BUFFALO
SEWER AUTHORITY

SPDES Permit No. NY0028410

Long Term Control Plan Semi-Annual Status Report
Reporting Period: *July through December 2024*

Amended Administrative Order
CWA-02-2014-3033
(Amends CWA-02-2012-3024)

March 2025

Long Term Control Plan Semi-Annual Status Report

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1. INTRODUCTION

The Buffalo Sewer Authority (BSA, Authority) received approval of its Long-Term Control Plan (LTCP) from the United States Environmental Protection Agency (USEPA) and New York State Department of Environmental Conservation (NYSDEC) on March 18, 2014. The Authority entered into an Amended Administrative Order on April 16, 2014 (herein after referred to as the AO), with the USEPA. This AO establishes a schedule for implementation of the Authority's LTCP, approved by the USEPA and NYSDEC.

The AO in part requires that the Authority submit written Semi-Annual Status Reports to the USEPA and NYSDEC by September 1st for current year January 1– June 30 reporting period, and March 1st for the previous calendar year July 1 – December 31 reporting period. The AO requires that the following be provided in each Semi-Annual Status Report:

3.1. The project milestones, deadlines and other terms that the Authority is required to meet since the date of the last Semi-Annual Status Report, whether and to what extent the Authority has met those requirements, and the reason for any anticipated delays and/or noncompliance.
3.2. A general description of the work completed during the reporting period and the applicability of the work to meet indicated design criteria, as well as the projection of work to be performed during the next reporting period and any anticipated delays for the upcoming work. Any changes in key personnel must also be noted.
3.3. Enclosure of public meeting (if held) materials including: advertisements, handouts, formal meeting notes, and a summary of the meeting (see Attachment C).
3.4. Copies (to USEPA only) of all monthly monitoring reports or other reports pertaining to combined sewer overflows (CSOs) and bypasses that Authority submitted to the NYSDEC during the reporting period. Please note DMRs are now submitted electronically directly to the USEPA and no dry weather CSOs occurred during this period, so this item does not apply during this reporting period.

This report covers July through December 2024 which serves as Semi-Annual Report No. 22.

2. REQUIREMENTS DUE IN REPORTING PERIOD

Attachment A provides the current status of all projects listed in the Administrative Order. Issues with implementing these projects are detailed in Section 4 of this document.

This document serves as the March 1, 2025, Semi-Annual Report.

3. WORK COMPLETED IN CURRENT REPORTING PERIOD AND PROJECTION OF WORK TO BE PERFORMED NEXT REPORTING PERIOD

A general description of the work completed on LTCP projects during the current reporting period and the work projected to be performed during the next reporting period is provided in Attachment A. Items that have been completed have been highlighted green. A more detailed description of each project including the location and the goal to be achieved through each project is provided in Attachment B.

With this report, while discussions are ongoing regarding the future of the LTCP, projects as outlined in the Draft LTCP Optimization Selected Alternative dated December 22, 2023, are listed as a separate tables within Attachments A and B. Cost data has been requested in the proposed consent decree language provided by the regulatory agencies and United States Department of Justice, to address this request, in Attachment A, columns have been added.

By providing this information now, Buffalo Sewer is demonstrating a good faith effort to ensure that at such time as the Draft LTCP Optimization Selected Alternative replaces the 2014 LTCP as a compliance document, that reporting conforms to formatting agreeable to all parties and that during this transition period the regulatory agencies are kept apprised of our progress.

4. IMPLEMENTATION ISSUES

In demonstration of the ongoing work that Buffalo Sewer has accomplished during this time period Attachment E: Board Items for LTCP Projects has been included in this submission. Preliminary Engineering Reports submitted for projects during this reporting period are included in Attachment D: Engineering Reports.

4.1 NFA Phase 1

This phase of facility construction work continued during this reporting period with the continued shutdown of a full secondary system battery (Battery A) for aeration diffusers and piping replacement. Piping installation in Tanks 1 through 4 of Battery A are completed and aeration piping is almost finished in the remaining 4 tanks of the battery. RAS piping replacement on Battery A has been completed. Battery A is anticipated to be placed back in service in the next reporting period. At that time, Battery B will be taken out of service for similar work. Due to tanks being out of service during construction, the capacity of the secondary system has been reduced to the point of dry weather partial treatment at times

4.2 NFA Phase 2

Construction work in the form of pre-mobilization has started on Phase 2A. Some portions of the work originally slated for Phase 2B have been moved to a separate contract (i.e., Gate 17 replacement). The remainder of Phase 2B will be re-bid later in 2025.

4.3 NFA Phase 3

Design has been started on NFA Phase 3 work including the obtaining of soil borings and topographical surveys.

4.4 CSO 053_11 Canisius/ Jefferson Delavan OLS

During this reporting period, an enhanced public participation plan and plans for an environmental impact statement were developed. It is anticipated that during the next reporting period, public outreach and environmental investigations will begin in earnest for this project.

4.5 CSO 053_3.2 Bailey & Amherst

This work is included in the ongoing project titled "Scajaquada Creek and Black Rock Canal Smart Sewer Project." The work specifically to Bailey and Amherst began during this reporting period and is ongoing.

4.6 CSO 010_1 Breckenridge Niagara RTC

This work was severed from the "Scajaquada Creek and Black Rock Canal RTCs" project and renamed Breckenridge Street CSO Control Project. Public outreach is planned to continue in the next reporting period. Design and bidding will be completed in the next reporting period.

4.7 CSO 006_2 Gates Circle RTC

This work is included in the ongoing project titled "Scajaquada Creek and Black Rock Canal Smart Sewer Project." The work specific to Gates Circle RTC began during this reporting period and is ongoing.

4.8 CSO 053_10 SPP 229A RTC

The contract for SPP 229A was bid during this reporting period. It is anticipated that construction of this project will begin in the next reporting period.

4.9 CSO 053_12.2 Jefferson Ave GI

Various green infrastructure options were reviewed during this reporting period and it was determined that none were feasible due to significant utility conflicts and site constraints. Instead, the goals of this project are anticipated to be achieved through alternative green infrastructure projects in the vicinity, but outside of the actual Jefferson Avenue corridor.

4.10 CSO 053_12.1 Jefferson Ave GI

Various green infrastructure options were reviewed during this reporting period and it was determined that none were feasible due to significant utility conflicts and site constraints. Instead, the goals of this project are anticipated to be achieved through alternative green infrastructure projects in the vicinity, but outside of the actual Jefferson Avenue corridor.

4.11 CSO 053_3.3 Bailey & Minnesota SPP 254 Modification

This work is included in the ongoing project titled "Scajaquada Creek and Black Rock Canal RTCs." The work specific to Bailey & Minnesota was substantially completed during this reporting period.

4.12 CSO 053_2.5 SPP 337 Modification

Preliminary design of this project was completed in the period covered by the last semi-annual report. During this reporting period, the project continued into final design. State Environmental Quality Review (SEQR) was initiated and the SEQR documents are included in Attachment E. Design and public outreach are planned to continue in the next reporting period. Specific to this site it should be noted that PCBs were found in a boring sample and further investigations are being coordinated with NYS DEC to ensure that remediation of the adjacent brownfield and related superfund site and the SPP modification are properly coordinated.

4.13 CSO 053_3.1 SPP 338 Modification

Preliminary design of this project was completed in the period covered by the last semi-annual report. During this reporting period, the project continued into final design. State Environmental Quality Review (SEQR) was initiated and the SEQR documents are included in Attachment E. Design and public outreach are planned to continue in the next reporting period.

4.14 CSO 053_8 SPP 341A Modification

Preliminary design of this project was completed in the period covered by the last semi-annual report. During this reporting period, the project continued into final design. State Environmental Quality Review (SEQR) was initiated and the SEQR documents are included in Attachment E. Design and public outreach are planned to continue in the next reporting period.

4.15 CSO 053_1.5 SPP 336B

Preliminary design of this project continued during this reporting period. Field investigations confirmed that the orifice plate in the existing SPP is no longer installed. However, raising of the weir in this location needs to be coordinated with the ultimate improvements selected for the CSO 053_1.4 Sidney Street OLS project, further described below.

4.16 CSO 053_1.4 Sidney Street OLS

Preliminary design of this project began during this reporting period. A Preliminary Engineer's Report is included in Attachment E specific to this project. Design and public outreach are planned to continue in the next reporting period.

4.17 CSO 053_14 SPPs 175, 176, & 177 Modifications

Preliminary design of this project was completed in the period covered by the last semi-annual report. During this reporting period, the project continued into final design. State Environmental Quality Review (SEQR) was initiated and the SEQR documents are included in Attachment E. Design and public outreach are planned to continue in the next reporting period.

4.18 CSO 053_5.2 Edison & Martha OLS

Preliminary design of this project began during this reporting period. A Preliminary Engineer's Report is included in Attachment E specific to this project. Design and public outreach are planned to continue in the next reporting period.

4.19 CSO 053_13 SPP165B Modification

This project was originally proposed as a project to decrease activations at CSO-053. However, during final design, additional information obtained during site visits required some small changes within the collection system model to represent actual in-field conditions. As a result, the changes within the collection system model resulted in this project no longer being necessary, as compliance was achieved under existing conditions.

5. CHANGES IN KEY PERSONNEL

As of September 1, 2024, Roberta Gaiek, Treatment Facility Administrator, retired from her position with BSA. On December 31, 2024, General Manager Oluwole McFoy resigned as General Manager. Rosaleen Nogle (Principal Sanitary Engineer) and Charles Riley (Executive Secretary and Chief Financial Officer), and Adam Sassone (Secretary to the General Manager and Chief of Staff) and the BSA Board are currently overseeing BSA's operations while the search for a new General Manager is ongoing.

6. PUBLIC MEETINGS

On October 8, 2024, Rosaleen Nogle, Principal Sanitary Engineer, presented at the Water Environmental Federation's Annual Technical Conference (WEFTEC) in New Orleans on Buffalo Sewer's efforts to Operationalize Equity in the Redevelopment of the Long-Term Control Plan. A copy of the presentation is included in Attachment C.

On October 15, 2024, Buffalo Sewer held a public event at Freedom Park to unveil the Queen City Clean Waters Initiative, the public rebranding of the LTCP. A copy of the press release is included in Attachment C.

On October 15, 2024 and October 17, 2024, Project Information Flyers were distributed for public outreach purposes related to the East Delavan Sewer Improvements and Florida Street Sewer Reconstruction: Environmental Impact Statement – Draft Scope of Work Hearing. Copies of the project materials are included in Attachment C.

October 16, 2024: Governor Kathy Hochul announced the award of an $8.75M Green Resiliency Grant to Buffalo Sewer. A copy of the press release is included in Attachment C.

On October 16, 2024: Buffalo Sewer and its Program Management consultant held a virtual informational Open House session for upcoming capital projects solicitations for both professional services and construction contracts. A flyer advertising it, the slide deck that was presented, and an RSVP contact list are included in Attachment C.

On October 29, 2024, the Buffalo News published an infrastructure op-ed by Buffalo Sewer's then-General Manager Oluwole McFoy on the LTCP titled, "Sewer Initiative Will Mitigate Storm Overflows.". A copy of the article is included in Attachment C.

In December 2024, the Buffalo Sewer Outreach team attended the Soulful Christmas Market hosted by the Michigan Street African American Heritage Corridor at Broadway and Michigan Streets. A copy of the post is included in Attachment C.

Throughout 2024, project information flyers on planned field work for LTCP projects were developed for public outreach purposes, distributed to residents and businesses of those respective Common Council Districts. Copies of the flyer are included in Attachment C.

An event tracker spreadsheet of 2024-2025 events for Buffalo Sewer staff to attend for public engagement is included in Appendix C.

7. MODEL MODIFICATIONS

On October 6, 2021, the United States Environmental Protection Agency (EPA) and New York State Department of Environmental Protection (NYSDEC) approved Buffalo Sewer's "Collection System Model- Model Update Report." The Buffalo Sewer Authority has since been utilizing the updated model to review the physical and financial feasibility and efficacy of projects remaining in the Long-Term Control Plan. During the July 2024-December 2024 period, the current conditions version of the model was updated to reflect completion of the Mill Race RTC project.

Throughout the reporting period, negotiations regarding a revised Long-Term Control Plan between the USEPA, NYSDEC, USDOJ, NYS Attorney General's Office, and the Buffalo Sewer Authority have been ongoing. Additionally, during this period, the renewal of Buffalo Sewer's Publicly Owned Treatment Works (POTW) has been under review and subject to multiple submissions and discussions between Buffalo Sewer, USEPA, and NYSDEC.

8. GREEN INFRASTRUCTURE

Buffalo Sewer remains committed to meeting the original conditions of the LTCP under the Amended Administrative Order to use Green Infrastructure (GI) to the extent originally approved. At this time, GI is not being proposed as a replacement for gray infrastructure, but rather in conformance with the approved LTCP.

Award for Niagara Street phase 4B was provided in July 26, 2023 and during this reporting period, Notice to Proceed was issued. The private property green infrastructure grant program contract has been executed and is currently receiving applicants.

Projects to be funded through the Environmental Impact Bond including a mix of stormwater tree trenches, bumpouts, and planters within the right-of-way and a mix of permeable pavement, underground storage, and rain gardens within public properties. These projects will be designed to provide supplemental storage for the combined sewer system and to improve water quality.

For the implementation of GI, BSA has partnered with the Department of Public Work, Buffalo Public Schools, and the Buffalo Municipal Housing Authority which offers benefits for both parties. BSA is able to implement stormwater management opportunities on public property and the partners end up with improved properties with new paving, street trees, and vegetation.

9. CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Rosaleen Nogle, PE, Principal Sanitary Engineer	02/28/2025 Date

Attachment A to the Semi-Annual Status Report: March 2025

Work Completed in Current Period/ Projection of Work to be Performed in Next Reporting Period

Project Name and Tag	Costs	Design	Construction + CA/CI	Total	Project Milestone	Proposed Deadline	Actual Completion	Milestone Status
NFA Phase I	Estimated	$ 7,190,000.00	$ 64,710,000.00	$ 71,900,000.00	Design Start	11/25/2019	11/25/2019	Complete
	Committed	$ 785,137.00	$ 60,553,128.00	$ 61,338,265.00	Design Completion	6/23/2022	6/23/2022	Complete
	To Date	$ 785,137.00	$ 29,910,290.00	$ 30,695,427.00	Notice to Proceed	9/27/2022	9/27/2022	Complete
	This Report	$ -	$ 6,006,735.00	$ 6,006,735.00	Construction Completion	5/25/2030		
NFA Phase II	Estimated	$ 7,400,000.00	$ 66,600,000.00	$ 74,000,000.00	Design Start	10/28/2020	10/28/2020	Complete
	Committed	$ 5,305,925.00	$ 37,855,000.00	$ 43,160,925.00	Design Completion	7/10/2025		See Notes
	To Date	$ 160,578.00	$ 1,222,716.50	$ 1,383,294.50	Notice to Proceed	7/23/2026		
	This Report	$ 160,578.00	$ 1,222,716.50	$ 1,383,294.50	Construction Completion	12/26/2031		
Jefferson & Florida (SPP 170B) (2.6 MG) (M) Replaced by CSO053_11 1.5 MG Canisius/Jefferson Delevan OLS	Estimated	$ 3,000,000.00	$ 27,000,000.00	$ 30,000,000.00	Design Start	12/1/2021	9/24/2021	Complete
	Committed	$ 3,182,854.50	$ -	$ 3,182,854.50	Design Completion	6/30/2026		
	To Date	$ 2,377,908.90	$ -	$ 2,377,908.90	Notice to Proceed	9/7/2028		
	This Report	$ 1,006,443.90	$ -	$ 1,006,443.90	Construction Completion	4/9/2032		
Amherst Quarry OLS (M) Now CSO053_3.2 Bailey & Amherst, Amherst Quarry PS RTC	Estimated	$ 215,087.20	$ 1,935,784.80	$ 2,150,872.00	Design Start	12/1/2021	4/8/2022	Complete
	Committed	$ 959,931.00	$ 2,467,841.00	$ 3,427,772.00	Design Completion	11/27/2024	7/26/2024	Complete
	To Date	$ 671,952.00	$ 987,137.00	$ 1,659,089.00	Notice to Proceed	5/28/2025	3/14/2024	Complete
	This Report	$ 291,011.69	$ 904,239.28	$ 1,195,250.97	Construction Completion	7/6/2028		
Underflow Upsizing (CSO 008/010, 061, 004) (M) Replaced by CSO010_1 Breckenridge Niagara RTC	Estimated	$ 363,661.70	$ 3,272,955.30	$ 3,636,617.00	Design Start	3/1/2022	6/15/2021	Complete
	Committed	$ 838,300.00	$ -	$ 838,300.00	Design Completion	2/25/2025		Expected completion 2/4/25
	To Date	$ 655,000.00	$ -	$ 655,000.00	Notice to Proceed	8/26/2025		
	This Report	$ 655,000.00	$ -	$ 655,000.00	Construction Completion	1/31/2029		
CSO006_2 Gates Circle RTC	Estimated	$ 283,528.70	$ 2,551,758.30	$ 2,835,287.00	Design Start	3/1/2022	4/8/2022	Complete
	Committed	$ 1,267,237.00	$ 3,252,737.00	$ 4,519,974.00	Design Completion	10/8/2024	6/7/2023	Complete
	To Date	$ 910,735.00	$ 394,786.00	$ 1,305,521.00	Notice to Proceed	4/8/2025	3/14/2024	Complete
	This Report	$ 457,794.69	$ 311,888.28	$ 769,682.97	Construction Completion	5/17/2028		
CSO053_10 SPP229A RTC	Estimated	$ 300,000.00	$ 2,700,000.00	$ 3,000,000.00	Design Start	3/1/2022	9/24/2021	Complete
	Committed	$ 353,650.50	$ 2,282,828.00	$ 2,636,478.50	Design Completion	4/23/2024	3/25/2024	Complete
	To Date	$ 264,212.10	$ -	$ 264,212.10	Notice to Proceed	10/22/2024	10/7/2024	Complete
	This Report	$ 111,827.10	$ -	$ 111,827.10	Construction Completion	7/19/2026		

Project Name and Tag	Costs	Design	Construction + CA/CI	Total	Project Milestone	Proposed Deadline	Actual Completion	Milestone Status
CSO053_12.2 Jefferson Ave GI	Estimated	$ 152,000.00	$ 1,368,000.00	$ 1,520,000.00	Design Start	3/1/2022	9/14/2020	Complete
	Committed	$ -	$ -	$ -	Design Completion			Refer to the report
	To Date	$ 37,950.50		$ 37,950.50	Notice to Proceed			
	This Report	$ -	$ -	$ -	Construction Completion	6/14/2028		
CSO053_12.1 Jefferson Ave GI	Estimated	$ 46,000.00	$ 414,000.00	$ 460,000.00	Design Start	3/1/2022	9/14/2020	Complete
	Committed	$ -	$ -	$ -	Design Completion			Refer to the report
	To Date	$ 37,950.50		$ 37,950.50	Notice to Proceed			
	This Report	$ -	$ -	$ -	Construction Completion	6/14/2028		
CSO053_3.3 Bailey & Minnesota SPP254 Modification	Estimated	$ 23,238.50	$ 209,146.50	$ 232,385.00	Design Start	3/1/2022	4/8/2022	Complete
	Committed	$ 103,632.00	$ 266,422.00	$ 370,054.00	Design Completion	4/23/2024	6/7/2023	Complete
	To Date	$ 93,268.00	$ 213,137.00	$ 306,405.00	Notice to Proceed	10/22/2024	3/14/2024	Complete
	This Report	$ 93,268.00	$ 130,239.28	$ 223,507.28	Construction Completion	7/19/2026		
Colorado ILS (M) Replaced by CSO053_2.5 SPP337 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/2/2024	2/1/2024	Complete
	Committed	$ 347,217.00	$ -	$ 347,217.00	Design Completion	6/30/2026		
	To Date	$ 27,202.80	$ -	$ 27,202.80	Notice to Proceed	12/31/2026		
	This Report	$ 27,202.80	$ -	$ 27,202.80	Construction Completion	12/31/2028		
South Bailey ILS (M) Replaced with CSO053_3.1 SPP338 Modification	Estimated	$ 400,000.00	$ 3,600,000.00	$ 4,000,000.00	Design Start	3/2/2024	2/1/2024	Complete
	Committed	$ 66,282.67	$ -	$ 66,282.67	Design Completion	12/31/2026		
	To Date	$ 10,441.14	$ -	$ 10,441.14	Notice to Proceed	6/30/2027		
	This Report	$ 10,441.14	$ -	$ 10,441.14	Construction Completion	12/31/2029		
SPP 341A Optimization Genesee & Kearns (M) Replaced by CSO053_8 SPP341A Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/2/2024	2/1/2024	Complete
	Committed	$ 463,632.00	$ -	$ 463,632.00	Design Completion	12/31/2025		
	To Date	$ 27,011.31	$ -	$ 27,011.31	Notice to Proceed	6/30/2026		
	This Report	$ 27,011.31	$ -	$ 27,011.31	Construction Completion	12/31/2027		

Project Name and Tag	Costs	Design	Construction + CA/CI	Total	Project Milestone	Proposed Deadline	Actual Completion	Milestone Status
CSO053_1.5 SPP336B Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/2/2024	2/1/2024	Complete
	Committed	$ 66,282.67	$ -	$ 66,282.67	Design Completion	12/31/2025		
	To Date	$ 10,441.14		$ 10,441.14	Notice to Proceed	6/30/2026		
	This Report	$ 10,441.14	$ -	$ 10,441.14	Construction Completion	12/31/2027		
SPP 336 A/B (SPP165A, SPP165B, SPP336A, SPP 336B) (4.2 MG) (M) Replaced by CSO053_1.4	Estimated	$ 2,772,000.00	$ 24,948,000.00	$ 27,720,000.00	Design Start	3/2/2024	2/1/2024	Complete
	Committed	$ -	$ -	$ -	Design Completion	6/30/2027		
	To Date	$ 160,088.00	$ -	$ 160,088.00	Notice to Proceed	12/31/2027		
	This Report	$ 160,088.00	$ -	$ 160,088.00	Construction Completion	12/31/2032		
CSO053_13 SPP165B Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/2/2024	2/1/2024	Complete
	Committed	$ -	$ -	$ -	Design Completion			Refer to the report
	To Date	$ 64,698.11		$ 64,698.11	Notice to Proceed			
	This Report	$ -	$ -	$ -	Construction Completion			
CSO053_14 SPP175 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/2/2024	2/1/2024	Complete
	Committed	$ 66,282.67	$ -	$ 66,282.67	Design Completion	12/31/2025		
	To Date	$ 10,441.14		$ 10,441.14	Notice to Proceed	6/30/2026		
	This Report	$ 10,441.14	$ -	$ 10,441.14	Construction Completion	12/31/2027		
CSO053_5.2 Edison Martha OLS	Estimated	$ 3,724,000.00	$ 33,516,000.00	$ 37,240,000.00	Design Start	3/2/2024	2/1/2024	Complete
	Committed	$ -	$ -	$ -	Design Completion	12/31/2026		
	To Date	$ 180,000.00		$ 180,000.00	Notice to Proceed	6/30/2027		
	This Report	$ 180,000.00	$ -	$ 180,000.00	Construction Completion	6/30/2033		
NFA Phase III	Estimated	$ 7,500,000.00	$ 67,500,000.00	$ 75,000,000.00	Design Start	3/2/2024	4/26/2024	Complete
	Committed	$ 4,356,000.00	$ -	$ 4,356,000.00	Design Completion	9/30/2027		
	To Date	$ 697,335.30	$ -	$ 697,335.30	Notice to Proceed	3/31/2028		
	This Report	$ 635,791.01	$ -	$ 635,791.01	Construction Completion	12/31/2031		

Project Name and Tag	Costs	Design	Construction + CA/CI	Total	Project Milestone	Proposed Deadline	Actual Completion	Milestone Status
Non-NFA Phase III Improvements	Estimated	$ 7,500,000.00	$ 67,500,000.00	$ 75,000,000.00	Design Start	3/2/2024	4/26/2024	Complete
	Committed	$ 484,000.00	$ -	$ 484,000.00	Design Completion	9/30/2027		
	To Date	$ 77,481.70		$ 77,481.70	Notice to Proceed	3/31/2028		
	This Report	$ 70,643.45	$ -	$ 70,643.45	Construction Completion	6/30/2033		
CSO014_1.1 SPP206A&B RTC	Estimated	$ 400,000.00	$ 3,600,000.00	$ 4,000,000.00	Design Start	3/3/2025		
	Committed	$ -	$ -	$ -	Design Completion	3/31/2028		
	To Date			$ -	Notice to Proceed	9/30/2028		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2030		
System_2 Schiller Park OLS	Estimated	$ 8,596,000.00	$ 77,364,000.00	$ 85,960,000.00	Design Start	3/3/2025		
	Committed	$ -	$ -	$ -	Design Completion	6/30/2028		
	To Date			$ -	Notice to Proceed	12/31/2028		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2033		
System_2_3 SPP339 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2025		
	Committed	$ -	$ -	$ -	Design Completion	12/31/2026		
	To Date			$ -	Notice to Proceed	6/30/2027		
	This Report	$ -	$ -	$ -	Construction Completion	6/30/2029		
System_2_4 Schiller Park OLS SPP340 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2025		
	Committed	$ -	$ -	$ -	Design Completion	12/31/2026		
	To Date			$ -	Notice to Proceed	6/30/2027		
	This Report	$ -	$ -	$ -	Construction Completion	6/30/2029		
CSO-014/015 (0.8 MG) (M) Updated to larger tank: CSO014_1.2 5.55 MG Erie Basin Marina	Estimated	$ 6,244,000.00	$ 56,196,000.00	$ 62,440,000.00	Design Start	3/3/2025		
	Committed	$ -	$ -	$ -	Design Completion	3/31/2028		
	To Date			$ -	Notice to Proceed	9/30/2028		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2033		

Project Name and Tag	Costs	Design	Construction + CA/CI	Total	Project Milestone	Proposed Deadline	Actual Completion	Milestone Status
CSO-013 (0.3 MG) (M) Replaced with CSO013_1 SPP304 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2026		
	Committed	$ -	$ -	$ -	Design Completion	12/31/2027		
	To Date			$ -	Notice to Proceed	6/30/2028		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2029		
CSO017_8 SPP326 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2026		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2028		
	To Date			$ -	Notice to Proceed	6/30/2029		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2030		
CSO011_1.2 SPP024 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2026		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2029		
	To Date			$ -	Notice to Proceed	6/30/2030		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2032		
CSO012_1.2 SPP023 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2026		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2029		
	To Date			$ -	Notice to Proceed	6/30/2030		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2032		
CSO012_2.1 SPP296 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2026		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2029		
	To Date			$ -	Notice to Proceed	6/30/2030		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2032		
CSO026_1.3 Collins Park OLS	Estimated	$ 3,010,000.00	$ 27,090,000.00	$ 30,100,000.00	Design Start	3/3/2027		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2029		
	To Date			$ -	Notice to Proceed	6/30/2030		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2035		

Project Name and Tag	Costs	Design	Construction + CA/CI	Total	Project Milestone	Proposed Deadline	Actual Completion	Milestone Status
CSO027_1 SPP 317 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2027		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2028		
	To Date			$ -	Notice to Proceed	6/30/2029		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2030		
CSO027_2 Babcock PS Weir Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2027		
	Last Report	$ -	$ -	$ -	Design Completion	6/30/2029		
	To Date			$ -	Notice to Proceed	12/31/2029		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2031		
CSO-055 (7.5 MG) (M) Updated to larger tank with new location: CSO055_1.5 11.55 MG Military Rd OLS	Estimated	$ 9,688,000.00	$ 87,192,000.00	$ 96,880,000.00	Design Start	9/1/2027		
	Last Report	$ -	$ -	$ -	Design Completion	9/30/2030		
	To Date			$ -	Notice to Proceed	3/31/2031		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2036		
Northern Relief Sewer/ North Relief - Interceptor (M) New Configuration, tagged as System_1 Northern Relief Tunnel	Estimated	$ 7,281,074.40	$ 65,529,669.60	$ 72,810,744.00	Design Start	9/1/2027		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2032		
	To Date			$ -	Notice to Proceed	6/30/2033		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2040		
CSO017_9 SPP059 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/1/2028		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2030		
	To Date			$ -	Notice to Proceed	6/30/2031		
	This Report	$ -	$ -	$ -	Construction Completion	6/30/2033		

Project Name and Tag	Costs	Design	Construction + CA/CI	Total	Project Milestone	Proposed Deadline	Actual Completion	Milestone Status
CSO027_3 SPP097 modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/1/2028		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2030		
	To Date			$ -	Notice to Proceed	6/30/2031		
	This Report	$ -	$ -	$ -	Construction Completion	6/30/2033		
CSO033_2 Clinton St OLS	Estimated	$ 16,380,000.00	$ 147,420,000.00	$ 163,800,000.00	Design Start	3/3/2029		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2031		
	To Date			$ -	Notice to Proceed	6/30/2032		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2036		
CSO033_3 SPP104 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2029		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2030		
	To Date			$ -	Notice to Proceed	6/30/2031		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2032		
CSO017_10 SPP051 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2029		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2030		
	To Date			$ -	Notice to Proceed	6/30/2031		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2032		
CSO-064 (0.1 MG) (M) Replaced with CSO064_1.1 CSO-064 ILS	Estimated	$ 400,000.00	$ 3,600,000.00	$ 4,000,000.00	Design Start	3/3/2025		
	Last Report	$ -	$ -	$ -	Design Completion	6/30/2028		
	To Date			$ -	Notice to Proceed	12/31/2028		
	This Report	$ -	$ -	$ -	Construction Completion	6/30/2031		
CSO006_3 Delavan Drain Weir Raising & RTC	Estimated	$ 400,000.00	$ 3,600,000.00	$ 4,000,000.00	Design Start	3/3/2030		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2032		
	To Date			$ -	Notice to Proceed	6/30/2033		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2036		

Project Name and Tag	Costs	Design	Construction + CA/CI	Total	Project Milestone	Proposed Deadline	Actual Completion	Milestone Status
CSO064_1.2 SPP 137 Modification	Estimated	$ 6,000.00	$ 54,000.00	$ 60,000.00	Design Start	3/3/2025		
	Last Report	$ -	$ -	$ -	Design Completion	6/30/2028		
	To Date			$ -	Notice to Proceed	12/31/2028		
	This Report	$ -	$ -	$ -	Construction Completion	6/30/2031		
CSO-028/044/047 (2.3 MG) (M) Updated to smaller tank: CSO028_1 0.95 MG Hopkins & Osage OLS	Estimated	$ 1,764,000.00	$ 15,876,000.00	$ 17,640,000.00	Design Start	3/3/2031		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2033		
	To Date			$ -	Notice to Proceed	6/30/2034		
	This Report	$ -	$ -	$ -	Construction Completion	9/30/2039		
CSO017_6 Bass Alley OLS	Estimated	$ 3,262,000.00	$ 29,358,000.00	$ 32,620,000.00	Design Start	3/3/2031		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2033		
	To Date			$ -	Notice to Proceed	6/30/2034		
	This Report	$ -	$ -	$ -	Construction Completion	9/30/2039		
CSO033_1 Bailey & Regent OLS (Moreland Park)	Estimated	$ 5,362,000.00	$ 48,258,000.00	$ 53,620,000.00	Design Start	3/2/2032		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2034		
	To Date			$ -	Notice to Proceed	6/30/2035		
	This Report	$ -	$ -	$ -	Construction Completion	9/30/2040		
CSO064_2 Perry Street Sanitary Sewer	Estimated	$ 480,000.00	$ 4,320,000.00	$ 4,800,000.00	Design Start	3/3/2033		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2035		
	To Date			$ -	Notice to Proceed	6/30/2036		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2038		
CSO017_1.1 SPP054 Sewer Separation	Estimated	$ 70,000.00	$ 630,000.00	$ 700,000.00	Design Start	3/3/2033		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2035		
	To Date			$ -	Notice to Proceed	6/30/2036		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2038		
Hertel North East ILS (M) Updated design (CSO055_1.1)	Estimated	$ 400,000.00	$ 3,600,000.00	$ 4,000,000.00	Design Start	3/3/2034		
	Last Report	$ -	$ -	$ -	Design Completion	12/31/2036		
	To Date			$ -	Notice to Proceed	6/30/2037		
	This Report	$ -	$ -	$ -	Construction Completion	12/31/2040		

Project Name and Tag	Costs	Design	Construction + CA/CI	Total	Project Milestone	Proposed Deadline	Actual Completion	Milestone Status
Green Infrastructure Projects								
Waterbody and GI Projects Included	**Costs**	**Design**	**Construct**	**Total**	**Project Milestone**	**Proposed Deadline**	**Actual Compeltion**	**Milestone Status**
CSO053_9 (16.7 acres managed) Scajaquada Creek	Estimated	$ 334,400.00	$ 3,009,600.00	$ 3,344,000.00	Start Date	3/2/2028		
	Last Report	$ -	$ -	$ -	20% Completion	3/1/2029		
	To Date			$ -	40% Completion	3/1/2030		
	This Report	$ -	$ -	$ -	60% Completion	3/1/2031		
					80% Completion	3/1/2033		
					100% Completion	3/1/2034		
CSO006_5 (52.5 acres managed) Black Rock Canal	Estimated	$ 1,050,600.00	$ 9,455,400.00	$ 10,506,000.00	Start Date	3/3/2031		
	Last Report	$ -	$ -	$ -	20% Completion	3/1/2032		
	To Date			$ -	40% Completion	3/1/2033		
	This Report	$ -	$ -	$ -	60% Completion	3/1/2034		
					80% Completion	3/1/2036		
					100% Completion	3/1/2037		
CSO011_1.1 (19.9 acres managed) Niagara River	Estimated	$ 398,200.00	$ 3,583,800.00	$ 3,982,000.00	Start Date	3/2/2032		
	Last Report	$ -	$ -	$ -	20% Completion	3/1/2034		
	To Date			$ -	40% Completion	3/1/2036		
	This Report	$ -	$ -	$ -	60% Completion	3/1/2037		
					80% Completion	3/1/2039		
					100% Completion	3/1/2040		
CSO055_3 (260.2 acres managed) Niagara River	Estimated	$ 5,203,200.00	$ 46,828,800.00	$ 52,032,000.00	Start Date	3/2/2032		
	Last Report	$ -	$ -	$ -	20% Completion	3/1/2034		
	To Date			$ -	40% Completion	3/1/2036		
	This Report	$ -	$ -	$ -	60% Completion	3/1/2037		
					80% Completion	3/1/2039		
					100% Completion	3/1/2040		

Project Name and Tag	Costs	Design	Construction + CA/CI	Total	Project Milestone	Proposed Deadline	Actual Completion	Milestone Status
CSO017_4 (37.5 acres managed) Buffalo River	Estimated	$ 749,000.00	$ 6,741,000.00	$ 7,490,000.00	Start Date	3/3/2032		
	Last Report	$ -	$ -	$ -	20% Completion	3/1/2033		
	To Date			$ -	40% Completion	3/1/2035		
	This Report	$ -	$ -	$ -	60% Completion	3/1/2036		
					80% Completion	3/1/2038		
					100% Completion	3/2/2039		
CSO026_4 (125.5 acres managed) Buffalo River	Estimated	$ 2,510,400.00	$ 22,593,600.00	$ 25,104,000.00	Start Date	3/3/2032		
	Last Report	$ -	$ -	$ -	20% Completion	3/1/2033		
	To Date			$ -	40% Completion	3/1/2035		
	This Report	$ -	$ -	$ -	60% Completion	3/1/2036		
					80% Completion	3/1/2038		
					100% Completion	3/2/2039		

Attachment B to the Semi-Annual Status Report: March 2025

Detailed Project Descriptions for Original & Revised Proposed Work

Project Name	Project Description	Project Purpose*
Proposed Revised LTCP Projects		
NFA Phase I	The first phase of the Treatment Facility upgrades consists of replacement of the diffusers, removal of grit, and replacement and upgrading of piping and valves for the return activated sludge system.	The NFA Phase 1 project is designed to restore the secondary system's capacity and facilitate work specified in NFA Phase 3 while also increasing the aeration efficiency.
NFA Phase II	The second phase of the Treatment Facility upgrades consists of installation of a new chlorine contact tank, dosing system, and pumping station for the primary system together with odor controls and primary sludge pumping station upgrades.	The NFA Phase 2 project is designed to provide reliable disinfection to flows diverted to the primary treatment system during wet weather events.
Jefferson & Florida (SPP 170B) (2.6 MG) (M) Replaced by CSO053_11 1.5 MG Canisius/Jefferson Delevan OLS	There is a new opportunity to move the tank location north and utilize an existing parking garage area at Jefferson and Delavan proposed to be demolished for the construction of a new surface parking lot. In the updated configuration and location, flow at SPP333 is routed to a 1.5 MG offline storage tank with an RTC at SPP229A.	The proposed Canisius/Jefferson Delevan OLS (CSO053_11) is planned to replace the Jefferson Avenue & Florida Street (CSO-053) Satellite Storage. In this Selected Alternative, it is anticipated that the proposed smaller tank together with other LTCP Projects will reduce activations from 37 to 4 for CSO-053 upon completion of the Selected Alternative.
Amherst Quarry OLS (M) Now CSO053_3.2 Bailey & Amherst, Amherst Quarry PS RTC	This RTC project includes adding RTC at SPP255 (Bailey Avenue and East Amherst Street) as well as improving the efficiency of Amherst Quarry dewatering operations to reduce overflows.	The proposed CSO053_3.2 Bailey & Amherst, Amherst Quarry PS RTC would replace the Amherst Quarry OLS. It is anticipated that the proposed project together with other proposed projects will reduce activations from 37 to 4 for CSO-053 upon completion of the Selected Alternative.
Underflow Upsizing (CSO 008/010, 061, 004) (M) Replaced by CSO010_1 Breckenridge Niagara RTC	The proposed design was similar to the Smith St. and Mill Race RTC projects, with a static weir in the 36” diameter pipe upstream of SPP021 diverting flow to a new controlled connection to the North Interceptor. This project also has the potential to reduce overflows at CSO-011 (SPP024) and CSO-055 (SPP001).	Regarding the Selected Alternative model, the proposed Breckenridge Niagara RTC is planned to replace the Underflow Pipe Upsizing project. In this Selected Alternative, it is anticipated that the new project with other LTCP projects will reduce activations from 5 to 2 for CSO 004, from 33 to no activations for CSO 008, and from 14 to no activations for CSO 010 upon completion of the Selected Alternative. In the new model's baseline and Selected Alternative scenarios, CSO-061 is already in compliance.

Project Name	Project Description	Project Purpose*
CSO006_2 Gates Circle RTC	Real-Time Controlled gate structure at SPP 332. Additional instrumentation will also be installed at the Niagara Metering Station (SPP 330) to inform gate control.	Together with other projects, this project is projected to reduce CSO 006 discharges to Scajaquada Creek from 47 to 1 activation.
CSO053_10 SPP229A RTC	SPP229A would be modified by incorporating an additional 24" diameter underflow pipe downstream of a 24" dynamically controlled gate. The gate would open when there is available capacity in the Scajaquada Tunnel or there is a risk for overflow at SPP229A	Together with other projects, this project is projected to reduce CSO-053 discharges to Scajaquada Creek from 37 to 4 activations
CSO053_12.2 Jefferson Ave GI	Permeable pavement would be installed in the parking lanes along Jefferson Avenue from the intersection with Beverly Road to the intersection with Best Street. The design for this project is not complete, but it is assumed that the depth and pore space would match the Kenmore GI project. This project would manage 7.6 acres of impervious area upstream of SPP229A	Together with other projects, this project is projected to reduce CSO-053 discharges to Scajaquada Creek from 37 to 4 activations.
CSO053_12.1 Jefferson Ave GI	Permeable pavement would be installed in the parking lanes along Jefferson Avenue from the intersection with Main Street to the intersection with Beverly Road. The design for this project is not complete, but it is assumed that the depth and pore space would match the Kenmore GI project. This project would manage 2.3 acres of impervious area upstream of SPP333.	Together with other projects, this project is projected to reduce CSO-053 discharges to Scajaquada Creek from 37 to 4 activations.
CSO053_3.3 Bailey & Minnesota SPP254 Modification	The overflow weir at SPP254 (located at the intersection of Minnesota Avenue and Bailey Avenue) would be replaced. The new weir elevation would be 82.90 ft (City datum), which is slightly lower than the weir elevation in the LTCP model. Lowering the weir results in more flow being routed to the Amherst Quarry PS storage.	Together with other projects, this project is projected to reduce CSO-053 discharges to Scajaquada Creek from 37 to 4 activations.

Project Name	Project Description	Project Purpose*
Colorado ILS (M) Replaced by CSO053_2.5 SPP337 Modification	SPP337 would be modified by incorporating the equivalent of an additional 30" diameter underflow pipe. The project is currently under final design.	The proposed CSO053_2.5 SPP337 Modification replaces the Colorado ILS project. In the Selected Alternative, it is anticipated that the proposed project together with other LTCP Projects will reduce activations from 37 to 4 for CSO-053 upon completion of the Selected Alternative
South Bailey ILS (M) Replaced with CSO053_3.1 SPP338 Modification	For this project, the SPP338 underflow orifice would be enlarged. The overflow weir would be raised to 54.5 ft (City datum), and the length increased to 19.5'. This project is currently in final design.	The proposed SPP338 Modification (CSO053_3.1) replaces the South Bailey ILS project. It is anticipated that the proposed project together with other proposed projects will reduce activations from 37 to 4 for CSO-053 upon completion of the Selected Alternative.
SPP 341A Optimization Genesee & Kearns (M) Replaced by CSO053_8 SPP341A Modification	For this project, SPP341A will be modified by incorporating the equivalent of an additional 18" diameter underflow pipe and raising the overflow weir to 55.60 ft (City datum), reducing overflows at CSO-053. This project is currently in final design.	The proposed CSO053_8 SPP341A Modification is planned to replace the SPP 341A Optimization Genesee & Kearns project. It is anticipated that the proposed project together with other proposed projects will reduce activations from 37 to 4 for CSO-053 upon completion of the Selected Alternative
CSO053_1.5 SPP336B Modification	SPP336B would be modified by removing the underflow orifice plate, reducing overflows at CSO-053. Field investigations have subsequently indicated that the underflow orifice plate has already been removed.	Together with other projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek from 37 to 4 activations.
SPP 336 A/B (SPP165A, SPP165B, SPP336A, SPP 336B) (4.2 MG) (M) Replaced by CSO053_1.4 3.26 MG Sidney OLS	Satellite Storage at Humboldt Parkway will be replaced with a smaller 3.26 MG tank at the corner of Sidney Street and Lark Street. To reduce flows at SPP336B, the Sidney Street OLS will store flow diverted from the sewer along Humboldt Parkway. The storage would dewater via gravity when there is sufficient available capacity in the Scajaquada Tunnel Interceptor.	The proposed Sidney OLS (CSO053_1.4) is planned to replace the SPP 336 A&B (CSO-053) Satellite Storage. In this Selected Alternative, it is anticipated that the proposed smaller tank together with other LTCP Projects will reduce activations from 37 to 4 for CSO-053 upon completion of the Selected Alternative.
CSO053_13 SPP165B Modification	SPP165B underflow orifice would be upsized to 24" and underflow pipe to 36". The overflow weir would also be raised to 54.81 ft (City datum). These modifications would reduce overflows at CSO-053. Based on actual conditions observed during site visits, the noted conditions were incorporated into the collection system model. As a result, the SPP was able to achieve compliance. Therefore, no project is required at this site.	Project is no longer required at this site.
CSO053_14 SPP175 Modification	SPP175 at Dodge Street and Michigan Ave would be raised to 56.10 ft (City datum). SPP176 at Michigan Avenue and Riley Street and SPP177 at Michigan Avenue and Glenwood Avenue would be raised to 52.85 ft and 48.35 ft (City datum), respectively.	Together with other projects, this project is projected to reduce CSO-053 discharges to Scajaquada Creek from 37 to 4 activations.

Project Name	Project Description	Project Purpose*
CSO053_5.2 Edison Martha OLS	This project consists of a 2.61 MG tank at the northwest corner of Edison Avenue and Kensington Expressway. The storage would dewater via gravity when there is available capacity in the Edison Avenue trunk sewer.	Together with other projects, this project is projected to reduce CSO-053 discharges to Scajaquada Creek from 37 to 4 activations.
NFA Phase III	The NFA Phase III improvements consist of increasing the penetrations to the existing secondary clarifiers, adding two new secondary clarifiers, and adding an additional chlorine contact tank.	These improvements will be designed to provide 400 MGD of secondary treatment during wet weather events and reduce bypasses of the secondary system.
Non-NFA Phase III Improvements	The non-NFA Phase III Improvements are improvements to the secondary system that were not specified in the 2014 LTCP, but will be incorporated into the contracts for the Phase III NFA Improvements.	These improvements will ensure the long-term reliability of those systems installed and upgrades as part of the NFA Phase III.
CSO014_1.1 SPP206A&B RTC	The proposed RTC project adds a 24” dewatering gate and connection to the South Interceptor. The gate would open to send more flow to the South Interceptor when it has available capacity, and close when it is near full capacity. This would further reduce overflows at SPP206A&B and could provide additional benefit downstream at SPP024 (CSO-011).	Together with other projects, this project is projected to reduce CSO-014 discharges to Erie Basin Marina from 12 to 2 activations.
System_2 Schiller Park OLS	This projects consists of an 8.0 MG offline storage project to divert inflows from Cheektowaga to an 8.00 MG storage facility during wet weather until the BSA collection system has capacity to receive and treat it. This project would help buffer peak flows to the Bird Island Treatment Facility and reduce overflows at SPPs along the North and South Interceptor, including SPP001 and SPP024. The OLS is currently configured as gravity-driven storage with dynamically controlled inlet and outlet gates.	Together with other projects, this project is projected to reduce CSO 012 discharges to Black Rock Canal from 35 to 3 activations., CSO-053 discharges to Scajaquada Creek from 37 to 4 activations, and CSO-055discharges to Niagara River from 38 to 9 activations.
System_2_3 SPP339 Modification	SPP339 would be modified by increasing the diameter of the underflow pipe to 48”, and by raising the elevation of the overflow weir to 52.71 ft (City datum). These modifications would reduce CSO-053 overflows.	Together with other projects, this project is projected to reduce CSO-053 discharges to Scajaquada Creek from 37 to 4 activations.

Project Name	Project Description	Project Purpose*
System_2_4 Schiller Park OLS SPP340 Modification	SPP340 would be modified by increasing the diameter of the underflow orifice to 24". A flap gate would also be applied to prevent backflow from the Scajaquada Drain. This modification would reduce CSO-053 overflows.	Together with other projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creekfrom 37 to 4 activations.
CSO-014/015 (0.8 MG) (M) Updated to larger tank: CSO014_1.2 5.55 MG Erie Basin Marina OLS	The OLS would consist of a 5.55 MG tank north of the intersection of Trenton Road and Fourth Street. The storage would dewater when there is available capacity in the Swan trunk sewer. The Proposed OLS configuration requires a pump station for dewatering.	The proposed Erie Basin Marina OLS (CSO014_1.2) is planned to replace the CSO-014/015 Satellite Storage. In this Selected Alternative, it is anticipated that the new project together with other LTCP projects will reduce activations from 12 to 2 for CSO-014. In the newmodel's baseline and the Selected Alternative scenarios, there were no activations observed at CSO-015.
CSO-013 (0.3 MG) (M) Replaced with CSO013_1 SPP304 Modification	For this SPP modification project, SPP304 (CSO-013, Virginia St. & Busti Ave.) would be modified by removing the underflow orifice plate. The removal of an existing underflow orifice plate in combination with upstream proposed off-line storage projects are expected to achieve compliance under the revised model.	The proposed SPP304 Modification (CSO013_1) is planned to replace the CSO-013 Satellite Storage. In this Selected Alternative, it is anticipated that the target of 4 CSO activations at CSO-013 in the Black Rock Canal will be sustained from the initial baseline conditions to the implementation of the Selected Alternative.
CSO017_8 SPP326 Modification	This project consists of upsizing SPP 326 underflow pipe to 36" to utilize capacity created by CSO014_1.2 Erie Basin Marina OLS.	Together with other projects, this project is projected to reduce CSO-017 discharges to Buffalo River from 24 to 4 activations.
CSO011_1.2 SPP024 Modification	SPP024 (CSO-011) would be modified by enlarging the underflow opening to 4.8 ft, which would send more flow to South Interceptor and reduce overflows at CSO-011.	Together with other projects, this project is projected to reduce CSO-011 discharges to Niagara River from 39 to 4 activations.

Project Name	Project Description	Project Purpose*
CSO012_1.2 SPP023 Modification	This project consists of enlarging SPP 023 underflow opening to 5 ft by 5 ft and by raise the overflow weir to 1.55'(City Datum).	Together with other projects, this project is projected to reduce CSO-012 discharges to Black Rock Canal from 35 to 3 activations.
CSO012_2.1 SPP296 Modification	This project consists of enlarging SPP 296 underflow opening to 5 ft by 5 ft and by raise the overflow weir to 1.55' (City Datum).	Together with other projects, this project is projected to reduce CSO-012 discharges to Black Rock Canal from 35 to 3 activations.
CSO026_1.3 Collins Park OLS	This project consists of a 2.56 MG Storage Tank with Gravity Dewatering	Together with other projects, this project is projected to reduce CSO-026 discharges to Buffalo River from 9 to 6 activations.
CSO027_1 SPP 317 Modification	SPP317 overflow weir would be lowered to 7.25 ft (City datum). Lowering the weir would result in increased flows being directed to the Smith Street ILS facility, while lowering the flows in the Swan Trunk. The lowered flows in the Swan Trunk results in a reductionin overflows at CSO 027.	Together with other projects, this project is projected to reduce CSO-027 discharges to Buffalo River from 10 to 4 activations.
CSO027_2 Babcock PS Weir Modification	Babcock Pump Station operates as an RTC facility to store flows in an upstream 11 ft by 11 ft box culvert during wet weather. The CSO027_2 modification project redirects flow from a 48" sewer to the box culvert instead of the sewer downstream of the pump station.This increases the in-line storage utilization and reduces the flow sent to the Swan Trunk in wet weather.	Together with other projects, this project is projected to reduce CSO-027 discharges to Buffalo River from 10 to 4 activations.
CSO-055 (7.5 MG) (M) Updated to larger tank with new location: CSO055_1.5 11.55 MG Military Rd OLS	The proposed Military Road OLS project is a 11.55 MG tank that stores flow diverted from the Hertel Avenue South barrel at the intersection of Hertel Avenue and Military Road.	The proposed Military Rd OLS (CSO055_1.5) is planned to replace the CSO-055 Satellite Storage. In this Selected Alternative, it is anticipated that the proposed larger tank together with other LTCP Projects will reduce activations from 38 to 9 for CSO-055 upon completion of the Selected Alternative.
Northern Relief Sewer/ North Relief - Interceptor (M) New Configuration, tagged as System_1 Northern Relief Tunnel	This tunnel system is anticipated to have three parts, North of Scajaquada Creek, South of Scajaquada Creek, and the Southern Relief Tunnel. The Northern Relief Tunnel is designed to create more conveyance capacity to the WWTP, supplement capacity in the North and South Interceptors, and increase the ability of the system to store wet-weather flows. It is anticipated that the tunnel will have an inside diameter of 12-feet based on the most recent system simulations.	In the Selected Alternative, it is anticipated that the proposed tunnel together with other projects will reduce activations from 35 to 3 for CSO-012.
CSO017_9 SPP059 Modification	This project consists of upsizing the underflow pipe to 24" and raising the overflow weir to 3.25' (City Datum).	Together with other projects, this project is projected to reduce CSO-017 discharges to Buffalo River from 24 to 4 activations.

Project Name	Project Description	Project Purpose*
CSO027_3 SPP097 modification	The SPP097 underflow pipe would be upsized to 48 inches. The overflow weir would be raised to 0.82 ft (City datum) with an associated length increase to 100 ft.	Together with other projects, this project is projected to reduce CSO-027 discharges to Buffalo River from 10 to 4 activations.
CSO033_2 Clinton St OLS	The Clinton St. OLS project includes adding a new 60" diameter sewer that starts on Clinton Street near Kelburn Street and routes wet weather flow through Houghton Park to a 21.72 MG storage tank. An orifice plate and weir would be added at the intersection of Bailey Avenue and Clinton Street to route more flow to the tank via Clinton Street. An automatically controlled gate at the downstream end of the tank would close to store flow when SPP104 (CSO-033) is at risk for overflow and would open to prevent basement backups upstream.	Together with other projects, this project is projected to reduce CSO-033 discharges to Buffalo River from 15 to 2 activations.
CSO033_3 SPP104 Modification	The SPP104 overflow weir would be raised to 6.85 ft (City datum), and the length increased to 40'. These modifications would reduce overflows at CSO-017.	Together with other projects, this project is projected to reduce CSO-033 discharges to Buffalo River from 15 to 2 activations.
CSO017_10 SPP051 Modification	This project consists of removing the orifice plate and raising the overflow weir to 1.35 ft (City Datum).	Together with other projects, this project is projected to reduce CSO-017 discharges to Buffalo River from 24 to 4 activations.
CSO-064 (0.1 MG) (M) Replaced with CSO064_1.1 CSO-064 ILS	The existing 24" sewer upstream of SPP137 between South Street and Republic Street along Louisiana Street would be replaced by two 60" diameter sewers. These sewers would provide in line storage volume to help reduce overflows at SPP137.	The proposed CSO-064 ILS (CSO064_1.1) is planned to replace CSO-064 Satellite Storage. It is anticipated that the proposed project together with other proposed projects will reduce activations from 10 to 4 for CSO-064upon completion of the Selected Alternative.

Project Name	Project Description	Project Purpose*
CSO006_3 Delavan Drain Weir Raising & RTC	This project consists of replacing existing permanently closed sluice gate with dynamically real-time controlled interconnection between the Delavan Drain and North Interceptor and modification (raising of weir)of SPP 170A to divert flows from Scajaquada Creek to the Delavan Drain during only the most extreme storm events for flood prevention purposes.	Together with other projects, this project is projected to reduce CSO 006 discharges to Scajaquada Creek from 47 to 1 activation.
CSO064_1.2 SPP 137 Modification	The SPP137 overflow weir would be raised to 0.50 ft (City datum). In addition, the underflow orifice plate would be removed. These modifications would reduce overflows at CSO-064 and would be implemented in conjunction with the CSO-064 ILS (CSO064_1.1) project.	Together with other projects, this project is projected to reduce CSO-064 discharges to Buffalo River from 10 to 4 activations.
CSO-028/044/047 (2.3 MG) (M) Updated to smaller tank: CSO028_1 0.95 MG Hopkins & Osage OLS	To address CSO-028 overflows, the Hopkins and Osage OLS would store flow from the Hopkins Street sewer in a 0.95 MG tank at the eastern end of Osage Street. The storage would dewater when there is available capacity in the South Park Avenue sewer and no risk of overflow at the downstream SPPs 125 and 126.	The proposed Hopkins & Osage OLS (CSO028_1) is planned to replace the CSOs 028/044/047 Satellite Storage. In this Selected Alternative, it is anticipated that the smaller proposed tank, together with other LTCP Projects, will reduce activations from 33 to 4 for CSO-028. Both CSO-044 and CSO-047 are in compliance in the new model's baseline and the Selected Alternative scenarios.
CSO017_6 Bass Alley OLS	This project will consist of a 3.60 MG Storage Tank with Dewatering Pump Station	Together with other projects, this project is projected to reduce CSO-017 discharges to Buffalo River from 24 to 4 activations.

Project Name	Project Description	Project Purpose*
CSO033_1 Bailey & Regent OLS (Moreland Park)	This project consists of a 4.50 MG tank at Moreland Field between Regent Street and Moreland Street along Bailey Avenue. The storage would dewater when there is available capacity in the downstream sewer and no risk of overflow at the downstream SPP 104. The Proposed OLS configuration requires a pump station for dewatering.	Together with other projects, this project is projected to reduce CSO-033 discharges to Buffalo River from 15 to 2 activations.
CSO064_2 Perry Street Sanitary Sewer	This project would replace an existing sewer partially built into Hamburg Drain. The new sewer would start on Scott St near Illinois St to Louisiana St, then continue along Perry St to the Hamburg St. Pump Station. The total length of new sewer would be 6,417 ft, with the largest pipe diameter being 42”.	Together with other projects, this project is projected to reduce CSO-064 discharges to Buffalo River from 10 to 4 activations.
CSO017_1.1 SPP054 Sewer Separation	This project consists of converting the sewer upstream of SPP054 to a separate storm sewer. This would eliminate SPP054 as an SPP	Together with other projects, this project is projected to reduce CSO-017 discharges to Buffalo River from 24 to 4 activations.
Hertel North East ILS (M) Updated design (CSO055_1.1)	The Hertel North East / Hertel Delaware ILS (CSO055_1.1) is designed to take advantage of additional storage capacity available on Hertel Avenue North barrel upstream of the existing Hertel at Deer RTC structure. Since there is a short travel time between the two locations, the preliminary control strategy would start storage when the depth upstream of the Hertel North East / Hertel Delaware ILS (CSO055_1.1) structure indicates wet weather. This project will work in conjunction with the CSO-055/ Military Road OLS project.	The proposed updated design of the Hertel North East / Hertel Delaware ILS (CSO055_1.1) together with other LTCP Projects will reduce activations from 38 to 9 for CSO-055 upon completion of the Selected Alternative.

Project Name	Project Description	Project Purpose*
Proposed Revised Green Infrastructure Projects		
CSO053_9 (16.7 acres managed)	The CSO-053 basin would have green infrastructure managing 16.7 acres of impervious area. The exact list of projects to be implemented would be determined during the design phase.	Together with other projects, this project is projected to reduce CSO-053 discharges to Scajaquada Creek from 37 to 4 activations.
CSO006_5 (52.5 acres managed)	Green infrastructure projects would be constructed within the basin sufficient to control runoff from 20% of the impervious area within the basin (52.5 acres managed). The exact list of projects to be implemented would be determined during the design phase.	Together with other projects, this project is projected to reduce CSO 006 discharges to Scajaquada Creek from 47 to 1 activations.
CSO011_1.1 (19.9 acres managed)	Green infrastructure projects would be constructed within the basin sufficient to control runoff from 20% of the impervious area within the basin (19.9 acres managed). The exact list of projects to be implemented would be determined during the design phase.	Together with other projects, this project is projected to reduce CSO-011 discharges to Niagara River from 39 to 4 activations.
CSO055_3 (260.2 acres managed)	The CSO-055 basin would have green infrastructure managing 260.2 acres of impervious area. The exact list of projects to be implemented would be determined during the design phase.	Together with other projects, this project is projected to reduce CSO-055 discharges to Niagara River from 38 to 9 activations.
CSO017_4 (37.5 acres managed)	The exact list of projects to be implemented would be determined during the design phase.	Together with other projects, this project is projected to reduce CSO 017 discharges to Buffalo River from 24 to 4 activations.
CSO026_4 (125.5 acres managed)	The CSO-026 basin would have green infrastructure managing 125.5 acres of impervious area.	Together with other projects, this project is projected to reduce CSO-026 discharges to Buffalo River from 9 to 6 activations.

Attachment C to the Semi-Annual Status Report: March 2025

Public Outreach Materials

COMMUNITY EVENTS TRACKER

Event Name	Event Date	Event Location	Lit Drop	Tabling	Other	Primaries Flyer	QCCW Overview	Fat Free Sewers	Get Waterwise	Green Infrastructure
National Night Out	8/6/2024	City Wide	No	Yes				300		
Northland Food Truck Thursday	8/15/2024	NWTC	No	Yes		27	35	5		
University Unity Fest	8/10/2024	UB South	Yes	Yes		650	650			
Displays in WWTP	8/22/2024	WWTP	no	no	Brochure Displays					
Displays in City Hall	8/25/2024	City Hall	no	no	Brochure Displays					
Beverly Road BC Party	9/1/2024	Beverly Road	no	yes		25	25			
Igniting Hope	9/20/2024	589 Ellicott	No	Yes		15	20	2		
Fire Open Houses	10/5/2024	Various	Yes			400	400	400		
Masten District Breakfast	10/19/2024	Delavan Grider	No	Yes						
Central Terminal	11/12/2024	Central Terminal								
Winter Preparedness	11/13/2024	PS 006	No	Yes				35		
Winter Preparedness	11/15/2024	PS 156	No	Yes				45		
OBX Eco Day	11/15/2024	Northland	No	Yes		25	25			
Soulful Xmas Mark	12/7/2024	136 Broadway	No	Yes		17	22	9	5	0
NFTA BRT Outreach Event	2/6/2025	Gerald Place	No	Yes		5	5	5	5	5
University Breakfast	2/8/2025	Martha Mitchell Center	No	Yes		6	9	10	12	5
NFTA BRT Outreach Event	2/8/2025	Boys and Girls Club on Bailey	No	Yes		18	19	13	10	11

Can I use the Shoreline Trail during construction?

- The project will require a temporary closure (up to 12 months) of a portion of the Shoreline Trail that runs along the west side of the Bird Island Wastewater Treatment Facility. Extents of the closure are shown below in red.
- A Work Zone Traffic Control Plan has been developed to detour pedestrians and cyclists along Niagara Street between Freedom Park (formerly Broderick Park) and Unity Island Park. Neither park will be impacted by the project.

What else can I expect during construction?

- Construction is scheduled to start in late 2024 / early 2025 and last until 2028.
- Disturbances such as noise and dust are possible while heavy machinery is in operation.
- Sewage odors may also be present during construction. These temporary disturbances will be minimized as much as possible.

Where can I find more information?

If you would like further information, please call or email Timothy Blake, Treatment Plant Capital Improvements Department, at the Buffalo Sewer Authority at (716) 851-4664 or tblake@buffalosewer.org.

Our website has information about the Long Term Control Plan and current construction projects: **www.buffalosewer.org**

Buffalo Sewer Authority

1038 City Hall
65 Niagara Square
Buffalo, NY14202

Phone: 716-851-4664

Primary Treatment Renovation at Bird Island Wastewater Treatment Facility

Project Information

BUFFALO SEWER AUTHORITY

Why is the Buffalo Sewer Authority doing this project?

The Buffalo Sewer Authority is working together with the United States Environmental Protection Agency and the New York State Department of Environmental Conservation on a Long Term Control Plan (LTCP). The LTCP identifies projects that will improve water quality of local water bodies and waterways. This once in a generation project is part of the LTCP to improve the existing primary treatment system.

What are the project goals and community benefits?

- Protect Public Health and the Environment
- Improve Water Quality for the Niagara River
- Modernize the Treatment Facility with necessary upgrades
- Implement an Odor Control system for the Primary Sedimentation Tanks to mitigate odor emissions
- Commitment to Economic Growth with supplier diversity and local workforce

How is this project being funded?

The construction costs of this project are anticipated to be worth $70—$80 million. The project has received State and Federal Funding to ensure affordability to ratepayers.

What is included in the renovations?

1. Primary Sedimentation Tanks Upgrades
2. Sludge Pumping Station Upgrades
3. New Odor Control
4. New High-Rate Disinfection System
5. Bypass Structure Gates Replacement
6. Outfall 001 Repair

Buffalo Sewer Authority
1,389 followers
2mo •

This weekend the Buffalo Sewer Authority Outreach Team was at the Soulful Christmas Market hosted by the Michigan Street African American Heritage Corridor at Broadway and Michigan.

If you would like us to table at one of your events please contact us at 716-851-4664

Arthur Hall, M.U.P. and 20 others

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Today the Buffalo Sewer Authority hosted the Queen City Clean Waters Initiative Launch Media Event. Through this initiative, Buffalo Sewer is committed to modernizing our water infrastructure, increasing climate resilience, and enhancing public health for all residents. BSA employees, elected leaders, and community stakeholders came together at Freedom Park to learn more about the initiative and its benefits. Here are some photos from the launch.

69 2 reposts

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Buffalo Sewer Authority
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As part of our Scajaquada Creek and Smart Sewer project we have dug up a pipe at East Amherst and Bailey that at first appears to be wooden.
But what we found was that the pipe is actually concrete, but the original workers tunneled through clay and used two layers of wooden shoring to keep the tunnel from collapsing and then used that to form the new pipe.

Buffalo Sewer Authority
1,389 followers
5mo •

Today we had the pleasure of tabling at the Buffalo Police Departments B District Community Days at Front Park. It was a great opportunity to share information on upcoming projects with residents that came and give candy and coloring pages to the kids.

Buffalo Sewer Authority
1,389 followers
6mo •

The NACWA Utility Conference is this week. Today, Buffalo Sewer's own Preventative Maintenance Coordinator, Perry Pope, was part of the panel discussion "How Community Engagement Drives Better Outcomes... The Buffalo Case Study" along with Franchelle Parker, Executive Director of Open Buffalo, with Porsha Ari Parson as moderator. They were introduced by NACWA President and BSA General Manager O.J. McFoy.

39 1 comment

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Most relevant

Sheri L. Mooney • 2nd
Leader | Coach | Founder | Attorney
6mo

Great to see more National conferences happening here in Buffalo!

Like · 3 | Reply

RIVERROCK TIMES

Vol. 4 No. 1 | Thursday, February 29, 2024 | Covering the Northwest Corner of Buffalo

Scanlon wants USPS to reconsider sending postal functions to Rochester

Buffalo Common Council President Christopher P. Scanlon (pictured at right) sent a letter Feb. 23 to Postmaster General Louis DeJoy expressing his profound concerns over the potential relocation of certain functions from the United States Postal Service (USPS) Processing & Distribution Center on William Street in Buffalo to a Rochester facility.

In the letter, Council President Scanlon urges Postmaster DeJoy to reconsider any proposals "that could have negative effects on the Buffalo Processing & Distribution Center, our dedicated postal and letter carrier workforce, mail services to the City of Buffalo, our residents, and our Western New York region."

Scanlon wrote that the recent release of the USPS's initial findings concerning this matter has "raised considerable apprehension within our community."

He said Buffalo and Western New York heavily depend on efficient mail processing for various essential aspects of everyday life, including the timely delivery of paychecks, prescriptions, communica-

significant disruption to the current operations, such as relocating functions to the Rochester Processing and Distribution Center, could have far-reaching consequences.

He added, "Not only would this impact hundreds of jobs, but it would also disrupt the daily lives of residents in Buffalo and the surrounding regions.

"It's imperative to emphasize that Buffalo is the second largest city in New York State outside of New York City. Additionally, recent projections from Zillow indicate that Buffalo's housing market is poised to be one of the most competitive among 50 major cities this year. Such rapid growth underscores the critical need for reliable and efficient mail services in our region."

Scanlon urged the postmaster to reconsider any proposals "that could have negative effects on the Buffalo Processing and Distribution Center, our dedicated postal and letter carrier workforce, mail services to the City of Buffalo, our residents, and our Western New

BSA set to begin four-year renovation project

Buffalo Sewer Authority rendering shows areas to be addressed. *buffalosewer.org*

by Roxie Harbison

The Buffalo Sewer Authority presented information regarding the Primary Treatment Renovation of the Bird Island Wastewater Treatment Facility at a well attended and informative Rediscover Riverside meeting at St. Mark's, 256 Riverside Ave. on Feb. 22.

The guest speakers were Walt Walker, consultant, and Rosaleen Nogle, BSA project engineer.

The renovation work will begin from Freedom Island and continue to Unity Island. The treatment facility built in 1938 needs an upgrade to improve water quality and reduce odors. Upgrading the facility will cost $70-$80 million.

The project will include the use

have more contact with the bleach.

The BSA will also be installing an odor control system from the tanks. This new technology reportedly filters out the odors. The current tanks and outflow pipes are still in pretty good condition.

The goals of the renovation, according to the speakers, are to protect public health, improve water quality, modernize the water treatment facility, and implement odor control. They will be keeping the original yellow brick on the outside of the facility while upgrading the inside.

Funding for the repairs will come from grants (both state and federal) and low interest loans. Construction will be from 2024 to 2028. Related items discussed included:

detour route is planned involving Niagara St.

• Buffalo Sewer Authority is also working to reduce flooding and back flows into households. It was recommended that if residents have a basement flood to call 311 first. Let the BSA check the problem.

• Storm water receivers are the sewer drains that seem to fill up with trash. There is a 2 foot difference between the bottom of the receiver and the water pipe. Debris collects in the bottom and it requires a 4-man crew to clean it up…twice a year.

• Right now the work at Hertel & Niagara streets is just sewer line replacement work.

• Tours are available of Bird Island.

• The BSA has two other large

Operationalizing Equity

Case Study: Buffalo Sewer Authority Queen City Clean Waters (Long-Term Control Plan)

October 08, 2024

Learning Objectives:

Recognize historical challenges and ethical dilemmas in equitable projects planning.

Explore publicly available tools and data points to enhance equitable project approaches.

Evaluate equity outcomes in infrastructure projects planning

Engage in reflective discussion on current industry best practices for promoting equity, sharing insights and experiences.

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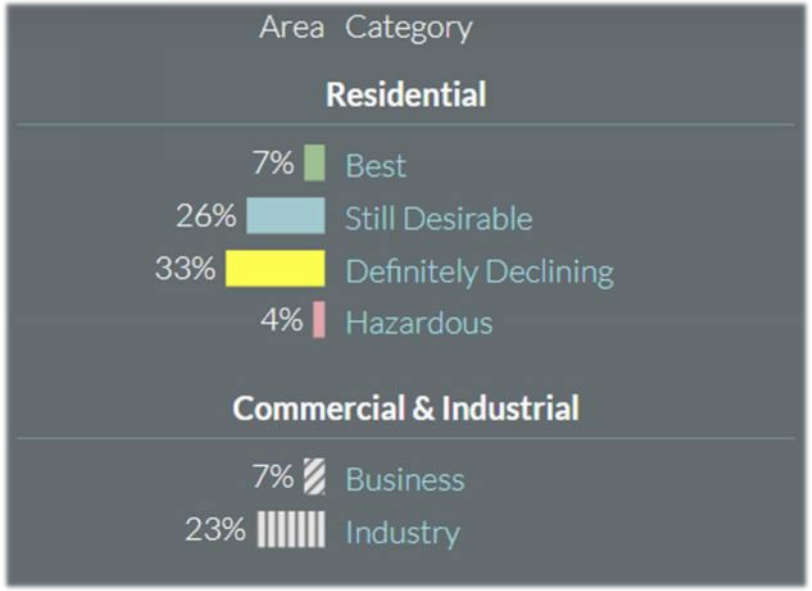
Redlining at work in Buffalo - 1937 federal underwriting map



The third version of *Mapping Inequality: Redlining in New Deal America*

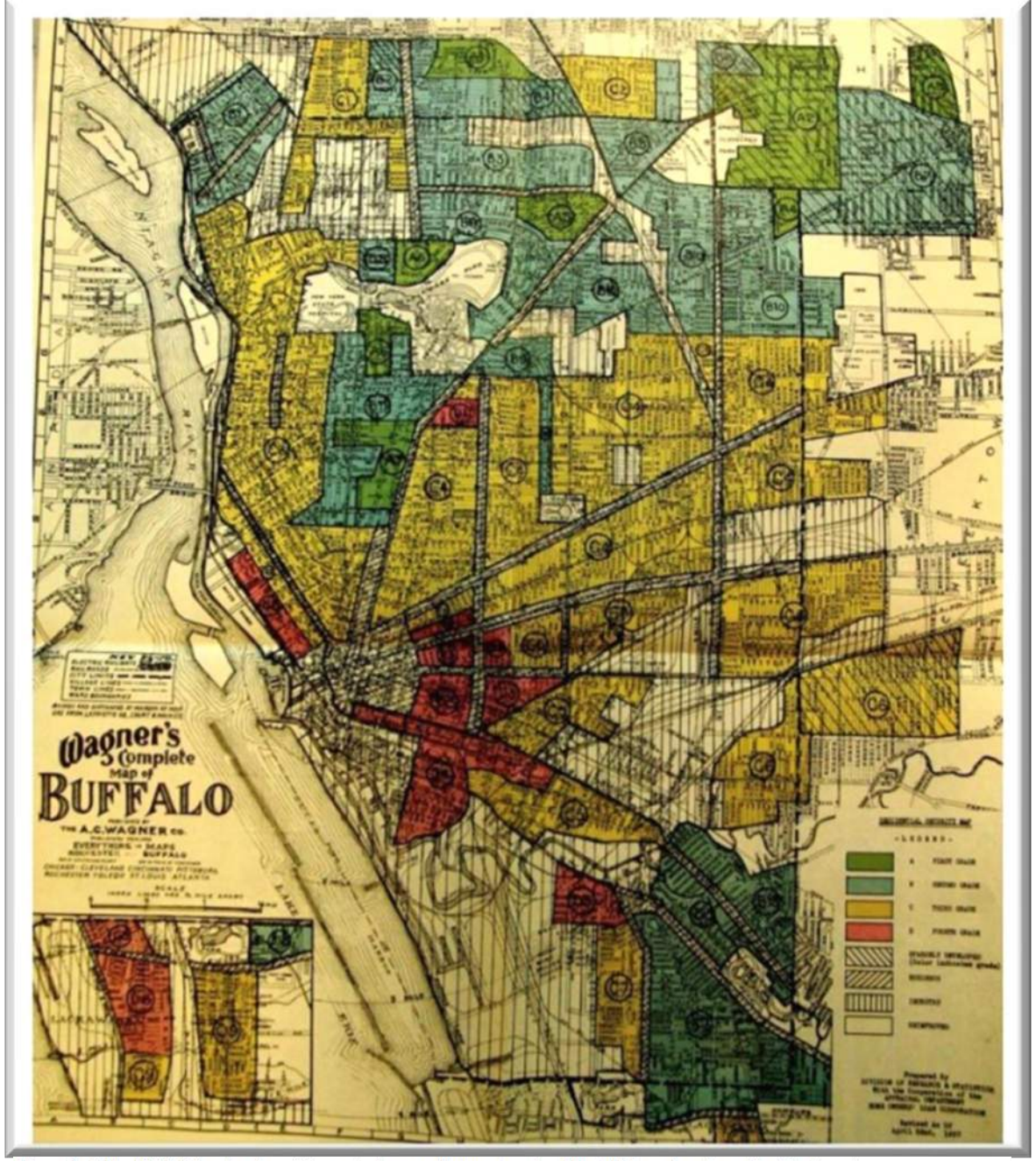


Figure 1. This 1937 federal underwriting map shows redlining at work. Most African Americans lived in the red zones.
Source: Residential Security Map, Buffalo, N.Y., City Survey File. Record Group 195. National Archives II, College Park MD.
Image courtesy of Carl Nightingale

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Consequences of Lack of Equity

***Environmental Injustice*:** Increased pollution, older housing stock, and the heightened presence of brownfields

Health Inequity: High risk of pollution related diseases, food deserts, and lower life expectancy

Vulnerable Communities: limited access to job and education opportunities

Buffalo's mayor has a plan to demolish about half of the city's vacant houses, like these two on Lombard Street. Credit...Doug Benz for The New York Times

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Environmental Justice factors included as Part of Projects Prioritization for Queen City Clean Waters (QCCW)

51 Projects to mitigate Combined sewer overflow events, comply *with water quality requirements,* and maximize project benefits to the community:

- Green Infrastructure
- Sewer Improvements & Modifications
- Real-Time Control Smart Sewers
- Combined Sewer Overflow (CSO) Storage

Ranking Criteria

- **Sewer Patrol Point (SPP) Overflow Volume Rank**
- **Water Body Ranking**
- **SPP Project Rank**
- **Construction Priority**
- **CSO Cost Effectiveness**
- **Environmental Justice**

Note: All parameters were given equal weight except for the water body rank, which was weighted 1.1 times higher than the other factors.

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Equity and EJ Considerations – Data Points

Designated Disadvantaged Community

Source: DAC Are state defined. State Law (State Drinking Water Act)

Examples: Intended Use Plan; Regulations

Socio-Economic Data

Source: Census Tract Data

Examples: Median Household Income; Density; Education; Age; Affordability

Economic Growth Focus Areas

Source: Federal, State, and Local designated communities

Examples: Opportunity Zones; Empowerment Zones

Environmental Justice Analysis

Source: Climate and Economic Justice Screening Tool (CEJST), EPA Environmental Justice Screening Tool (EJScreen)

Examples: Historically underserved and overburdened communities

Customer and Operational Data

Source: Utility

Examples: CSOs; SSOs; Consent Decrees; Customer assistance; delinquent accounts; Affordability

Additional Environmental Concerns/Citations

Source: Varies

Examples: Floods; tree canopies/energy burden; etc.

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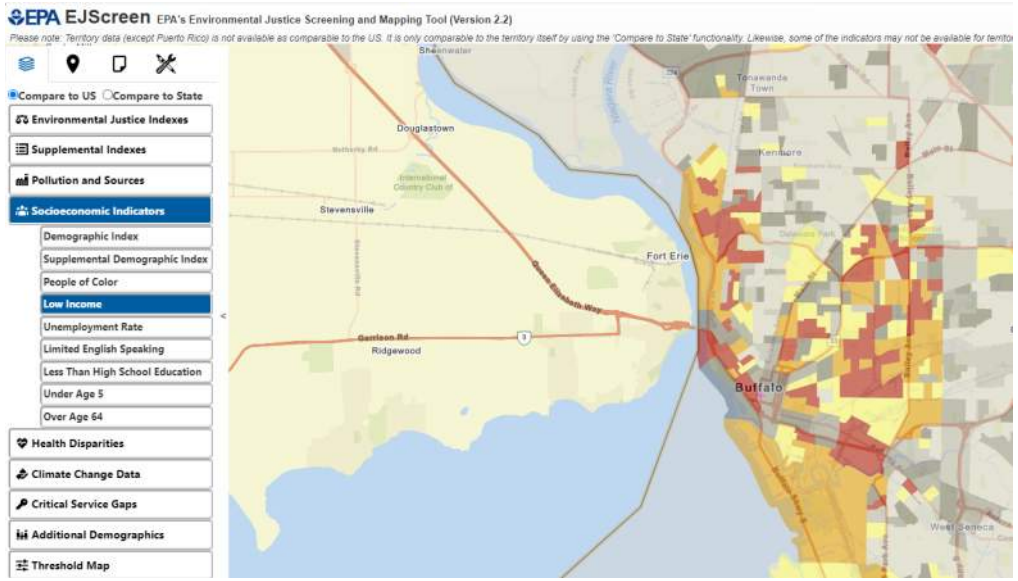
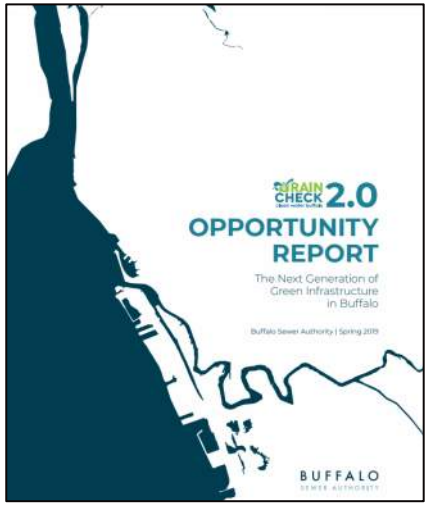
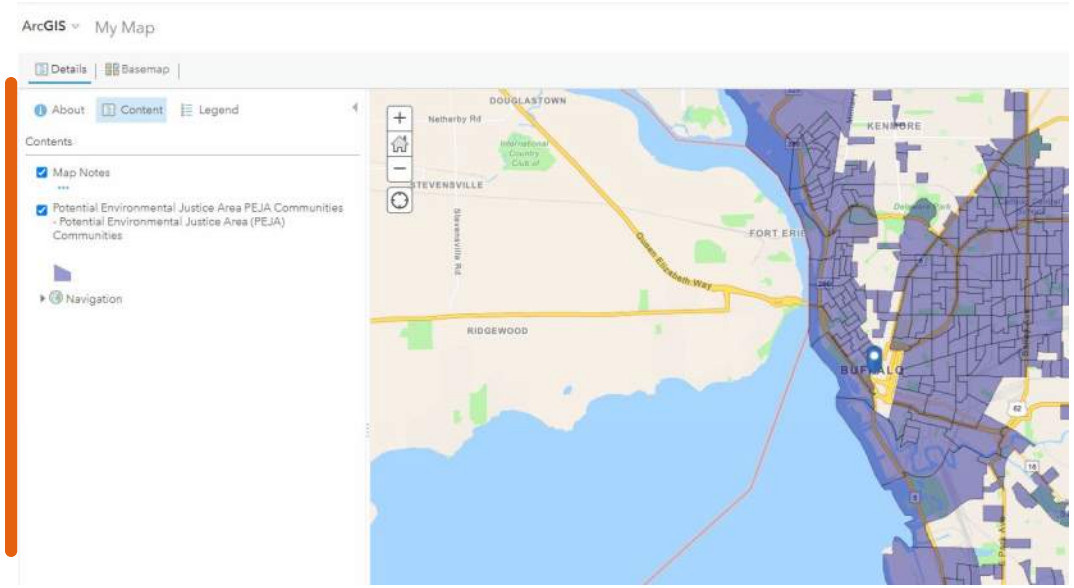
Queen City Clean Waters Environmental Justice Data Point Selection



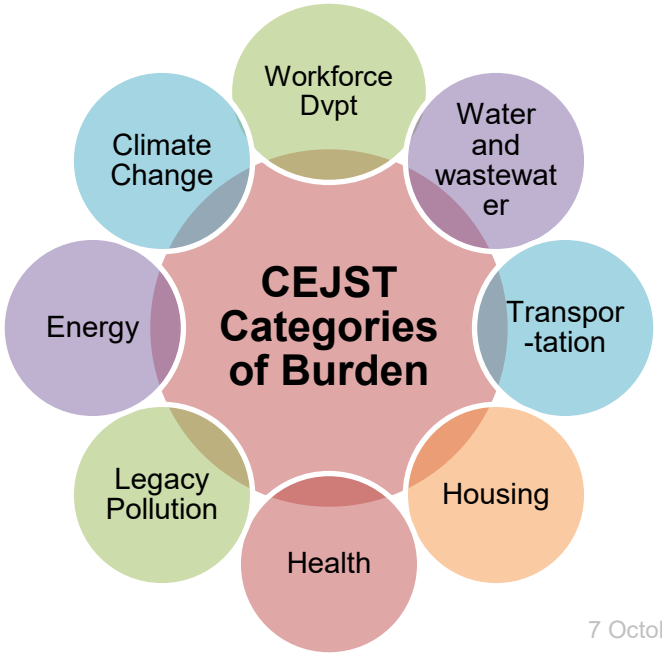
EPA EJScreen: Environmental Justice Screening and Mapping Tool



Buffalo Sewer Authority, "Rain Check 2.0 Opportunity Report"



NYS Potential Environmental Justice Areas (PEJAs)



Council on Environmental Quality – Climate and Economic Justice Screening Tool

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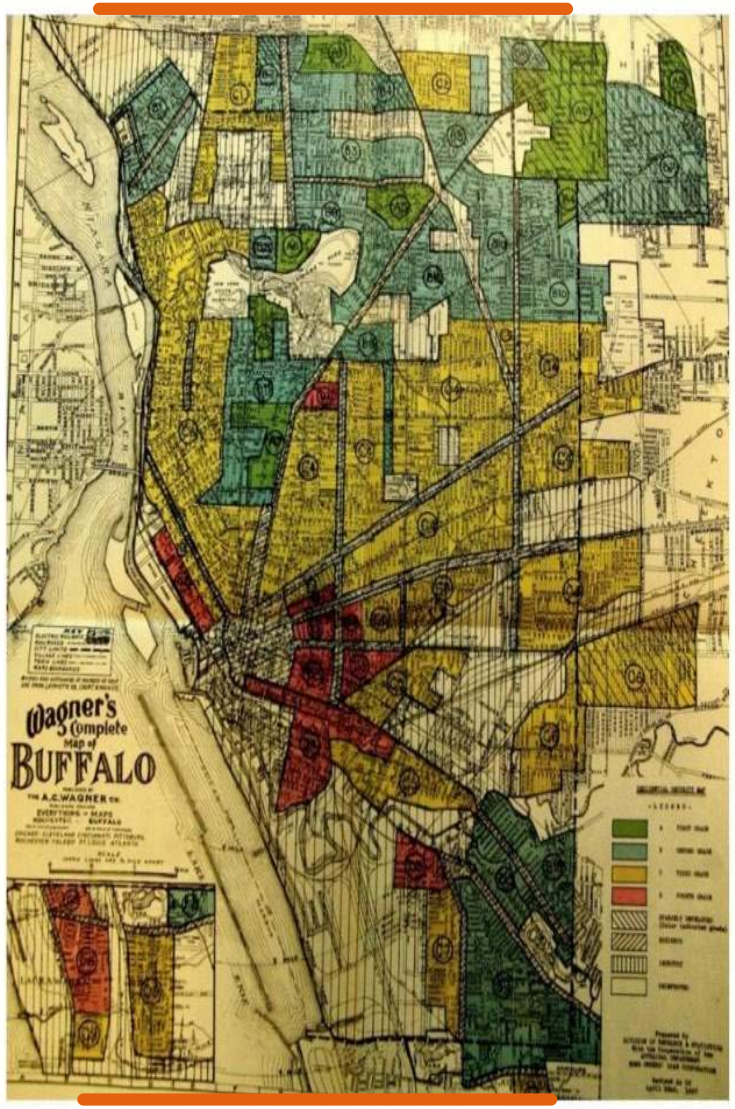
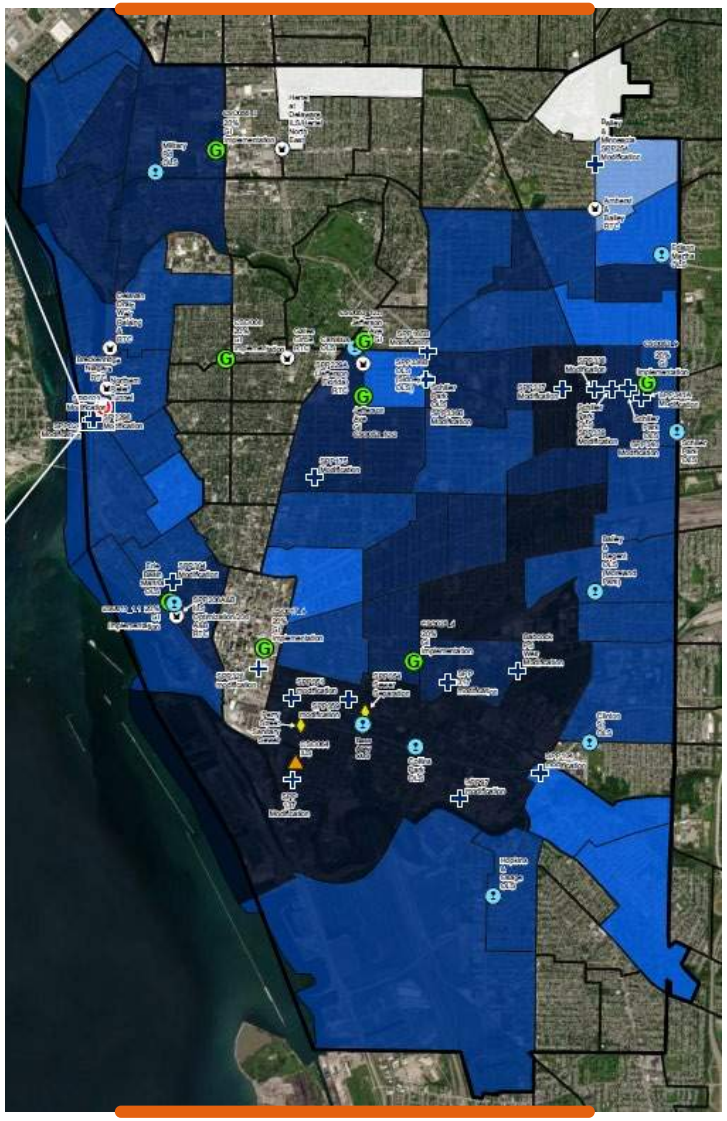
Environmental Justice Disadvantage Mapping





Legend

Disadvantage Rating

- 0
- 1
- 2
- 3
- 4
- 5
- 6

* Disadvantage Ratings of 7 & 8 were not observed in the City of Buffalo.

Project Type

- Green Infrastructure
- In-Line Storage
- Off-Line Storage
- Real Time Control
- SPP Modification
- Sewer Separation
- Tunnel
- City of Buffalo Boundary

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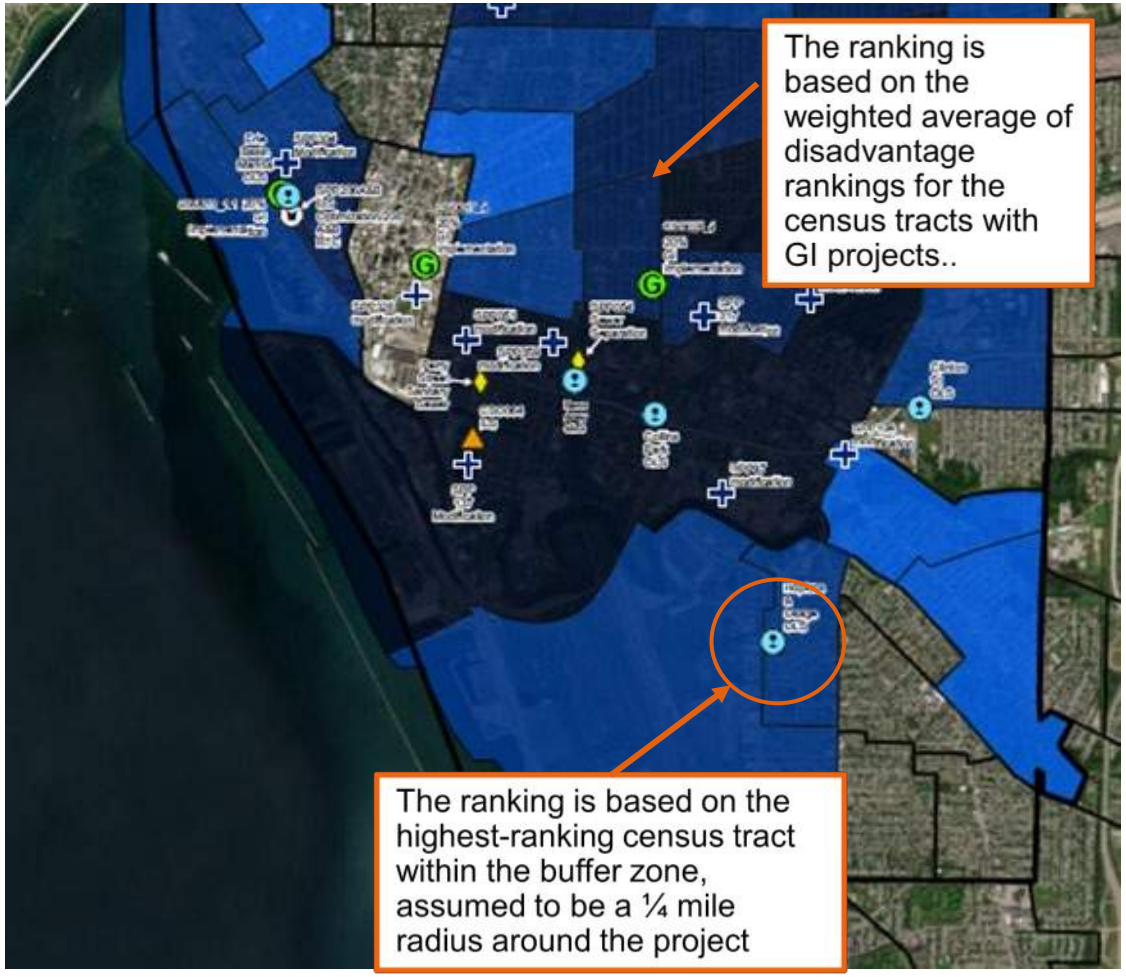
Disadvantage Rankings Calculations

Assessing Disadvantage Ranking:

- Observed disadvantage rankings range from 0 to 6
- Projects' locations plotted on the disadvantaged community map to calculate their respective rankings.

Approaches for Ranking Calculation:

- Green Infrastructure (GI) Projects:
- Other Projects (OLS, RTC, ILS, SPP Modifications):



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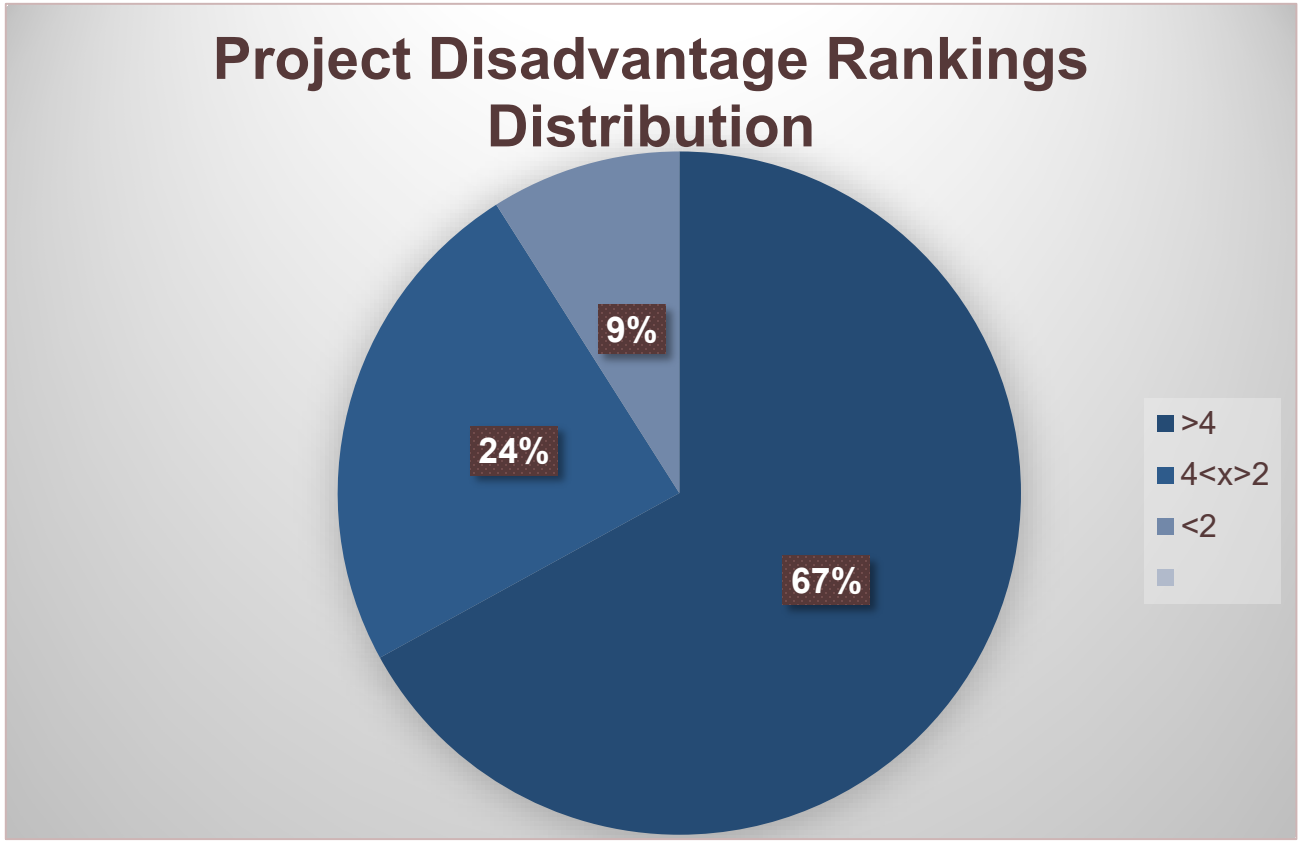
Results and Next Step



Conclusion:

The evaluation of disadvantage rankings provides several key insights:

- Increased awareness of the *impacts* on disadvantaged communities
- *Prioritization* of projects in vulnerable communities
- Guidance for *community engagement* efforts
- Promotion of equitable project implementation

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Equity Best Practices - DEC Enhanced Public Participation Plan

NYSDEC Commissioner Policy 29

- Enacted 3/19/2003
- Applicants for certain major ECL permits with environmental impact in or near a Potential Environmental Justice Area (PEJA)
- Geared towards discrete project site and short time-line
- Requires identification of stakeholders and deliberate outreach to them "Enhanced Public Participation Plan"

9/27/2023 Draft CLCPA Policy issued

- Climate Leadership and Community Protection Act (CLCPA),
- Preventing disadvantaged communities from being disproportionately affected by greenhouse gas (GHG) or co-pollutant emissions;
- All applicants under policy will need to prepare Enhanced Public Participation Plan

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Equitable Outcomes

- Prioritizing Projects in neighborhoods with greatest environmental justice concerns earlier
- Targeted Community Outreach and development of a Community Advisory Committee
- Workforce development and Green Infrastructure limited to neighborhoods with highest burdens
- Community benefit projects as requirement moving forward
- Credits for low and fixed income residents

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Key Takeaways

Equity Practices are important in promoting community wellbeing and benefits,

Disadvantage rankings can be used to prioritize projects in vulnerable communities. *Remember: Equity looks different for different communities*

Stakeholder engagement is important for achieving equitable outcomes

Inclusive planning includes articulating project goals, identifying equity gaps, and engaging all members of the community.

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Discussion on current industry best practices for promoting equity

1. What other data sources or tools do you use to assess social and economic dynamics in your project areas?
2. How do you ensure that community feedback is actively incorporated into project designs, especially when dealing with tight deadlines
3. What strategies have you found successful in overcoming barriers to participation in disadvantaged communities?
4. How have you made the case to leadership or funders that equity-focused projects can also provide cost benefits in the long run?
5. What are some lesser-known indicators you've found useful in measuring the success of equity-focused initiatives?

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Thank You!

Rosaleen Nogle, PE, BCEE, BC. WRE, CFM
Principal Sanitary Engineer
rnogle@buffalosewer.org

Nadia Mugisha, PE, PMP, CDT
Water Resources Engineer
Nadia.Mugisha@arcadis.com

Karyn Riley, Esq.
Water Equity and Social Impact Practice Lead
Karyn.Riley@arcadis.com

Kristina Macro, PE
Project Manager
kristina.macro@xylem.com

BUFFALO
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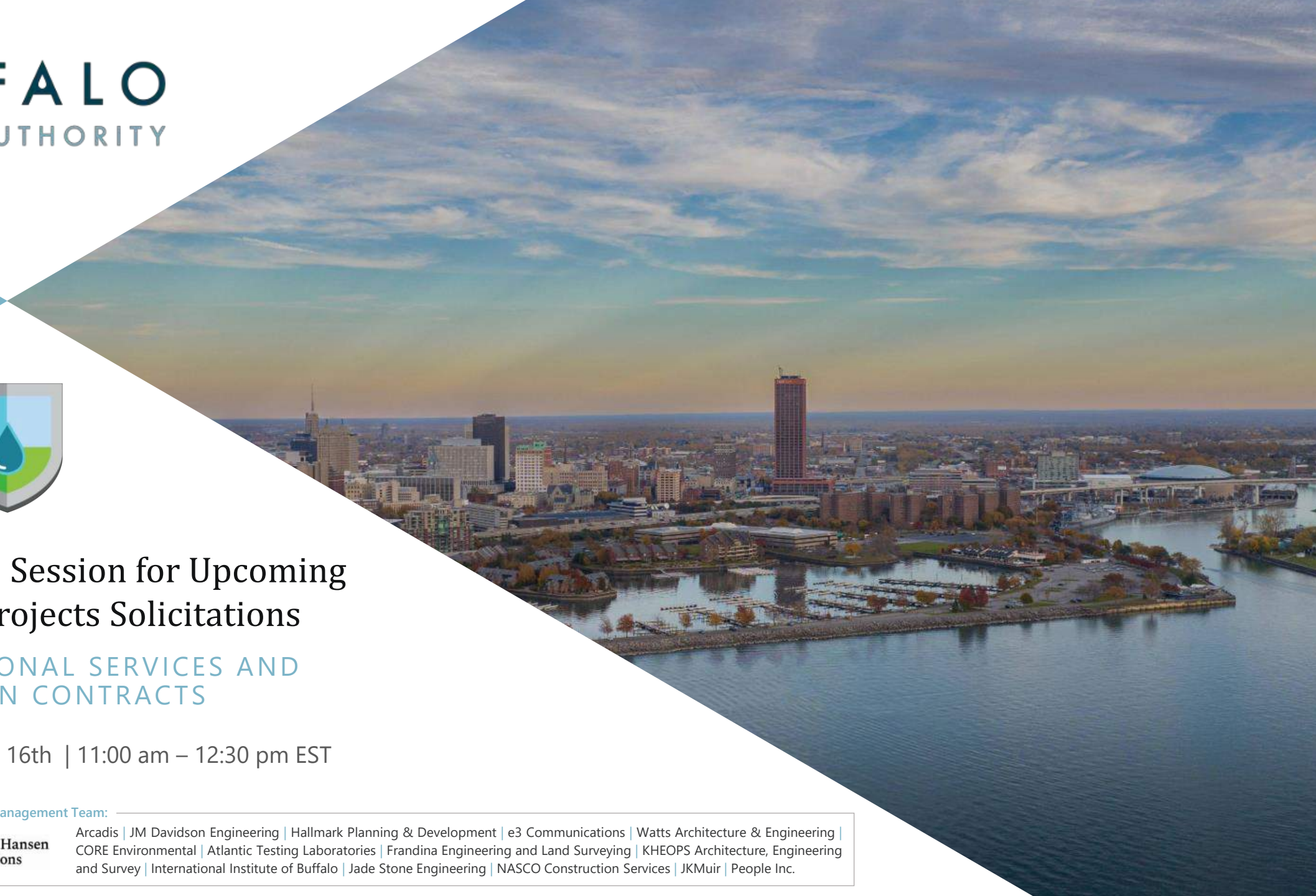


Informational Session for Upcoming BSA Capital Projects Solicitations

FOR PROFESSIONAL SERVICES AND CONSTRUCTION CONTRACTS

Wednesday, October 16th | 11:00 am – 12:30 pm EST

BSA Capital Projects Program Management Team:

TYLin | Greeley and Hansen Water Solutions

Arcadis | JM Davidson Engineering | Hallmark Planning & Development | e3 Communications | Watts Architecture & Engineering | CORE Environmental | Atlantic Testing Laboratories | Frandina Engineering and Land Surveying | KHEOPS Architecture, Engineering and Survey | International Institute of Buffalo | Jade Stone Engineering | NASCO Construction Services | JKMuir | People Inc.

Agenda

- Opening Remarks
- Buffalo Sewer Authority's Queen City Clean Waters Overview
- Upcoming Capital Projects
- D/M/WBE Requirements & Certifications
- Community Benefits Program
- Consultant Proposals & Requirements
- Construction Bid Solicitations & Requirements
- Feedback and Q&A Session

Opening Remarks

Online Meeting

Microphones Muted

Utilize the Chat Feature

Live Q&A

Recorded Meeting

Closed Caption

The presentation and attendee list will be shared with all attendees.

Presenters

OWNER

BUFFALO SEWER AUTHORITY

Rosaleen Nogle, PE, BCEE
Principal Sanitary Engineer

PROGRAM MANAGEMENT TEAM

TYLin

Walt Walker, PE, ENV SP
Program Director

JMDavidson Engineering, D.P.C.

Jaime Davidson, PE
Collections System Advisor

Buffalo Sewer's *Queen City Clean Waters*

BUFFALO SEWER AUTHORITY

QUEEN CITY CLEAN WATERS

VISION

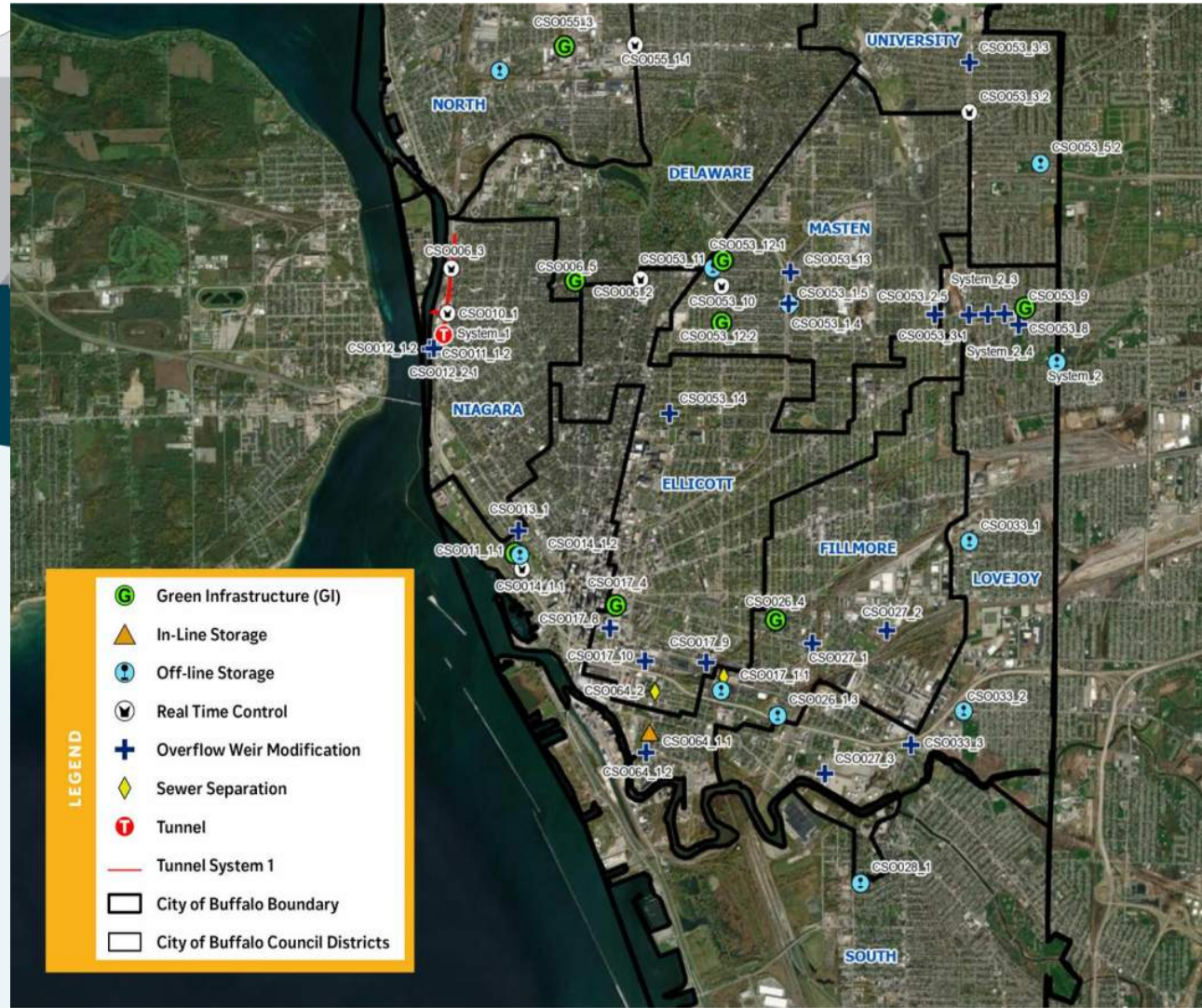
Clean waters and a resilient Buffalo.

MISSION

To safeguard public health and the environment while fostering strong community partnerships, creating meaningful workforce opportunities, and driving lasting economic impact for future generations in the City of Buffalo.

Queen City Clean Waters

PROGRAM OVERVIEW



buffalosewer.org/construction-projects/queen-city-clean-waters/

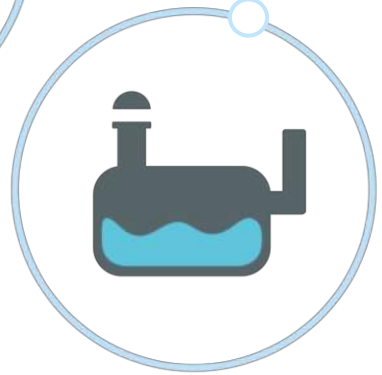
Types of QCCW Projects

$

Projects to be funded through a combination of:

Federal and state funding administered through NYSEFC and NYSDEC (grants, zero to low interest loans), Environmental Impact Bond, and BSA capital budget

Bird Island Treatment Facility Upgrades



Combined Sewer Offline Storage

Real-time Control Smart Sewers and Sewer Improvements & Modifications

Green Infrastructure (GI)

BUFFALO SEWER AUTHORITY

Upcoming QCCW Capital Projects for 2024 - 2025

- **PROFESSIONAL SERVICES (DESIGN CONSULTANT RFP)**
- **CONSTRUCTION SERVICES (INVITATION TO BID)**

Upcoming Projects – Overflow Weir (Sewer Patrol Point) Modifications

PROJECT NAME	LOCATION	TYPE OF CONTRACT	ESTIMATED DATE OF ADVERTISEMENT	OPINION OF PROBABLE CONSTRUCTION COST	PROJECT DESCRIPTION
CSO053_2.5 SPP337 Modification	Colorado & Scajaquada	Construction	Q3 2025	$12,000,000	• New diversion chamber • 50'+ drop shaft
CSO053_8 SPP341A Modification	Kerns & Genesee	Construction	Q3 2025	$6,500,000	• Additional of 18" diameter underflow pipe • Raise overflow weir • 50'+ drop shaft
CSO053_3.1 SPP338 Modification	Bailey & Kerns	Construction (Multiple sites as a single contract)	Q3 2025	$4,000,000	• Underflow orifice would be enlarged • Raise overflow weir & length increased to 30 ft
CSO053_1.5 SPP336B Modification	Humboldt & Lark				• Remove orifice plate • Raise overflow weir
CSO053_13 SPP165B Modification	Humboldt & Delavan				• Upsize underflow orifice / new junction chamber • Upsize underflow pipe to 36" (~1,000LF) • Raise overflow weir
CSO053_14 SPP175/ 176/ 177 Modification	Michigan & Dodge- Riley-Glenwood				• Raise 3 weirs

CSO053_2.5 SPP337 Modification

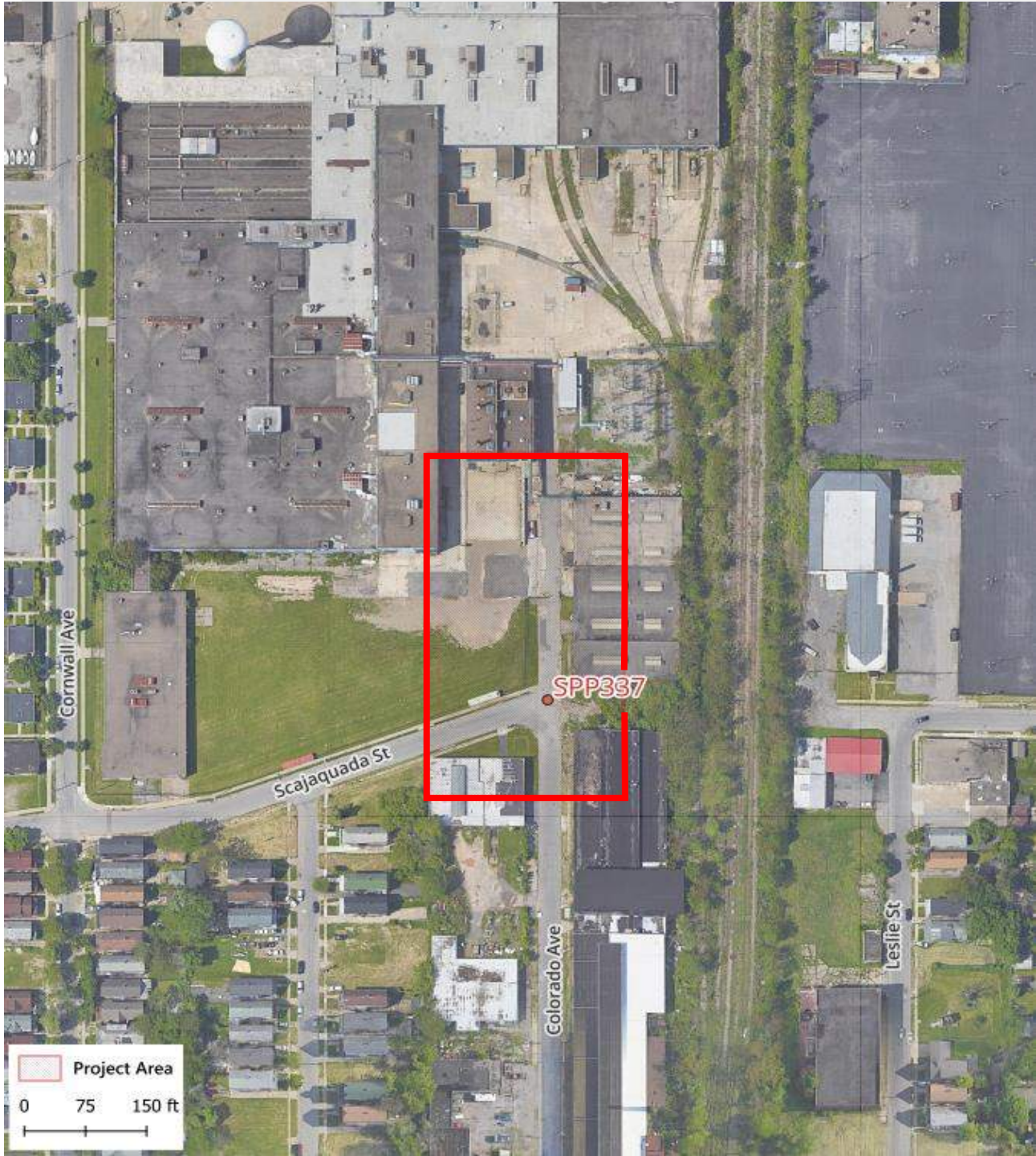
Location: Colorado & Scajaquada

Project Description:

– New diversion chamber

– New drop shaft ~50-55 ft deep to Scajaquada Tunnel.

Bid Release Date: Q3 2025



CSO053_8 SPP341A Modification

Location: Kerns & Genesee

Project Description:

– Additional 18” underflow pipe

– Raise the overflow weir

– New drop shaft ~50-55 ft deep to Scajaquada Tunnel.

Bid Release Date: Q3 2025

CSO053_3.1 SPP338 Modification

Location: Bailey & Kerns

Project Description:

– Enlarge underflow orifice

– Raise and lengthen weir

Bid Release Date: Q3 2025

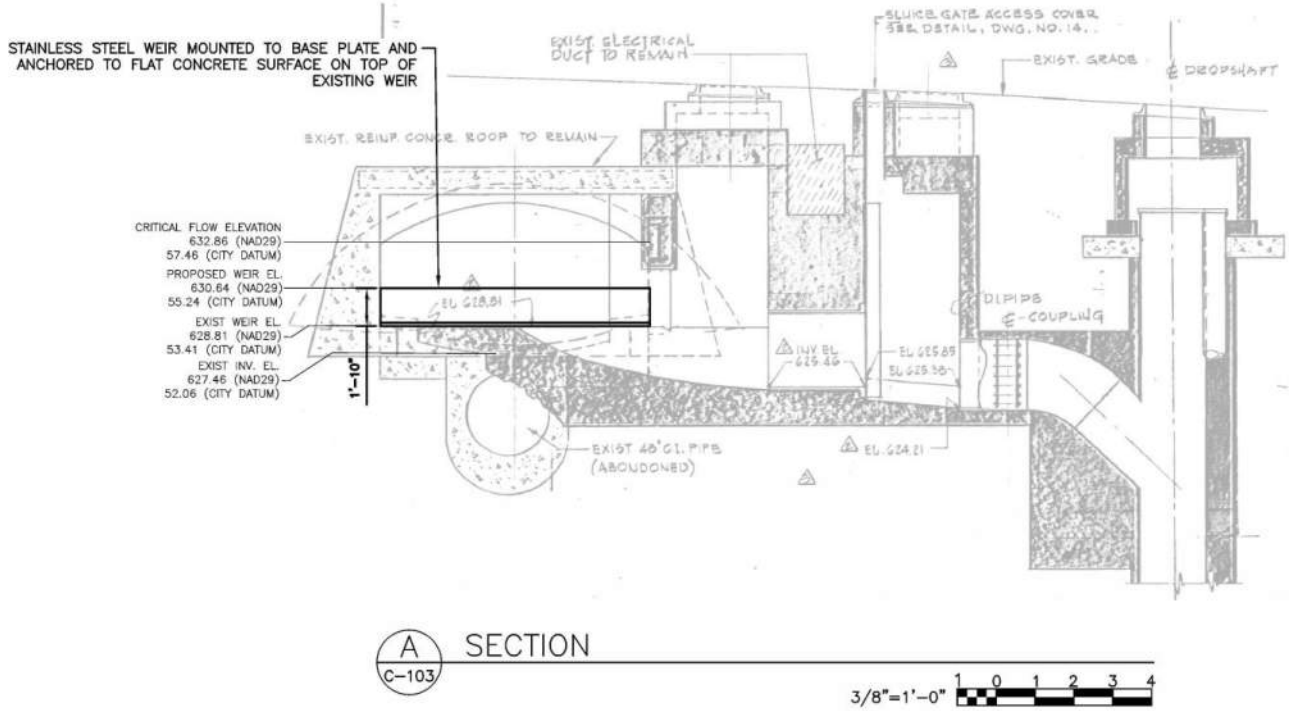
CSO053_1.5 SPP336B Modification

Location: Humbolt & Lark

Project Description:

- Remove the underflow orifice plate
- Raise the overflow weir

Bid Release Date: Q3 2025



*Sketch for illustrative purposes only and not representative of final design.

BUFFALO SEWER AUTHORITY

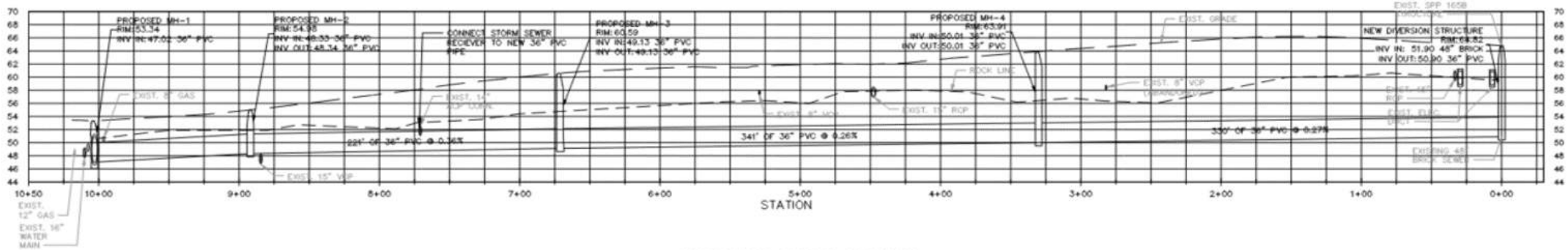
CSO053_13 SPP165B Modification

Location: Humboldt & Delavan

Project Description:

- Install new junction chamber
- Upsize the underflow pipe (on East side Humboldt from E. Delavan to Northland)
- Raise the overflow weir

Bid Release Date: Q3 2025



PROPOSED SEWER PROFILE

HORIZONTAL: 1"=40'

VERTICAL: 1"=5'

CSO053_14 SPP175/ 176/ 177 Modification

Location: Michigan & Dodge – Riley – Glenwood

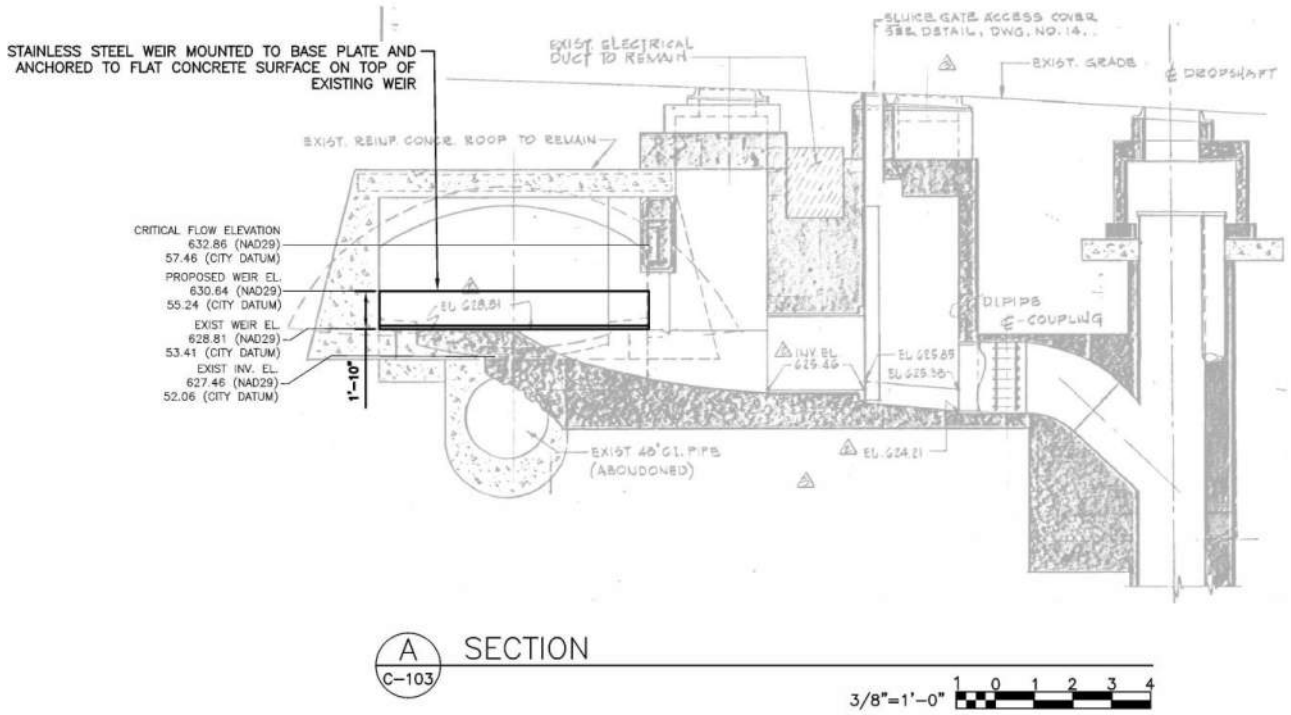
Project Description:
Raise weirs at:

– SPP175 (Dodge St & Michigan Ave)

– SPP176 (Michigan Ave & Riley St)

– SPP177 (Michigan & Glenwood Aves)

Bid Release Date: Q3 2025



*Sketch for illustrative purposes only and not representative of final design.

BUFFALO SEWER AUTHORITY

Upcoming Projects – Facility and Offline Storage

PROJECT NAME	LOCATION	TYPE OF CONTRACT	ESTIMATED DATE OF RFP/ BID ADVERTISEMENT	OPINION OF PROBABLE CONSTRCTION COST	PROJECT DESCRIPTION
Sidney & Lark Offline Storage (OLS)	Sidney St & Lark St	Design	Q4 2024	$27,720,000	• 3.26 MG Tank under city-owned vacant lots • Dewater via gravity to the Scajaquada Tunnel Interceptor
Edison & Martha Offline Storage (OLS)	Edison & Martha	Design	Q1 2025	$37,240,000	• 2.61 MG tank under Roosevelt Park • Dewater via gravity to the Edison Avenue trunk sewer.
Breckenridge St CSO Control Project	Breckenridge St & West Ave	Construction	Q1 2025	$20,000,000 - $25,000,000	• Replace and reverse slope of Breckenridge St sewer to discharge to new sewer on West Ave • New West Ave line will connect to a new drop-pipe manhole structure at Scajaquada Tunnel at West Ave and Lafayette Ave. • New Breckenridge St line will reroute to Herkimer St to West Ave
Raw Wastewater (RWW) & Settled Wastewater (SWW) Pump Station Rehab	Bird Island WWTF	Construction	Phase 1: Q1 2025 Phase 2: Q3 2025	$15,000,000-$20,000,000 each	Pump and valve rehabilitation, impeller replacements, roof repairs, instrumentation & control improvements, electrical upgrades
South Buffalo Pump Station Rehab	Bailey Ave & Old Bailey Ave	Construction	Q3/Q4 2025	$20,000,000-$25,000,000	Process mechanical, structural, architecture, HVAC, electrical, sitework
Primary Treatment Renovation – Contract B (Rebid)	Bird Island WWTF	Construction	Q3 2025	$60,000,000 - $70,000,000	New High-Rate Disinfection Chlorine Contact Tank, High-Rate Disinfection Building, renovations to the existing Outfall Structure 001, HRD Influent and Effluent Conduits, modifications to the existing Bypass and Control Chamber and Primary Bypass Junction Chamber and gates.

CSO053_1.4 3.26 MG Sidney & Lark OLS

Location: Sidney St & Lark St

Project Description:

- 3.26 MG underground tank
- Corner of Sidney Street and Lark Street (city owned vacant lots)
- Dewater via gravity to the Scajaquada Tunnel Interceptor

RFP Release Date: Q4 2024

CSO053_5.2
Edison & Martha OLS

Location: Edison Ave & Martha Ave

Project Description:

– 2.61 MG buried concrete tank

– Diversion structure

– Tank inlet and outlet sewers

RFP Release Date: Q1 2025

Breckenridge St CSO Control Project

(FORMERLY BRECKENRIDGE & NIAGARA RTC)

Location: Breckenridge St & West Ave to Lafayette Ave & West Ave

Project Description:

- Replace and reverse slope of Breckenridge St sewer to discharge to new sewer on West Ave
- New West Ave line will connect to a new drop-pipe manhole structure at Scajaquada Tunnel at West Ave and Lafayette Ave.
- New Breckenridge St line will reroute to Herkimer St to West Ave

Bid Advertisement Date: Q2 2025

Estimated Cost: $20M-$25M

BUFFALO SEWER AUTHORITY

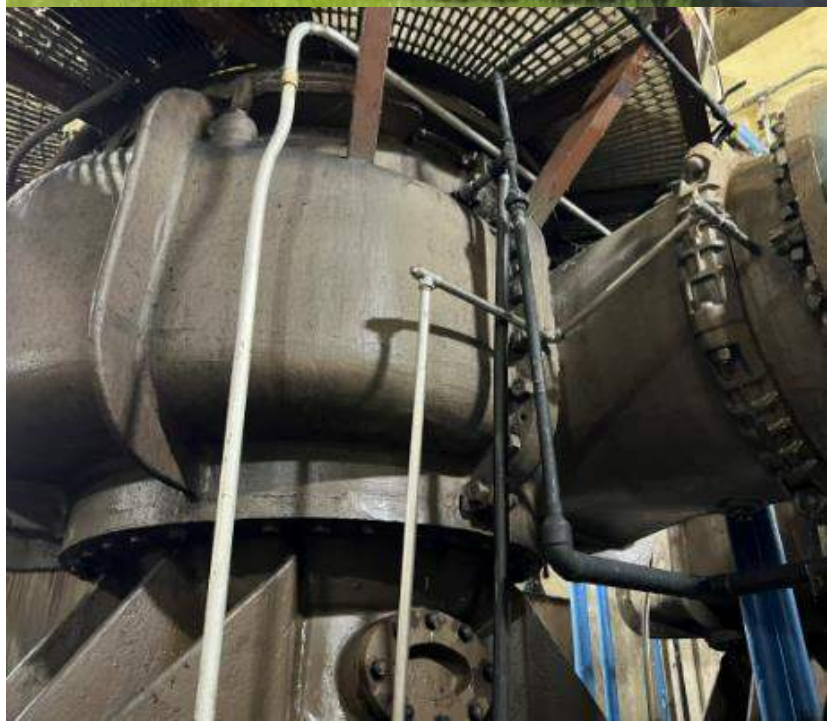
South Buffalo Pump Station Upgrades

Project Description:

- Pump rehabilitation
- Seal water improvements
- Discharge chamber improvements
- HVAC system replacement
- Comprehensive structural & architectural rehabilitation
- Control room improvements
- Enhanced equipment removal
- Comprehensive control system upgrades
- Supporting plumbing, site, and electrical work

Bid Advertisement Date: Q3/Q4 2025

Estimated Cost: $20M - $25M



BUFFALO
SEWER AUTHORITY

Raw Wastewater (RWW) & Settled Wastewater (SWW) Pump Station Upgrades Phase 1 & Phase 2

Project Description:

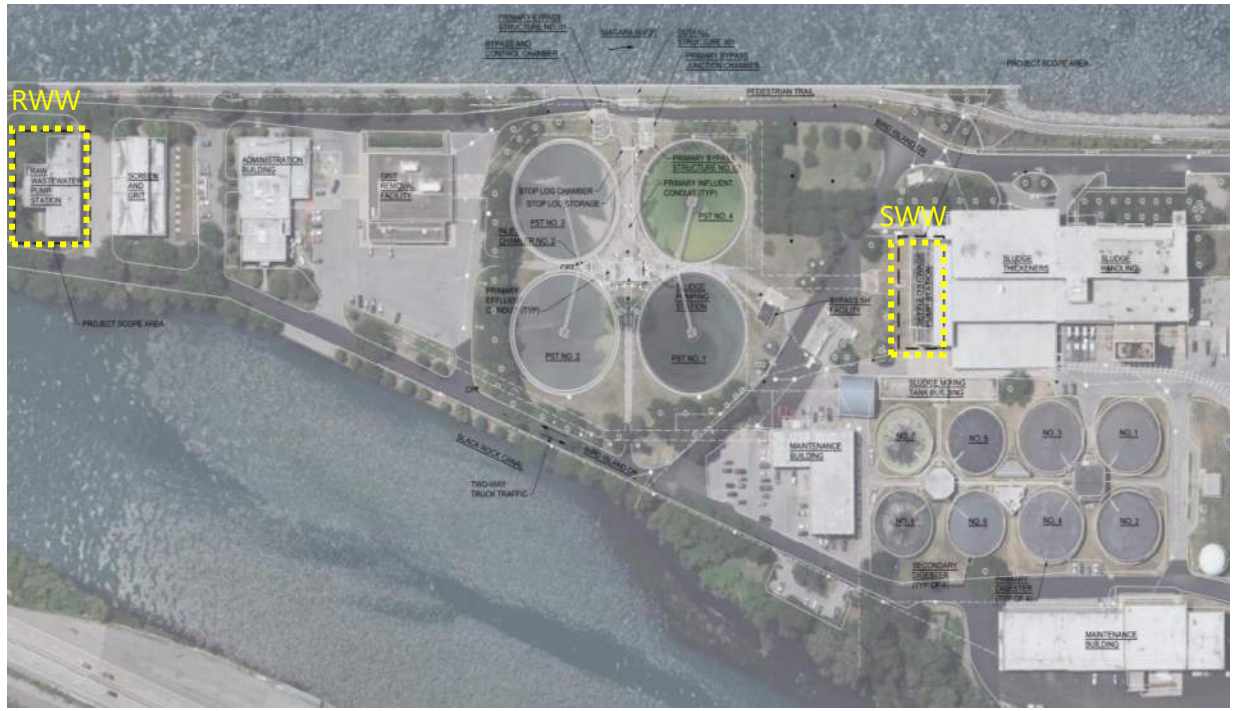
The Bird Island Wastewater Treatment Facility, including the RWW operational since 1938, initially served as a primary treatment plant.

Secondary treatment facilities, including SWW were added in the late 1970s due to the Clean Water Act and became operational in 1981.

The project's goal is to restore full pump capacity to these aging pump stations.

Work includes the following:

- Mechanical – Pump and Valve Rehab and Vacuum Priming System
- Electrical – Motor Rehab;
- Instrumentation & Controls – Pump Controls upgrade; and
- Structural/Architectural – Roof Replacement/repair



Bid Advertisement Date: Phase 1 – Q1 2025 | Phase 2 – Q 3 2025

Estimated Cost: Phase 1 - $15M - $20M | Phase 2 - $15M - $20M

BUFFALO SEWER AUTHORITY

Primary Treatment Renovation – Contract B (Rebid)

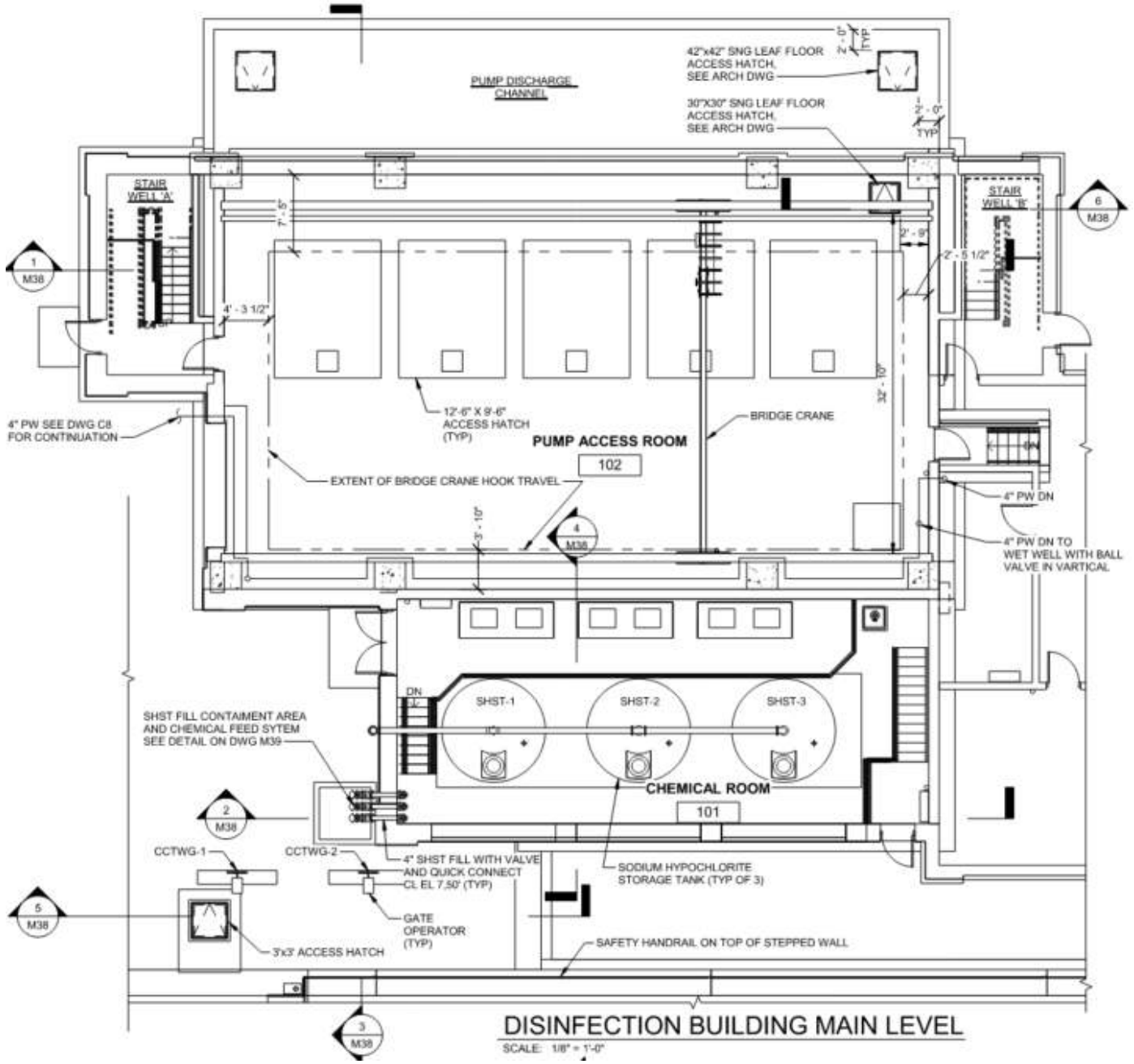
- New High-Rate Disinfection (HRD) Chlorine Contact Tank and High-Rate Disinfection (HRD) Pump Station Building
- New connection and renovations to the existing Outfall Structure 001, HRD Influent and Effluent Conduits
- Modifications to the existing Bypass and Control Chamber and Primary Bypass Junction Chamber
- Replacement of gates at the Bypass and Control Chamber, Primary Bypass Structure No. 1 and 2.
- Update: Gate WW-17 replacement now to be performed under a separate contract.
- **Bid Advertisement Date:** Q3 2025
- **Estimated Cost:** $60M-$70M

Future Rendering of New HRD Facility (left side) at Bird Island WWTF

BUFFALO SEWER AUTHORITY

HRD Pump Station

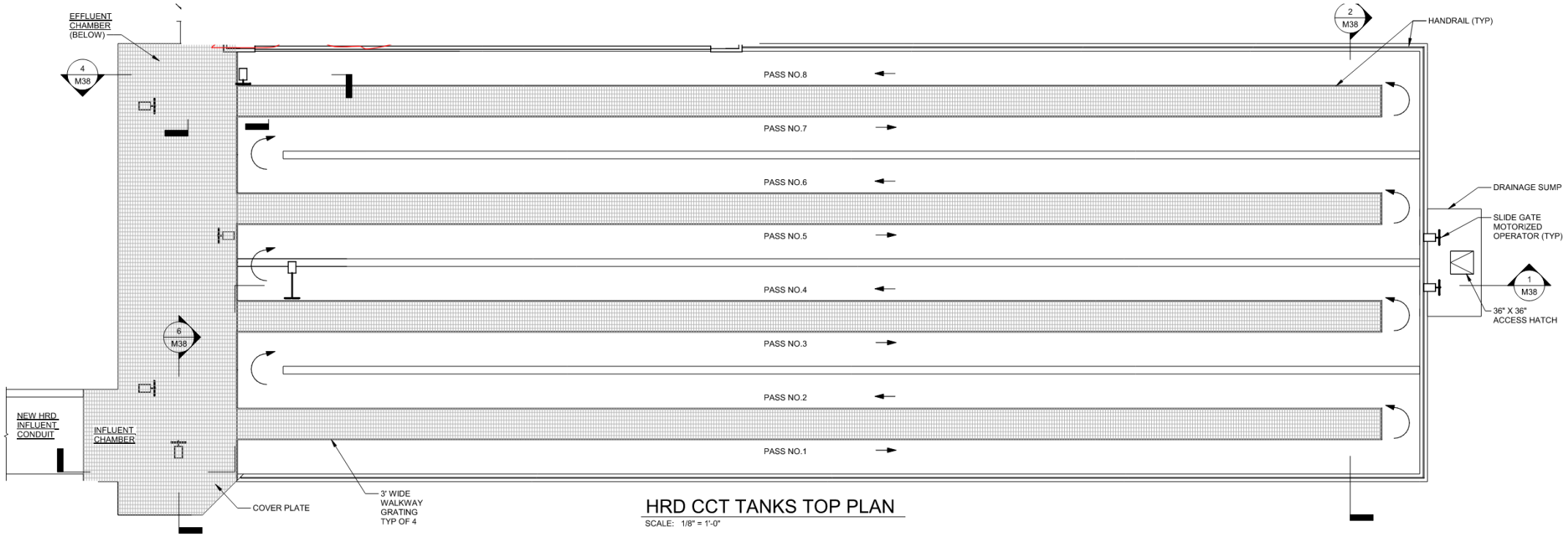
- Pumping Station
  - 160 MGD firm capacity
  - Five (5) 40 MGD Submersible Pumps
  - 3 Pumps on VFD, 2 constant speed
- Chemical Feed and Storage
  - Three (3) 11,200 gallon storage tanks
  - Chemical feed pumps

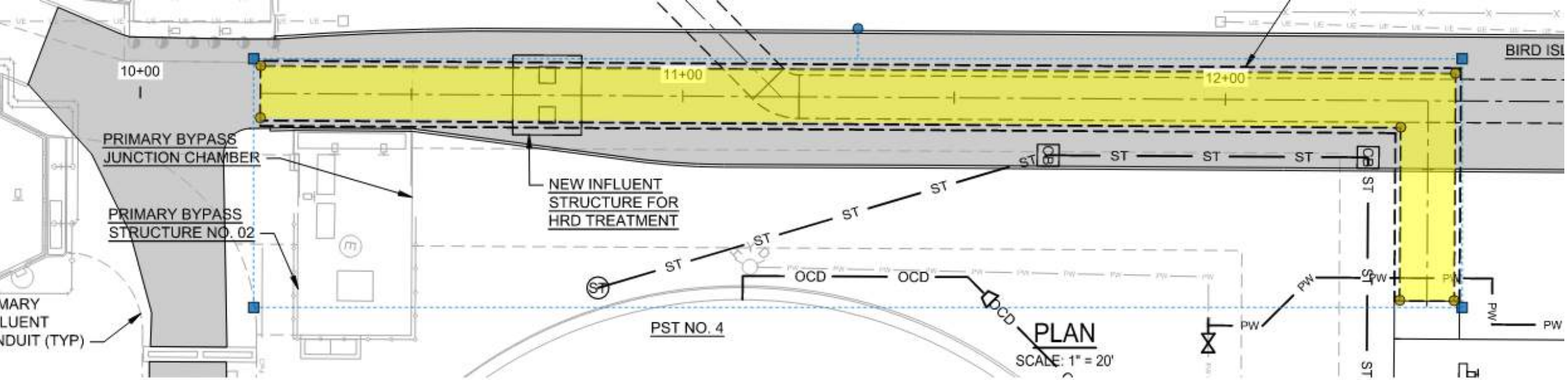


BUFFALO SEWER AUTHORITY

HRD Chlorine Contact Tank

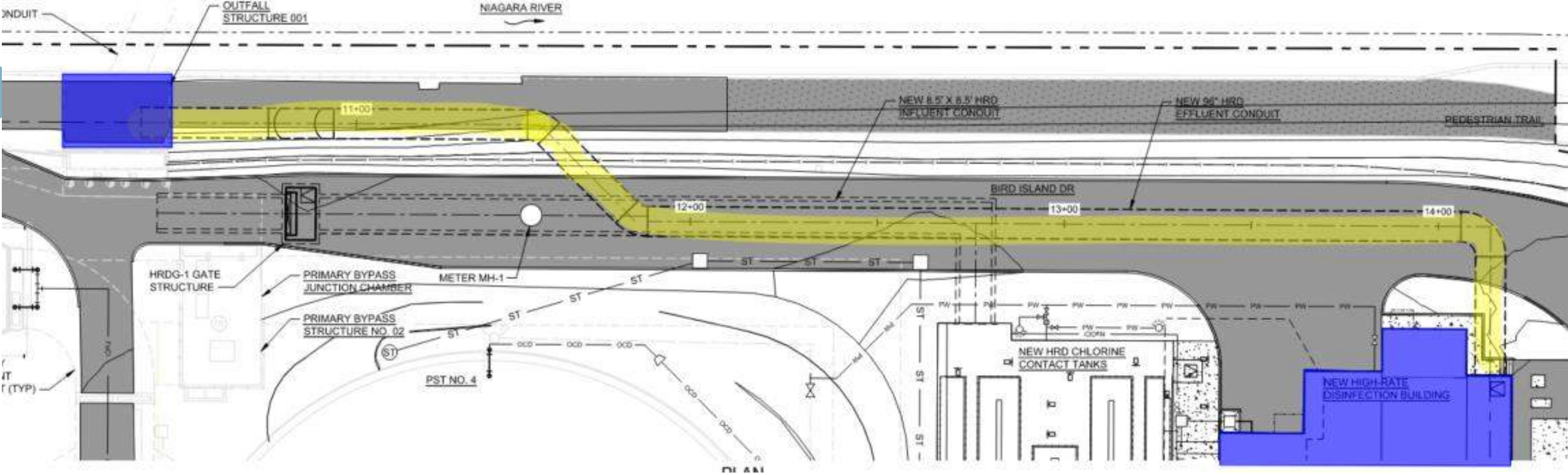
- 5-minute contact time:
  - Channel Width: 6 ft
  - Channels Length: 120 ft
  - Water Depth: ~13 ft





Influent to HRD Conduit

- Flow
  - Gravity
  - Average Flow: 74 MGD
  - Max Flow: 160 MGD
- Size
  - 8.5’x8.5’
- Structural
  - Material: Cast in Place Concrete
  - Steel piles



Outfall 001 Repair and Connection to HRD

- The HRD Pumping Station force main will tie into the existing Outfall 001 structure.
- The existing Outfall 001 overflow structure and conduit was inspected to verify they are structurally competent to facilitate the proposed renovation.

Primary Treatment Renovation
Scope of Work – Potential Schedule of Quantities

NO.	ITEM	QUANTITY	UNIT
1B	Construction of a new Chlorine Contact Tank, High-Rate Disinfection Building, a new connection and renovations to the existing Outfall Structure 001, HRD Influent and Effluent Conduits, modifications to the existing Bypass and Control Chamber and Primary Bypass Junction Chamber, replacement of gates at the Bypass and Control Chamber, Primary Bypass Structure No. 1 and 2, and associated equipment, material and labor.	1	Lump Sum
2B	Negotiated Price: Emerson equipment and integration for the equipment associated with the High-Rate Disinfection System.	1	Lump Sum
3B	Allowance for the handling, removal, and legal disposal of unanticipated hazardous and non-hazardous (regulated) waste.	1	Lump Sum
4B	Allowance for the handling, removal, and legal disposal of unanticipated impacted soil and groundwater.	1	Lump Sum
5B	Allowance for the repair of existing pipelines.	1	Lump Sum
6B	Additional earth excavation	1,000	Cubic Yards
7B	Additional select fill	1,000	Cubic Yards
8B	Additional Class B Concrete	1,000	Cubic Yards
9B	Additional Steel Reinforcing	5,000	Pounds
10B	Additional Pile Length	2,000	Linear Feet

Summary: Major Work and Coordination items

- HRD PS and CCT
  - Deep Excavation and Dewatering for Dewatering
  - Electrical power supply from MegaStructure & Substation
  - The new facility itself – Pump station, CCT, and influent and effluent conduit
  - Concrete
  - trucking/delivery
- Coordinating shutdown for portion of Shoreline Trail to facilitate HRD Connection to Outfall 001
- Instrumentation & Controls coordination with Emerson for the Ovation Control System
- Long lead items: HRD pumps, MCC, control panels, WW gates

Future Construction Projects – Estimated Bid Dates

Type 1 (Weir Modifications / Gate Installation)	Cornelius Creek CSO Backwater Gate (2025) SPP 206A&B/ SPP 304 (August 2027) SPP 340 (October 2026) SPPs 023, 024, 296 (October 2027)
Type 2 (Underflow Drop Shaft Modifications)	SPP 339 (October 2026)
Type 3 (Upsized Underflow Pipe)	SPP 326 (October 2027)
Off-Line Storage	East Delavan Sewer Project (December 2026) Schiller Park (8 MG) (December 2027) Erie Basin Marina (5.55 MG) (September 2028)
Bird Island WWTF	Phase III: Secondary System Expansion (2026)
Green Infrastructure	Hennepin Park (Fall 2025) Streetscape and Park Improvements (Fall 2025) Buffalo Public Schools Permeable Pavement and Rain Gardens (Fall 2025)

Professional Services and Construction Bid Requirements

Typical Services Desired for Upcoming BSA Projects

Professional Services

- Engineering
- Civil/Mechanical
- Civil-Site, Structural, Geotechnical, HVAC/Plumbing, Instrumentation
- Underground Storage Tanks
- Deep Tunnels/Pipes
- Green Infrastructure + Landscape Design
- Architecture
- Energy Efficiency
- Community Engagement and Placemaking
- Grant Writing / Funding Support
- Growth, Inclusion and Partnership of Local Workforce and Suppliers

Construction

- General, Mechanical, Electrical Contracting
- Equipment Suppliers
- Electrical and Instrumentation
- Concrete
- Excavation/Dewatering
- Traffic Control
- Document Management
- Gate Installation
- Testing and Inspection
- Surveying and Utility Verification
- Photography
- Pavement Sawcutting
- Trucking and Material Procurement
- Environmental Health & Safety
- Growth, Inclusion and Partnership of Local Workforce and Suppliers

Professional Services: Requests for Proposals (RFPs)

Typical Proposal Components

Cover Letter

Project Approach

Experience

Professional Team (Org Chart + Resumes)

Company Profile

DBE/MWBE Plan

Cost Proposal

BSA Evaluation Criteria

Demonstrated understanding of project requirements

Technical and creative quality of proposed approach, including community engagement and social impacts

Proposed schedule

Experience with comparable projects

Professional team organization and expertise

Company profile

Minorities, Women, and MBE/WBE/DBE firms as a percentage of the professional team

BUFFALO SEWER AUTHORITY

Typical Requirements for Construction Bids

General

- ✓ Bid Sheet(s)
- ✓ Equal Employment Opportunity
- ✓ Tax Exemption
- ✓ Non-Collusive Bidding Certification
- ✓ Insurances
- ✓ List of subcontractors
- ✓ DBE/MWBE Plan

Bonds

- ✓ Performance Bond – 100%
- ✓ Maintenance Bond – 10%

Liquidated Damages

- ✓ $500 per day after time specified for Substantial Completion
- ✓ $1,000 per day beginning 60 days after time specified for Substantial Completion

Supplier Diversity: Meaningful Inclusion of DBE/MWBE Firms

- DBE/MWBE must be certified in New York State
  - Typical DBE Goal: 20%
  - Typical MWBE Goal: 30%
- MWBE Certification in Erie County is a plus
- A DBE/MWBE Utilization Plan must be submitted with your Proposal Package:
  - https://efc.ny.gov/mwbe-forms
- Prime consultant or contractor must utilize DBE/MWBE suppliers/subcontractors that are certified on behalf of the New York State Certification Program:
  - NYS United DBE Certification Program
  - NYS MWBE Certification Program
- Buffalo Sewer is looking for Plans that are:
  - Reflecting a good-faith effort
  - Realistic and meaningful

PURPOSE

- Create economic opportunity for DBE/MBE/WBE firms, including firms who are new to working with BSA and/or the City of Buffalo
- Promote meaningful teaming arrangements, mentorship, and partnership between established, experienced firms and new and/or smaller firms

DBE, MBE, WBE Resources

MINORITY-OWNED BUSINESS ENTERPRISE & WOMEN-OWNED BUSINESS ENTERPRISE

- MWBE - Business Growth Accelerator Program
- Mentor-Protégé Program
- Supply & Demand Utilization Factsheet
- DMWBD Event Speaker Form
- NFTA Diversity Development (DBE)
- BSU - M&WBE Resources
- The MWBE Training Day Conference
- Erie County-COB MWBE Certification

CERTIFICATION RESOURCES:

Buffalo Small Business Administration
*Buffalo Main Office:
130 S. Elmwood Ave., Suite 540, Buffalo, NY 14202
Phone: 716-551-4301

Women's Business Center at Canisius College
1901 Main Street, Science Hall, Buffalo, NY 14208
Phone: 716-888-8280

* **Additional Resources:** Service - Disabled Veteran-Owned Small Business (SDVOB) and other small business resources available at the Buffalo Main Office.

MWBE Training Day Conference – Buffalo, NY

When:
Oct 24th
8 am – 5:00 pm

Where:
Buffalo Convention Center

Ticket Prices:
$40 - $125

Secure your ticket @ The MWBE Training Day Conference Tickets

Get Certified!

MWBE CERTIFICATION SESSIONS

When:

– Oct 22nd
– Oct 29th
– Nov 12th
– Nov 19th

Where:

Innovation Center-BNMC
640 Ellicott St.
Buffalo, NY 14203

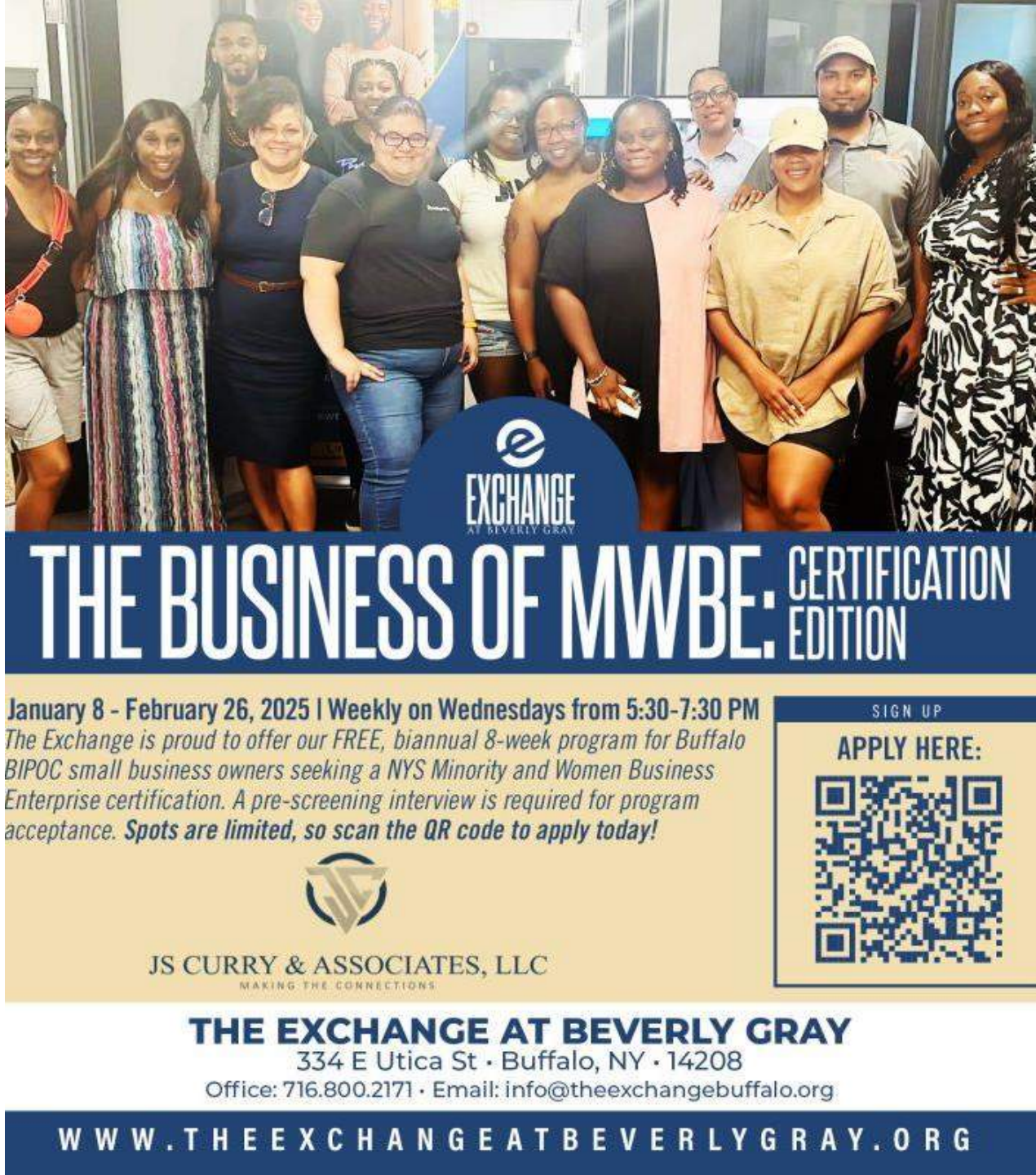
Get Certified!

MWBE CERTIFICATION SESSIONS

Hosted by The Exchange at Beverly Gray

Wednesdays, Jan 8-Feb 26, 2025

- Applications open for our January cohort of The Business of MWBE!
- Apply now as each applicant has to go through an interview process if you meet all qualifications.
- More information will be coming out soon.



Small Business Resources

BUFFALO STATE SMALL BUSINESS DEVELOPMENT CENTER (SBDC)

- Business Plan Development
- Funding Sources
- Exporting of Goods & Services
- Market Plan Development
- Invention Viability
- Compliance with Licensing & Regulation

https://sbdc.buffalostate.edu/sbdc-services

Small Business Resources
(Cont.)

BSU – SBDC SERVICES

– Business Plan Development
– Small Business start ups
– Organizational structure
– Accounting
– Financial Planning
– E-commerce
– Cost analysis
– Loan Information
– Marketing
– Human Resources (HR)
– Employee Training
– And More!

Coming in 2025: Community Benefits Program

WHAT IS A COMMUNITY BENEFITS PROGRAM?

Leverage large scale Buffalo Sewer construction and professional services contracting to deliver positive economic, environmental, and social impacts for residents of our service area.

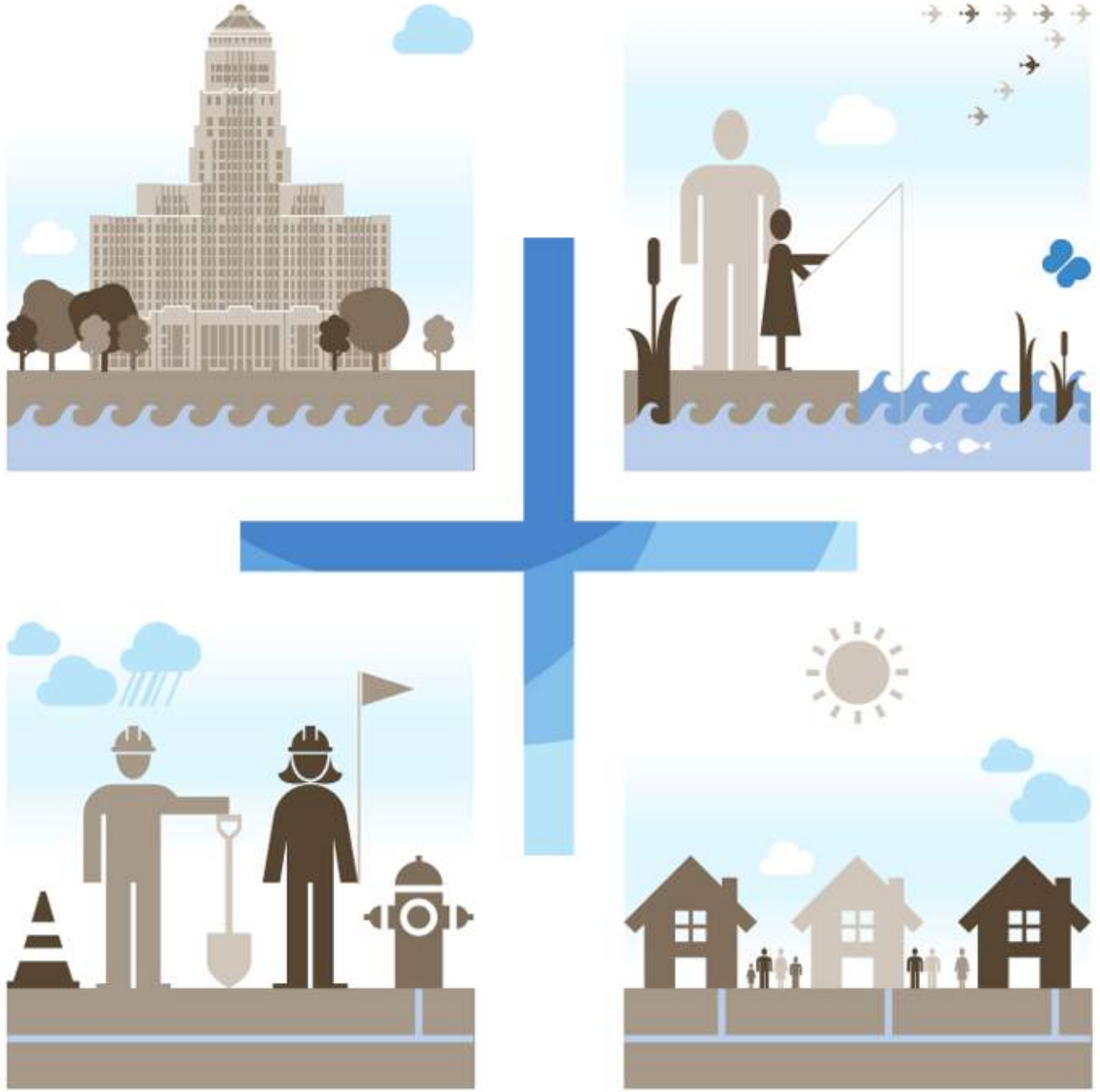
Elevate and support the work of local nonprofit organizations and schools that support shared education, environmental stewardship, workforce development, and economic goals

How:
Prime companies contracting with BSA are encouraged to assist nonprofit activity in the Buffalo community through workforce development, contracting, education, community improvements, financial or in-kind contributions, volunteering and more.

Why:
The goal is to continually increase health, equity, sustainability, and opportunities throughout the Buffalo community through economic, environmental, and social impacts for residents

Potential Community Benefits Program Areas

- Workforce Development
- Economic Development
- Education
- Community and Environmental Health



BUFFALO
SEWER AUTHORITY

Q&A

Contact Information

Walt Walker, PE, ENV SP
Program Director, TYLin

walt.walker@tylin.com

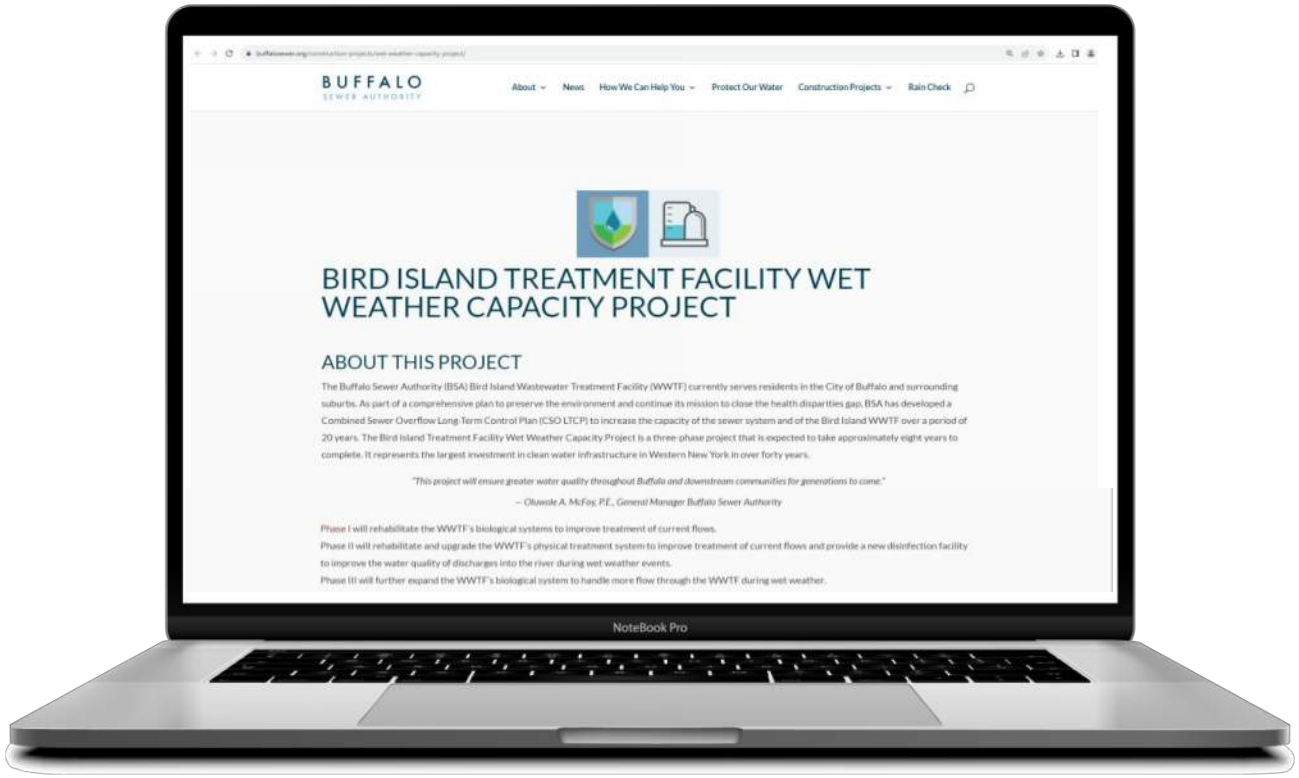
Edmund Aplerh-Doku, PE, ENV SP
Program Manager, TYLin

edmund.aplerhdoku@tylin.com

Art Hall
Community Engagement Lead, Hallmark Planning

Rosaleen Nogle, PE, BCEE
Principal Sanitary Engineer, Buffalo Sewer Authority

Buffalo Sewer Authority Website



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Making Water Quality Projects Affordable for All Communities

Green Resiliency Grant Awards 2024

Announced by Governor Kathy Hochul on Wednesday, Oct. 16, 2024

Governor Kathy Hochul on Oct. 16, 2024 announced $60 million in Green Resiliency Grant (GRG) funding to support 13 transformative green infrastructure projects across the state. The projects will combat the effects of climate change, particularly in flood-prone and disadvantaged communities. The GRG program, supported through the Clean Water, Clean Air, and Green Jobs Environmental Bond Act, will deliver on Governor Hochul's State of the State resiliency commitment to protecting New Yorkers from extreme weather and ensuring equitable access to clean water resources.

Awarded Projects:

Broome County Industrial Development Agency: $1.475 million for the Roberson Museum Green Initiative to integrate bioretention basins, porous pavement, vegetated swales, and riparian buffer restoration to manage stormwater and improve resilience to flood events at the historic Roberson Mansion and associated facilities in Binghamton.

Buffalo Sewer Authority: $8.75 million for the Rain Check 2.0 Park Projects to implement stormwater tree trenches, rain gardens, underground stormwater storage systems, and porous pavement in five parks. The project will reduce stormwater runoff by 100,000 cubic feet annually, reduce combined sewer overflows during extreme weather events, address urban heat island effects, improve air quality, and enhance recreational opportunities.

Village of Dolgeville: $1.75 million for the North Main Street Waterfront Park Project to implement tree trenches, an infiltration basin, porous pavement, and a bioslope to reduce runoff to the storm sewer system and the East Canada Creek. The project will improve water quality and provide the first publicly accessible connection to the scenic creek, enhancing recreational activities. Plans include a playground, swing garden, pavilion, and porous pavement walking paths.

Town of Geddes: $1.025 million for the Dwight Business Park Green Infrastructure Retrofit Project to install bio-retention, vegetative swales, and porous pavement in strategic locations within the business park. The project will reduce non-point source contaminants from entering Onondaga Lake while restoring approximately one acre of wetland and reducing urban heat effects.

Village of Hastings-On-Hudson: $2.5 million for the Farragut Parkway Wet Extended Detention Pond Project to store runoff, holding it in place for pollutants to settle out and for infiltration and evapotranspiration. The detention pond and drainage bypass will reduce downstream peak flows to Boutilliers Brook, a watercourse frequently overwhelmed during storm events and mitigate the persistent and destructive flooding experienced in a residential area.

City of Kingston: $4.375 million for the Safe & Accessible Flatbush & Foxhall Streetscape Project to add bioswales and stormwater tree pits to improve climate resiliency, reduce runoff, and protect natural resources. Streetscape improvements will increase pedestrian and cyclist safety in a busy urban neighborhood.

Village of Mamaroneck: $6.6 million for the Floodplain Restoration Effort to mitigate flood risks in a designated high-risk area by creating two floodplain benches. The project will increase flood storage capacity and improve water quality with natural sediment filtering.

New York City Department of Parks and Recreation: $10 million for the Harlem Meer Stormwater Resilience Project. Through smart water infrastructure and ecological restoration, the project will transform Central Park's northern waterbodies into a multiple pond system for stormwater management, reducing the risk of flooding in Central Harlem and East Harlem.

New York City Housing Authority: $6.85 million for the Jefferson Houses Cloudburst Project to manage, store, and filter stormwater runoff at a public housing development in East Harlem. The project will install a subsurface retention system, porous concrete pavers, and two synthetic turf fields. These green infrastructure practices will reduce urban heat island effect while providing residents access to outdoor recreation space.

New York City Municipal Water Finance Authority: $10 million grant for the Tibbetts Brook Daylighting Project to reduce combined sewer overflows to the Harlem River by more than 200 million gallons annually, with improved access to new open space and into Van Cortlandt Park, enhancing the quality of life for residents.

City of North Tonawanda: $1.5 million for the Oliver Street Green Infrastructure Improvement Project to convert impervious terrace back to green space, reduce pavement width, plant street trees, and install structural soils and/or bioretention areas. The project will extend an existing storm sewer and separate combined storm and sanitary sewers, reducing untreated discharges into the Niagara River.

City of Ogdensburg: $2.925 million for the Downtown Mall Beautification, Green Infrastructure and Stormwater Reduction Project to integrate porous pavement surfaces and add bioretention and rain garden techniques. The project will improve water quality in the St. Lawrence River and reduce stormwater from entering the city's combined sanitary storm sewer. A new pocket park will feature landscape design to retain and reuse rainwater. LED lighting and electric vehicle charging stations will further promote renewable energy options to reduce the overall carbon footprint of the parking area.

City of Utica: $2.25 million for the Nail Creek Floodplain Restoration to construct flood benches and incorporate riparian buffer zones or wetlands along Nail Creek at the confluence of Halleck's Ravine, addressing flooding during storm events.

Disadvantaged Communities

Disadvantaged communities are those identified by the Climate Justice Working Group, pursuant to the Climate Leadership and Community Protection Act (https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fclimate.ny.gov%2FResources%2FDisadvantaged-

Communities-Criteria&data=05%7C02%7Cheather.cameron%40efc.ny.gov%7Cea6b0319(. Disadvantaged communities are disproportionately impacted by climate change, and are prone to increased risks of pollution, flooding, and extreme heat. Disadvantaged communities shall receive no less than 35 percent, with the goal of 40 percent, of the benefits of the $4.2 billion Environmental Bond Act funds. EFC sought to surpass the 40 percent goal for the GRG program.

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RSVP/Attendee List:
10/16/2024 BSA Virtual Open House Info Session for Upcoming Capital Projects

First & Last Name	Company	Email2	Office Address / City & State	Interest as a Prime/Sub/Vendor/Undecided? (check all that apply)	Trade / Specific Services	Is your company a certified DBE in New York State?	Is your company a certified MBE or WBE in New York State?
Zachary Hein	ACE	zack.hein@aceservinc.com	11075 Stratfield Ct, Marriottsville, MD 21104	Prime Contractor ;	General Contractor	No	No
Marie Patton	Active Workforce, Inc	marie@activewf.com	853 Brighton Road Tonawanda NY 14150	Vendor/Manufacturer/ Supplier;	Construction labor, all skills and levels	No	Yes
Jeff Tudini	AECOM	jeffrey.tudini@aecom.com	50 Lakefront Blvd, Buffalo NY	Prime Consultant;	Engineering	No	No
Jamie Johnson	AECOM	jamie.l.johnson@aecom.com	50 Lakefront Blvd, Buffalo, NY	Prime Consultant;Subconsultant (for Design RFPs);	Engineering Consultancy, Construction Services	No	No
Michelle Palmer	AECOM	michelle.palmer@aecom.com	50 Lakefront Blvd Suite 111 Buffalo, NY 14202	Prime Consultant;Subconsultant (for Design RFPs);	Consulting, Planning, Engineering, Design, Construction	No	No
Doug Gove	AECOM	doug.gove@aecom.com	250 Apollo Drive, Chelmsford, MA 01880	Prime Consultant;Subconsultant (for Design RFPs);	Civil / Environmental Engineering	No	No
Kate Mignone	AECOM	Kate.mignone@aecom.com	250 Apollo drive Chelmsford ma	Prime Consultant;Subconsultant (for Design RFPs);	Civil	No	No
Stefanie Taplin	Atlantic Testing Laboratories	Staplin@atlantictesting.com	5167 South Park Ave / Hamburg NY	3rd Party Material Testing;	Material Testing	No	Yes
Stefanie Taplin	Atlantic Testing Laboratories	Staplin@atlantictesting.com	5167 South Park Avenue/Hamburg, New York	Subcontractor (for Construction Bids);	Material Testing Services	No	Yes
Gerard Sentz	Azar Deaigb Co	Gsentz@azardzn.com	295 Main Street. Suite 200 Buffalo NY 14203	Subconsultant (for Design RFPs);Prime Consultant;	Engineering, Architecture, Survey, Landscape Arch	Yes	Yes
Peggy Gust-Anger	Azar Design Co, formerly Foit-Albert Associates	peggy@azardzn.com	295 MainStreet, Buffalo, NY 14203	Prime Consultant;Subconsultant (for Design RFPs);	Architecture, Landscape Architecture, Engineering and Surveying	Yes	Yes
Max Faduski (Chiarella)	Azar Design Co. (formerly Foit-Albert Associates)	mfaduski@azardzn.com	295 Main Street Ste. 200, Buffalo NY	Prime Consultant;Subconsultant (for Design RFPs);	Civil Engineering Design, Landscape Architecture Design, Architecture Design, Surveying, MEP Design, Structural Engineering Design	Yes	Yes
Bryan Fulmer	B&T Construction Logistics	Bryan.Fulmer@BTConLog.com	40 Homer Place, Poughkeepsie, NY 126003	Vendor/Manufacturer/ Supplier;	Material Supplier	Yes	No
John Nevill	Baker Construction Inc.	Nevillj@bakerconstruction.com	990 North Main Street, Monroe, Ohio 45050	Subcontractor (for Construction Bids);Prime Contractor ;	Cast in place concrete	No	No
Nicholas Pezzino	Barton and Loguidice	Npezzino@bartonandlogiidice.com	1738 Elmwood Ave, Suite 100, Buffalo, NY	Prime Consultant;	Sewer infrastructure	No	No
Linda Dagostino	Bison Construction Concrete and Coatings	linda@bisonccc.com	90 Whitewater Way #301 Grand Island NY 14072	Subcontractor (for Construction Bids);	Concrete and Concrete Coatings	No	No
Joseph Stromwall	Black & Veatch	Stromwalljr@bv.com	Rochester, NY	Prime Consultant;Subconsultant (for Design RFPs);	Engineering	No	No
Chris Ranck	Black & Veatch	ranckcj@bv.com	Indianapolis, IN	Prime Consultant;Subconsultant (for Design RFPs);	Design, Planning, Construction Management	No	No
Mark Lang	Black & Veatch	Langm@BV.com	100 South Cliton Ave 24 Floor / Rochester NY 14604	Prime Consultant;Subconsultant (for Design RFPs);	Planning and Design Engineering Services	No	No
Kathleen Kane	Black Rock Controls	kathleen.kane@blackrockcontrols.com	2852 Delaware Avenue Suite 100 / Buffalo, NY	Subcontractor (for Construction Bids);	Controls/Integration	No	No
Steve Vinci	Brierley Associates	svinci@brierleyassociates.com	6323 Fly Rd, Suite 4 East Syracuse NY	Subconsultant (for Design RFPs);Subcontractor (for Construction Bids);	Tunnel, Trenchless, Shaft and Geostructural Engineers for Wet Weather/Wastewater/Stormwater Collections and Conveyances	No	No
Lauren Spink	Brown & Caldwell	lspink@brwncald.com	247 West Fayette Street, Suite 206, Syracuse, NY	Prime Consultant;	Wastewater Engineering Consulting Services	No	No
Bill Brower	Brown and Caldwell	bbrower@brwncald.com	Rochester, NY	Prime Consultant;Subconsultant (for Design RFPs);	Engineering design, construction management, planning	No	No
Carley Hill	CaHill Resources	carley@cahillresources.com	1711 Union Rd, Suite 5, West Seneca NY 140224	Subcontractor (for Construction Bids);	Dewatering, hydro excavation, site work, excavation/backfill, drainage, parking/cleaning, debris removal etc,	Yes	Yes
Carley Hill	CaHill Resources, LLC	carley@cahillresources.com	1711 Union Rd, Suite 5, West Seneca NY 14224	Subcontractor (for Construction Bids);	Site contracting services	Yes	Yes
Muffett Mauche George	CHA Consulting	mmauche@chasolutions.com	2200 Main Place Tower Buffalo, NY. 14202	Prime Consultant;Subconsultant (for Design RFPs);	Wastewater Design Services	No	No
Muffett Mauche George	CHA Consulting	mmauche@chasolutions.com	2200 Main Place Tower Buffalo, NY 14202	Prime Consultant;Subconsultant (for Design RFPs);	Wastewater Design Services	No	No
Michael Miller	CHA Consulting, Inc.	mmiller@chasolutions.com	2200 Main Place, Buffalo, NY	Prime Consultant;	Engineering Services	No	No
Sarah Dobie	CIS	sarah.dobie@cisolutions.com	3055 Plymouth Rd, Suite 205, Ann Arbor, MI 48104	Prime Consultant;Subconsultant (for Design RFPs);	Infrastructure Program Management	No	No
Timothy Toohey	CISolutions	tim.toohey@cisolutions.com	Orlando, FL	Prime Consultant;Prime Contractor ;	Workforce development	No	No
Mark Glasgow	Clementine Gold Group	mark@clementinegoldgroup.com	334 E. Utica St. Suite #3, Buffalo NY, 14208	Prime Consultant;	Strategy, Planning, Training, Community Engagement	No	No
Kim LaVare	Clementine Gold Group	kim@clementinegoldgroup.com	334 E. Utica Street, Buffalo, NY 14208	Subconsultant (for Design RFPs);Subcontractor (for Construction Bids);	Community Outreach, Project Management, Supplier Diversity and Contract Compliance	No	Yes
Ekua Mends-Aidoo	Clementine Gold Group LLC	ekua@clementinegoldgroup.com	334 E. Utica St, Ste. 3 Buffalo, NY 14204	Prime Consultant;Subcontractor (for Construction Bids);	Community Engagement, Project Management, MWBE Compliance	No	No
Elizabeth Casatelli	CME Associates, Inc.	Ecasatelli@cmeassociates.com	2727 Broadway, Buffalo NY	Subconsultant (for Design RFPs);Subcontractor (for Construction Bids);	Materials testing, special Inspections, drilling services	No	Yes
Michael Ennis	Colliers Engineering and Design	michael.ennis@collierseng.com	40 LaRiviere Drive, Suite 200, Buffalo, NY 14202	Subconsultant (for Design RFPs);Subcontractor (for Construction Bids);	Land Surveying	No	No
Yasin Rahman	Consultra Project Management	yrahman@consultrapm.com	1200 Morris Turnpike, Suite 3005, Short Hills, NJ 07078	Subconsultant (for Design RFPs);	Cost Estimating, Scheduling and Project Controls	Yes	Yes

RSVP/Attendee List:
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Jeffrey Hy	Creston Water Solutions	Jeff.hy@creston.com	223 Bryant street, north Tonawanda NY	Vendor/Manufacturer/ Supplier;	Water disinfection/hypochlorite treatment	No	No
Jeffrey Hu	Creston Water Solutions	Jeff.hy@creston.com	223 Bryant, north Tonawanda NY	Vendor/Manufacturer/ Supplier;	Hypochlorite generation and application	No	No
Mauricio	Diaz	mcantondiaz@buffalopurchasing.org	716 exchange st, suite 525, Buffalo NY	Economic development organization ;	N/a	No	No
Prisca Baity	Dirkson Rehab, LLC	Dirksonrehab@gmail.com	68 Hamilton St, Buffalo, NY	Subcontractor (for Construction Bids);	Flooring, kitchens and baths	No	Yes
Prisca Baity	Dirkson Rehab, LLC	Dirksonrehab@gmail.com	68 Hamilton St, Buffalo, NY 14207	Subcontractor (for Construction Bids);	GC specializing in flooring, kitchens, and baths	No	Yes
Jamie Howard	DN Tanks	jamie.howard@dntanks.com	2662 Route 20 Cazenovia, NY 13035	Subcontractor (for Construction Bids);Prime Contractor ;	Design and construct wire-wound prestressed precast concrete storage tanks	No	No
BRADFORD PITTS	ELITE PROTECTION & INVESTIGATIONS	BPITTS@ELITEPROTECTIONNY.COM	1348 N FOREST AVE WILLIAMSVILLE NEW YORK	Vendor/Manufacturer/ Supplier;	SECURITY	No	No
Steven Rakvica	Encorus Group	srakvica@encorus.com	295 Main Street / West Seneca, NY 14224	Prime Consultant;Subconsultant (for Design RFPs);	A SDVOSB Design A/E Consultants and Testing and Inspections / MEP, CSA, FP, FA, Process, I&C and Testing CT, RBM, NDE, MI	No	No
Susanne Kelley	Encorus Group	skelley@encorus.com	295 Main Street, West Seneca, NY 14224	Prime Consultant;Subconsultant (for Design RFPs);	Engineering, Architecture, Civil Materials Testing, Hazardous Materials Consulting, Mechanical Integrity Inspections	No	No
Daniel Ziemianski	Erdman Anthony	ziemianskidj@erdmananthony.com	8608 Main Street, Buffalo, NY	Prime Consultant;Subconsultant (for Design RFPs);	Engineering, survey, construction administration, construction inspection	No	No
Anthony Sciandra	Frey Electric Construction Co., Inc.	anthonysciandra@frey-electric.com	100 Pearce Ave, Tonawanda NY 14150	Prime Contractor ;	Electrical	No	No
Kyle Logue	Gannett Fleming	jlogue@gfnet.com	207 Senate Avenue, Camp Hill, PA 17011	Prime Consultant;	Engineering	No	No
Mark Abbott	GHD	mark.abbott@ghd.com	Buffalo, NY	Prime Consultant;	Engineering	No	No
Mallory Griffin	GHD	Mallory.griffin@ghd.com	Buffalo, NY	Prime Consultant;	Engineering	No	No
Robert Lannon	GHD	Robert.lannon@ghd.com	Buffalo, NY	Prime Consultant;	Consulting engineer	No	No
Paul McGarvey	GHD	paul.mcgarvey@ghd.com	Buffalo, NY	Prime Consultant;Subconsultant (for Design RFPs);	Design and construction phase services consulting engineer.	No	No
Mark Abbott	GHD	mark.abbott@ghd.com	Buffalo, NY	Prime Consultant;Subconsultant (for Design RFPs);	Water/wastewater Process Engineering	No	No
Kristin Ihnchak	Greenprint Partners	kristin@greenprintpartners.com	17 N State St, Chicago IL 60602	Prime Consultant;Subconsultant (for Design RFPs);	planning, engineering, construction management	Yes	Yes
Todd Bown	GZA	Todd.Bown@gza.com	300 Pearl St. Buffalo NY	Undecided;	Geotechnical & Environmental Engineering	No	No
Jennifer Kuhn	Hamburg Overhead Door, Inc	Jen@hamburgdoor.com	5659 Herman Hill Rd Hamburg, NY	Subcontractor (for Construction Bids);	Overhead foors	No	Yes
Danielle Dabek	Hasan Demolition and Flooring	HasanFlooring716@gmail.com	154 Gorski st buffalo nh	Subcontractor (for Construction Bids);Prime Contractor ;	Concrete & epoxy	No	No
Randall Divito	HATCH Associates Consultants, Inc.	randall.divito@hatch.com	100 Sylvan Parkway, Suite 500	Prime Consultant;Subconsultant (for Design RFPs);	Design Engineering	No	No
Rebecca Shaw	Hazen and Sawyer	rshaw@hazenandsawyer.com	1 Seneca Street, Suite 2875, Buffalo, NY 14203	Prime Consultant;Subconsultant (for Design RFPs);	Professional Engineering Consulting Services	No	No
Mark Lenz	Hazen and Sawyer	mlenz@hazenandsawyer.com	1 Seneca Street, Suite 2875, Buffalo NY 14203	Prime Consultant;Subconsultant (for Design RFPs);	Consulting Engineering	No	No
Ross Horvath	Hazen and Sawyer	rhorvath@hazenandsawyer.com	7870 East Kemper Road, Suite 300, Cincinnati, Ohio 45249	Prime Consultant;Subconsultant (for Design RFPs);	Professional Engineering, Planning, Design, or Construction Administration	No	No
Dan Seider	Hazen and Sawyer	dseider@hazenandsawyer.com	1 Seneca Street, Buffalo, NY 14203	Prime Consultant;Subconsultant (for Design RFPs);	Engineering services	No	No
Robert ostapczuk	Hazen and Sawyer	Rostapczuk@hazensndsawyer.com	1 Seneca Street / Buffalo, NY	Prime Consultant;Subconsultant (for Design RFPs);	Engineering, construction management	No	No
Minassian	HDR	vatche.minassian@hdrinc.com	711 Westchester Ave, White Plains, NY	Prime Consultant;	Engineering	No	No
George Kansas	HDR	George.kansas@hdrinc.com	16 Corporate Woods Boulevard Albany, NY	Prime Consultant;Subconsultant (for Design RFPs);	Design and CA services	No	No
George Kansas	HDR	george.kansas@hdrinc.com	16 Corporate Woods Boulevard, Albany, NY	Prime Consultant;Subconsultant (for Design RFPs);	Engineering design and construction phase services	No	No
Victoria Johnson	HDR Engineering, Inc.	victoria.johnson@hdrinc.com	500 7th Ave, New York, NY	Prime Consultant;	Professional design and engineering services	No	No
Emily Hill	Hillpoint Scanning, LLC	Emily@hillpointscanning.com	7001 Brandywine Drive, Derby, NY 14047	Subconsultant (for Design RFPs);Subcontractor (for Construction Bids);	LiDAR scanning for existing conditions & clash detection	No	No
Donald Schiedel	Hohl Industrial Services	Dschiedel@hohlind.com	770 Riverview Blvd, Buffalo, NY 14150	Prime Contractor ;Subcontractor (for Construction Bids);	Rigging/Millwrighting/IronWork/Diving	No	No
Arnold Collier	Iroquois Bar Corp	Acollier@iroquoisbar.com	155 Commerce Dr, Lackawanna, NY 14218	Subcontractor (for Construction Bids);Vendor/Manufacturer/Supplier;	Rebar, concrete, trucking, demo	Yes	Yes
Arnold collier	Iroquois Bar Corp	Acollier@iroquoisbar.com	155 commerce Dr, Lackawanna, NY 14218	Subcontractor (for Construction Bids);Vendor/Manufacturer/Supplier;	Rebar, concrete, trucking	Yes	Yes
Michael Deyulio	J. Andrew Lange Inc.	miked@jalangeinc.com	Syracuse, NY	Vendor/Manufacturer/ Supplier;	Wastewater treatment equipment	Yes	Yes
David Barnes	Jacobs	david.barnes1@jacobs.com	PO Box 7 - Buffalo, NY 14203	Prime Consultant;	Engineering Planning, Design and Construction Administration	No	No
Zachary Monge	Jacobs	Zachary.monge@jacobs.com	Box 7, Buffalo, NY	Prime Consultant;Subconsultant (for Design RFPs);	Engineering design, construction, and program management	No	No
Gina Davis	Jes Breathe	Bentleygirl621@gmail.com	63 E. Parade Avenue Buffalo NY	Undecided;	Wellness	No	No
Erik Gundel	Jett Industries, Inc.	Erik.Gundel@kiewit.com	7 NYS Route 7 Colliersville, NY 13747	Prime Contractor ;	General Contractor - Water & Wastewater Plants	No	No
Daniel Shults	Jett Industries, Inc.	dan.shults@jettindustries.com	PO Box 219, Colliersville, NY 13747	Prime Contractor ;	Water and Wastewater Treatment Plant Construction & Upgrades	No	No

RSVP/Attendee List:
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Megan Coleman	JKMuir	mcoleman@jkmuir.com	2275 Silas Deane Highway, Rocky Hill, CT	Prime Consultant;Subconsultant (for Design RFPs);	Energy Efficiency, Decarbonization, Resiliency, Climate Action Planning, Construction Inspection	Yes	Yes
Jennifer Muir	JKMuir	jenmuir@jkmuir.com	2275 Silas Deane Highway, Rocky Hill CT	Subconsultant (for Design RFPs);	Engineering Consulting	Yes	Yes
Mike Schifano	John W. Danforth Company	mschifano@jwdanforth.com	300 Colvin Woods Pkwy, Tonawanda, NY 14221	Prime Contractor ;Subcontractor (for Construction Bids);	General Contractor, Mechanical Contractor	No	No
Gina Bosco	Jos. A. Sanders & Sons, Inc.	projsupport@jasroofing.com	107 Lathrop St., Buffalo, NY	Subcontractor (for Construction Bids);	roofing and related sheet metal	Yes	Yes
Ramsey E. Kahi	Joseph C. Lu Engineering P.C.	rkahi@luengineers.com	50 Lakefront Boulevard, Suite 212, Buffalo, NY 14202	Prime Consultant;Subconsultant (for Design RFPs);	Civil/Site, Transportation, Water, Sewer, Structures, Inspections, Construction management	Yes	Yes
Mike Haen	JWD	MHAEN@JWDANFORTH.COM	300 COLVIN WOODS PKWY TONAWNADA NY 14150	Prime Consultant;Subconsultant (for Design RFPs);Prime Contractor ;Subcontractor (for Construction Bids);	GC/EE	No	No
Dante Griggs	Kiper LLC	Dgriggs@kipermandt.com	334 E Utica Street, Buffalo, NY 14208	Subcontractor (for Construction Bids);Vendor/Manufacturer/Supplier;	Paint, Moving, Transportation, Staffing (General Labor and Post Construction Cleaning)	Yes	Yes
Andrew Gray	KJ Electric	andygray@kjelectric.com	170 Fire Tower Dr, Tonawanda, NY 14150	Subcontractor (for Construction Bids);Vendor/Manufacturer/Supplier;	Motors, drives and control panels	No	Yes
Michael Ademovic	Koester Associates	mademovic@koesterassociates.com	3101 Seneca Turnpike, Canastota, NY	Vendor/Manufacturer/Supplier;	Wastewater Equipment	No	No
Mark Koester	Koester Associates	mark@koesterassociates.com	Canastota NY	Vendor/Manufacturer/Supplier;	Representative	No	No
Mark Koester	Koester Associates, Inc	mkoester@koesterassociates.com	3101 Seneca Turnpike, Canastota, NY	Vendor/Manufacturer/Supplier;	Water/Wastewater Equipment Supplier	No	No
Matthew Higgins	LaBella Associates	mhiggins@labellapc.com	300 State St., Suite 201, Rochester, NY 14618	Prime Consultant;	Wastewater Engineer	No	No
Rebecca Smith	LaBella Associates	rlsmith@labellapc.com	300 Pearl Street Buffalo New York	Prime Consultant;Subconsultant (for Design RFPs);	GIS / Civil Engineering	No	No
Shreeram Shrivastava	Larsen Engineers	Ram@larsen-engineers.com	700 west metropark, Rochester NY 14623	Subconsultant (for Design RFPs);	Environmental engineering services Climate smart green infrastructure solutions	Yes	Yes
John Yim	Lazarus Industries	John.yim@lazarusindustries.com	382 High Street, Buffalo, NY 14204	Prime Consultant;Prime Contractor ;Subcontractor (for Construction Bids);Vendor/Manufacturer/Supplier;	Site work, GC, steel fabrication, concrete	Yes	Yes
Judy Beckwith	Lu Engineers	jbeckwith@luengineers.com	50 Lakefront Boulevard, Suite 212, Buffalo, NY 14202	Prime Consultant;Subconsultant (for Design RFPs);	Civil and Environmental Professional Engineering Services	Yes	Yes
Dan George	Manning Squires Hennig	dgeorge@mshco.com	8426 Seven Springs Road, Batavia, NY	Prime Contractor ;Subcontractor (for Construction Bids);	General Construction, Concrete, Masonry	No	No
John Dexter	Manning Squires Hennig	john@mshco.com	8426 Seven Springs Rd Batavia, NY 14020	Prime Contractor ;Subcontractor (for Construction Bids);	GC ; Concrete; Masonry	No	No
Jeffrey Salvatore	Mark Cerrone Inc.	Jsalvatore@markcerrone.com	2368 Maryland Ave. Niagara Falls NY 14305	Prime Contractor ;	Site Work, Utilities, Steel Piles, Concrete, Building Work	No	No
Andrew Klettke	McMahon & Mann Consulting Engineering and Geology, P.C.	aklettke@mmce.net	2495 Main Street, Suite 432, Buffalo, NY 14214	Subconsultant (for Design RFPs);	Geotechnical Engineering	No	No
Brandon Boone	Metro Contracting & Environmental, Inc.	Bboone@metroenvironmental.com	2939 Lockport rd. Niagara Falls, NY 14305	Subcontractor (for Construction Bids);Prime Contractor ;	Asbestos abatement, PCB abatement, lead abatement, select/mass demolition, microbial remediation	No	No
Molly Vendura	Molly Vendura Landscape Architect, PLLC	mvendura@VenduraLA.com	PO Box 358, Orchard Park, NY 14127	Subconsultant (for Design RFPs);	Landscape architecture, conceptual design, public engagement	Yes	Yes
Jason Aigner	MSH	jaigner@mshco.com	Seven Springs Road, Batavia, NY 14202	Subcontractor (for Construction Bids);	Concrete & Masonry Work	No	No
Susan Napier	Napier Nursery LLC	sue@napiernursery.com	501 Brighton Road Tonawanda NY 14150	Vendor/Manufacturer/Supplier;	Supply landscape materials	No	Yes
John Fischer	Nasco Construction Services	jfischer@nasco-ny.com	200 Business Park Drive Armonk, NY	Subconsultant (for Design RFPs);	Cost Estimating and Scheduling	No	Yes
Ian Street	Nautilus Consulting LLC	istreet@nautcon.com	6800 Jericho Tpke, Suite 216E, Syosset, NY 11791	Vendor/Manufacturer/Supplier;	CPM Scheduling and schedule/delay analysis	No	No
Gino Zagarrio	Nova Site Company, LLC	gzagarrio@novasiteco.com	6 Lena Ct., West Seneca, NY 14224	Prime Contractor ;	Civil/Utility	No	No
Andrew Fassl	O'Connell Electric	andrew.fassl@oconnellectric.com	Buffalo, NY	Prime Contractor ;Prime Consultant;Subconsultant (for Design RFPs);Subcontractor (for Construction Bids);	Electrical	Yes	Yes
John Bryant	On The Mark Utility Locating Services, Inc.	Jbryant@otmlocating.com	21 Goodway Drive, Suite 171, Rochester NY 14623	Prime Consultant;Subcontractor (for Construction Bids);	Underground Utility Locating	Yes	Yes
Jill Jones	Plum Impressions Inc	jill@plumimpressions.com	330 Watson St. Buffalo NY 14212	Prime Contractor ;Subcontractor (for Construction Bids);Vendor/Manufacturer/Supplier;Undecided;	paint; demolition; environmental	Yes	Yes
Jeffrey Fick	Popli Design Group	jfick@popligroup.com	170 Franklin Street, Suite 800	Subconsultant (for Design RFPs);Prime Consultant;	Civil Engineering, Structural Engineering, Mechanical Engineering, Electrical Engineering, Plumbing Engineering, Architecture, Surveying, Construction Inspection	No	Yes
Eric Kenney	Procurement Solutions Group LLC	ekenney@procurementsolutionsgrp.com	131 S. Erie St Mayville, NY 14757	Vendor/Manufacturer/Supplier;	Electrical systems, Automation and PLC engineering and programming, Pump/lift stations, chemical injection systems	No	No

RSVP/Attendee List:
10/16/2024 BSA Virtual Open House Info Session for Upcoming Capital Projects

Adrian Quackenbush	Quackenbush Co., Inc.	aquackenbush@qcoinc.com	495 Kennedy Rd. Buffalo, NY 14227	Prime Contractor ;Subcontractor (for Construction Bids);	Mechanical Contractor	No	No
Michelle McEntire	Ramboll	michelle.mcentire@ramboll.com	400 Andrews Street, Suite 710, Rochester, NY 14604	Prime Consultant;Subconsultant (for Design RFPs);	Wastewater Treatment, Collections, Pump Stations and Infrastructure	No	No
Collin Moran	Ramboll	CMoran@ramboll.com	400 Andrews Street, Suite 710, Rochester, NY 14604	Prime Consultant;Subconsultant (for Design RFPs);	Wastewater Treatment, Collections, Pump Stations and Infrastructure	No	No
Sammy Miller	Ramboll	SJMiller@ramboll.com	400 Andrews Street, Suite 710, Rochester, NY 14604	Prime Consultant;Subconsultant (for Design RFPs);	Wastewater Treatment, Collections, Pump Stations and Infrastructure	No	No
Ingrid Kaptein	Ravi Engineering and Land Surveying	ikaptein@ravieng.com	2110 S. Clinton Ave, Rochester, NY	Subconsultant (for Design RFPs);Subcontractor (for Construction Bids);	Environmental Engineering, Structural Engineering Survey: Design Survey, Construction Stakeout , SUE	No	Yes
Ingrid Kaptein	Ravi Engineering and Land Surveying, P.C.	ikaptein@ravieng.com	2110 S> Clinton, Rochester, NY 14618	Subconsultant (for Design RFPs);Subcontractor (for Construction Bids);	civil and environmental engineering consulting, subsurface utility location, surveying and survey stakeout	No	Yes
Richard Cerne	Rodriguez Construction Group	rcerne@rodriguez-cg.com	683 Northland Avenue Buffalo NY 14211	Prime Contractor ;Subcontractor (for Construction Bids);	General Contracting, Demolition, Sitework	Yes	Yes
Tamilyne Williams	Rodriguez Construction Group, Inc.	twilliams@rodriguez-cg.com	683 Northland Ave., Northland Ave., Buffalo, NY 14211	Subcontractor (for Construction Bids);Prime Contractor ;	Sitework/ General Trades	Yes	Yes
Timothy Lynch	Roscoe Moss Company	tim@roscoemoss.com	4360 Worth St Los Angeles CA	Vendor/Manufacturer/ Supplier;	Device to remove trash / litter from stormwater	No	No
Michael K Jones	Rosecroft Mechanical and Plumbing	Rosecroftllc@gmail.com	24 Randolph Ave Cheektowaga, NY 14211	Subcontractor (for Construction Bids);Vendor/Manufacturer/Supplier;	Steamfitting, Pipe fitting and Plumbing	Yes	Yes
Michael Lannon	Siewert Equipment	mlannon@siewertequipment.com	Syracuse, NY	Vendor/Manufacturer/ Supplier;	Representative of numerous water and wastewater conveyance and treatment manufacturers	No	No
Craig Moore	Siewert Equipment	cmoore@siewertequipment.com	1 Trillium Place Orchard Park,NY	Vendor/Manufacturer/ Supplier;	Pumps, valves, process equipment	No	No
Arthur Springs	SPRINGS MILL CONTRACTING and Consulting	716artie@gmail.com	179 Fox Street Buffalo NY 14211	Prime Consultant;Prime Contractor ;Subcontractor (for Construction Bids);Vendor/Manufacturer/Supplier;	Construction Management	Yes	Yes
Project Manager	STC Design	stc@stc-design.com	Athol Springs, NY	Subconsultant (for Design RFPs);AEC Consulting;	Design and Project Management	No	Yes
Caleb Shen	Thompson Pipe Group	caleb.shen@thompsonpipegroup.com	Boston, MA	Vendor/Manufacturer/ Supplier;	Large Diameter Pressure Pipe	No	No
Tracey King	Tracey Trucking, Inc	tracey@traceytrucking.com	Holland, NY	Subcontractor (for Construction Bids);Vendor/Manufacturer/Supplier;	Trucking, construction material supply, aggregate, ADS pipe, fittings and Geotextile fabric	Yes	Yes
Deidre Bonarrigo	Transitions BHS, LLC	Transitionsbhs@gmail.com	Syracuse, NY	Undecided;	Consulting	No	No
Catherine Dare	TRM Enviornmental	catherine@trmenvconsultants.com	301 N Washington Street, Suite 1000, Rome, NY 13440	Subconsultant (for Design RFPs);	Construction Inspection/SWPPP Inspections	No	Yes
Gary Hill	Unión Concrete	gary@unionconcretecorp.com	West Seneca, NY	Prime Contractor ;	Heavy civil contractor	No	No
Allison DeHonney	Urban Fruits & Veggies/Buffalo Go Green	adehonn@gmail.com	45 Pembroke Ave.	Urban Agriculture Organization ;	Agricultural	Yes	Yes
Jeanette Koch	Watts Architects & Engineers	jkoch@watts-ae.com	95 Perry Street, Suite 300, Buffalo NY 14203	Prime Consultant;Subconsultant (for Design RFPs);	Design	Yes	Yes
Jessica Henschel	Watts Architects & Engineers	jhenschel@watts-ae.com	95 Perry Street, Buffalo, NY	Subconsultant (for Design RFPs);Prime Consultant;	professional architecture, engineering, and environmental consulting design	Yes	Yes
Brad Sendlak	Watts Architects and Engineers	Bsendlak@watts-ae.com	95 Perry St, Buffalo, NY	Prime Consultant;Subconsultant (for Design RFPs);	Civil Engineering	Yes	Yes
Justin Kellogg	Watts-AE	jkellogg@watts-ae.com	95 Perry Street, Suite 300, Buffalo, NY 14222	Subconsultant (for Design RFPs);	Environmental Science/Engineering	Yes	Yes
Adam Tabelski	Wendel	atabelski@wendelcompanies.com	Williamsville NY	Prime Consultant;	A/E/C	No	No
Christopher Chapman	Wendel Companies	cchapman@wendelcompanies.com	Buffalo New York	Prime Consultant;Subconsultant (for Design RFPs);	Heavy Infrastructure, Collection systems, GI	No	No
Sashti Balu	WeRadiate	WeRadiateNY@gmail.com	Rochester, NY	Subconsultant (for Design RFPs);Subcontractor (for Construction Bids);	Agriculture, Compost, Soil, Landscape, Garden, Native Species, Data, Sensors, Remote Monitoring	No	Yes
Andrew Casolini Dal Bo	Whitman, Requardt & Associates	Acasolini@wrallp.com	12700 Fair Lakes Circle, Suite 300, Fairfax VA 22033	Prime Consultant;Subconsultant (for Design RFPs);	Wastewater planning, design and construction related services.	No	No
Renee Pfaltzgraff	WorryFree Home Services	Renee@wfhomesvcs.com	522 Amherst St Buffalo NY 14207	Subcontractor (for Construction Bids);Vendor/Manufacturer/Supplier;	Plumbing	No	No
Rich Loeffler	Xylem	richard.loeffler@xylem.com	NY	Prime Consultant;Subconsultant (for Design RFPs);Vendor/Manufacturer/Supplier;	Smart Sewer Capabilities	No	No
Robert Armacost	Xylem	robert.armacost@xylem.com	100 Cummings Center, Beverly MA 01910	Vendor/Manufacturer/ Supplier;Subcontractor (for Construction Bids);	Broad water technology: Pumps, sensors/monitors, treatment systems, digital/AI software, etc.	No	No
Todd Gaignat	Xylem / Evoqua	Todd.gaignat@xylem.com	115 berry rd loudon nh	Vendor/Manufacturer/ Supplier;	Municipal water & wastewater	No	No
Robert LeFevre	Xylem /Godwin Pumps	Robert.lefevre@xylem.com	8039 Oak Orchard Rd. Batavia, NY	Vendor/Manufacturer/ Supplier;	Pumping Systems / Dewatering	No	No

BUFFALO
SEWER AUTHORITY

BUFFALO SEWER AUTHORITY UNVEILS QUEEN CITY CLEAN WATERS INITIATIVE

BUFFALO, NY – The Buffalo Sewer Authority (BSA), elected officials, and community stakeholders gathered at Freedom Park to unveil the Queen City Clean Waters Initiative, a

$1 billion undertaking to improve local waterways over the next 15 years. The initiative will include infrastructure enhancements at 50+ sites across the city, including $250 million in upgrades at the Bird Island Wastewater Treatment Facility.

“The Queen City Clean Waters initiative is a community collaboration between BSA, the city of Buffalo, various community stakeholders, and residents to improve our local waterways and protect public health and safety,” said Oluwole A. (OJ) McFoy, Buffalo Sewer Authority CEO and General Manager. “This historic investment in our wastewater system infrastructure will reduce sewer overflows so that future generations can safely enjoy the vast recreational uses our waterways provide to our community and region.”

During heavy rainfall and snowmelt events, stormwater enters the sewer system, combining with wastewater, often leading to permitted combined sewer overflow discharges. These discharges are the result of the historical design of the city’s wastewater system, which was originally intended to prevent basement flooding.

Work already is underway at the Bird Island Wastewater Treatment Facility at Freedom Park, which is the first phase of facility upgrades and will significantly reduce overflows into the Niagara River. The 50+ planned projects will directly benefit other Western New York waterways including the Scajaquada Creek, Erie Basin Marina, Black Rock Canal, and the Buffalo River among others, by reducing sewer overflows.

“I am pleased that the Buffalo Sewer Authority’s Queen City Clean Waters initiative is highly focused on community engagement and making an historic and needed investment in the city’s wastewater system,” said City of Buffalo Acting Mayor Christopher P. Scanlon. “The Queen City Clean Waters inclusive and equitable approach is a priority of my administration and will help improve the quality of life of our underserved populations.”

The Queen City Clean Waters initiative includes a collaborative stakeholder engagement process that will be overseen by a Citizens Advisory Committee (CAC).

The CAC will play a crucial role in providing a platform for residents to voice their concerns and provide feedback and suggestions, on proposed projects in their communities. The CAC will be comprised of diverse community members and will act as a bridge between the BSA and residents, ensuring that the infrastructure investments reflect the needs and priorities of the community.

Jill Jedlica, executive director of Buffalo Niagara Waterkeeper and a member of the CAC said, “Our organization has been advocating for years for a program to once and for all reduce the harmful bacterial pollution caused by sewage overflows into our area waterways. This initiative under the auspices of the BSA gives us hope that one of our major advocacy priorities is being addressed in such a comprehensive and thorough manner.”

In addition to the CAC, Buffalo Sewer Authority will partner with workforce development entities to engage residents in project areas and provide them with valuable career training and job opportunities.

Through our historic financial commitment to the Queen City Clean Waters initiative, the BSA Board of Directors is establishing a precedent of making investments in underserved communities that are historically neglected by infrastructure investments,” said Buffalo Sewer Authority Chairman Herbert L. Bellamy, Jr. “This initiative will foster strong community partnerships, create meaningful workforce opportunities, and result in long-term environmental and economic benefits for future generations in Buffalo.”

Throughout the project schedule, BSA will host informational workshops to inform potential design consultants, construction contractors, and vendors of initiative opportunities. Specifically, BSA aims to create space for Disadvantaged, Women, and Minority Business Enterprise (D/W/MBE) firms to connect with prime contractors and other partners.

Design consultants, construction contractors, and vendors interested in learning about upcoming capital project opportunities are encouraged to attend a virtual Informational “Open House” Session on Wednesday, October 16, 2024, at 11:00 am EST.

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BUFFALO SEWER AUTHORITY

GOVERNOR AWARDS BUFFALO SEWER AUTHORITY $8.75 MILLION GRANT

BUFFALO, NY –Buffalo Sewer has been awarded a $8.75 million Green Resiliency Grant from New York State Governor Kathy Hochul and the New York State Environmental Facilities Corporation. Buffalo Sewer was one of 13 awardees from across the state and received the largest award outside of New York City of the $60 million that was disbursed through the grant program.

The $8.75 million grant will fund projects at Martin Luther King, Jr., Eddie Dawson, Hennepin, and Lincoln Parks to install rain gardens, stormwater tree trenches, underground stormwater storage systems, and porous pavement.

The projects were identified in Buffalo Sewer's Rain Check 2.0 Opportunity Report released in 2019 which serves as the framework for green infrastructure investments in the City of Buffalo. Rain Check 2.0 efforts are part of the Queen City Clean Waters initiative which will invest over $1 billion the next 15 years in infrastructure projects as part of Buffalo Sewer's long term control plan to reduce the impacts of combined sewer overflows into local waterways.

"High performance green infrastructure landscapes benefit water quality, and also bring a wide range of co-benefits that include reducing air pollution, improving property values, and increasing the walkability of the built-in environment," said Oluwole (OJ) McFoy, P.E., Buffalo Sewer Authority CEO and General Manager.

During heavy rainfall and snowmelt events, stormwater enters the sewer system, combining with wastewater and often resulting in permitted combined sewer overflows. These discharges are the result of the historical design of the city's wastewater system, which was originally intended to prevent basement and street flooding.

"This funding will be used to reduce urban flooding in neighborhoods across the city while improving access to parklands and recreation and helping lower the risk of combined sewer overflows, and ultimately improving access to our waterways," added McFoy. "We continue to aggressively pursue additional funding from our state and federal partners and other sources to support the Queen City Clean Waters initiative."

The Green Resiliency Grant Program is supported through the Clean Water, Clean Air, and Green Jobs Environmental Bond Act. Projects are intended to combat the effects of climate change, particularly in flood-prone and disadvantaged communities.

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THE BUFFALO NEWS

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EDITORIAL

ASSOCIATED PRESS

Abortion rights activists gather for a protest following the U.S. Supreme Court's decision to overturn Roe v. Wade, at Washington Square Park, New York. Proposal 1 will help protect the reproductive rights of women in New York.

Yes on Prop 1

An amendment that protects already-existing rights deserves to be passed

Ignore the fearmongering and the false claims. Proposal 1, which appears on the other side of every New Yorker's ballot this year, is an amendment to the state constitution that, if passed, would guarantee rights already written into state law.

In other words, it strengthens protections that New Yorkers currently have – some of them have been law for decades. Discrimination on the basis of age, race, creed, color, national origin, sexual orientation, military status, sex, marital status or disability is already prohibited in New York.

Proposal 1, also called the New York Equal Rights Amendment, would also protect New Yorkers who seek access to reproductive healthcare from discrimination on that basis. New York law already supports women's reproductive rights, but this amendment would add that protection to the state constitution.

Since Roe v. Wade was struck down by the Supreme Court, 21 states have either banned or restricted abortion care. That didn't happen in New York, but, under a different governor and a different legislature, it could. Easily.

To avoid any such catastrophic step backward for women and to strengthen other important rights that could be reversed by lawmakers, voters should vote "Yes" on Proposal 1. The amendment would keep reproductive rights from being subject to the political winds of government by embedding them in New York's constitution.

Opponents of Proposal 1 know that abortion rights are popular — and not just in New York. Indeed, when abortion rights have been on the ballot, people across the country have voted to support them.

That's why the amendment is being subjected instead to a barrage of false or misleading claims. One of them is that the amendment would infringe on parental rights by allowing minors to undergo operations such as gender-transition surgeries. According to the independent fact-checker organization, Politifact New York, the amendment would not undermine parental rights, as New York State does not allow minors to obtain medical care without parental consent in most cases, and this includes gender-affirming care.

Another claim, that transgender high school athletes would be allowed to play on teams that align with their chosen gender is misleading because New York State already offers protections that allow this. Proposition 1 would be strengthening protections that already exist.

The State Legislature amended New York's Human Rights Law in 2019 to include gender identity as a protected class and state education law states: "No person shall be disqualified from state public and high school athletic teams, by reason of that person's sex.

By pushing misleading claims and appealing to transphobia, opponents of Prop 1 don't have to talk about the issue of reproductive rights. But make no mistake, these efforts are as much about jeopardizing women's rights as they are anti-LGBTQ.

Both purposes endanger vulnerable segments of New York's populations. Both purposes set the stage for rolling back civil rights New York is renowned for respecting and guarding.

Proposal 1 deserves a Yes vote for what it is: a constitutional amendment that will help make sure New Yorkers keep the rights they now have.

MY VIEW

Memories of mom in floating feathers

Cheryl Apruzzese Thompson finds her way back to mom.

This time of year is filled with mom – her birthday, the holidays, yellow mums – but it also saddened her. "Everything is dying."

She reminded me of this last night while I was making the bed.

Since she passed last December, I've been waiting for the signs other people get, like pennies, numbers, or songs. A cardinal did appear in January, a brilliant red bird sitting on the snowy deck railing among a string of ordinary brown sparrows.

"Is that you, Mom?"

She had always stood out at the dances and festivals she loved to go to. Strong Ukrainian genes gifted her high cheekbones, flawless skin, beautiful green eyes, and a youthful figure. In her 90s, she could still pass for my older sister.

The cardinal looked straight in the window at me, then flew away. I've waited every morning, but it has never made itself known again. Then came the blue jays, and I convinced myself that mom was more like a jay. Excitable, curious, busy. Her first initial was J for Jeanette, and she loved the color blue. Yes, she must be a jay.

But which one? I waited for her to show herself. One, whose comb was slightly off-center, stared through the window. That must be Mom, I thought, remembering how she sat at the window first thing in the morning, looking at the birds with coffee cup in hand and morning hair.

But as time went on, I needed more. I went to the spiritual community of Lily-dale to attend a workshop on how to read signs. But try as I might to connect, my efforts failed.

I visited her favorite bookshop and café, and put yellow mums on her grave. "Mom, I'm still waiting."

Then, last night, as I was changing the sheets on the bed, I called out, "Mom, where are you? I have things I need to tell you. Your grandson is getting married, and I just saw your granddaughter in London."

Shaking the comforter, a few feathers escaped, and a strong sense of déjà vu came over me. I remembered a time decades ago, when she came to visit and helped me make the bed. Standing at opposite corners, we smoothed the sheets and shook out the blankets together.

I was in my '40s and still dragged around teenage baggage from my parents' divorce. Although I kept it hidden under the bed of adulthood, it lay quietly between us.

As we stood shaking the down comforter that would cover it all up again, I looked over at mom and found her looking back at me, her arthritic fingers clutching the comforter as the shakes grew stronger. Feathers floated memories around us. Then it struck me. I was now roughly her age when the divorce occurred. She wasn't perfect. Neither was I.

In silent synchronicity, Mom and I each dropped our ends of the comforter and stood staring at each other. I walked toward her side of the bed and put my arms around her. "Mom, I understand. I understand."

"I tried."

"I know."

No other words were ever needed. I felt my emotions lift out from under the bed and slip back onto the pages of my teenage diary, their rightful time and place.

This first year without her, I didn't see a butterfly on Mother's Day or a rainbow on my 71st birthday. But last night, there was no doubt that Mom was with me, helping me make the bed. And tucking me in.

• • •

My View *is a first-person column open to all Western New Yorkers. If your article is selected for publication, a photo of you is required. Email submissions to editpage@buffnews.com.*

ANOTHER VOICE | INFRASTRUCTURE

Sewer initiative will mitigate storm overflows

OLUWOLE MCFOY

Severe wet weather-related events are becoming the norm in our everyday lives across Western New York.

To address the challenges of these events and improve the quality of life for our residents and neighboring communities, Buffalo Sewer is committed to upgrading our treatment facilities to ensure cleaner water and a healthier environment for everyone.

In collaboration with community stakeholders, Buffalo Sewer recently unveiled the Queen City Clean Waters Initiative, a $1 billion undertaking to improve local waterways over the next 15 years.

The Queen City Clean Waters initiative is being implemented to mitigate stormwater and combined sewer overflows that discharge into our local waterways, including the Black Rock Canal, Buffalo River, Cazenovia Creek, Erie Basin, Niagara River, and Scajaquada Creek among others.

We are proud that this initiative is making it a precedent to invest in underserved communities that have been historically neglected by outdated infrastructure. We have strategically prioritized neighborhoods that have experienced, first-hand, Buffalo's ongoing stormwater challenge.

In addition, Queen City Clean Waters will allow future generations to safely enjoy the recreational use of our local waterways.

This initiative will foster strong community partnerships, create meaningful workforce opportunities, and result in long-term environmental and economic benefits.

Through our community engagement team and stakeholder advisory committee, we are ensuring that residents and community members will have a voice and seat at the table in this process. We will be visiting local block clubs, community groups, and residents.

This advisory committee will be comprised of diverse community members and will act as a bridge between the Buffalo Sewer and residents, ensuring these upgrades reflect the needs and priorities of the community.

Since 1935, Buffalo Sewer has prioritized safeguarding public health and remains committed to that mission through the implementation of our long-term control plan and now introduction of our Queen City Clean Waters initiative.

We look forward to creating opportunities for our local neighborhoods and protecting our waterways for current and future generations.

Oluwole (OJ) McFoy, P.E., serves as the general manager and chief executive officer for the Buffalo Sewer Authority.

Editorial Board

The editorials on this page represent the opinion of The Buffalo News editorial board. Members are Publisher Tom Wiley; Editor-in-Chief Margaret Kenny Giancola; and editorial writers Dawn Marie Bracely and Elizabeth Licata.

Another Voice *is an issues-oriented column that appears on the editorial page each day. Writers must have some background or expertise on the topic about which they are writing. Submissions should be about 480 words. Email submissions to editpage@buffnews.com.*

BUFFALO
SEWER AUTHORITY

UPCOMING WORK
IN THE
UNIVERSITY COMMON COUNCIL DISTRICT

Buffalo Sewer through its Queen City Clean Waters program **is tackling stormwater challenges in Buffalo.**

In the next month, our team will be **mapping** sites in your neighborhood for projects that are part of this Plan.

Our crews will wear yellow vests and hardhats as they work at:

1. **Edison Ave from Millicent Ave to bridge over Kensington Expressway**
2. **Roosevelt Park and Charter School of Inquiry**

For more information please contact:
Rosaleen Nogle, Principal Sanitary Engineer
Buffalo Sewer Authority
rnogle@buffalosewer.org.

BUFFALO
SEWER AUTHORITY

UPCOMING WORK
IN THE
LOVEJOY COMMON COUNCIL DISTRICT

Buffalo Sewer through its Queen City Clean Waters program **is tackling stormwater challenges in Buffalo.**

This month, our team will be **conducting drilling boring** sites in your neighborhood for projects that are part of this ~~Plan~~.

Our crews will wear yellow vests and hardhats as they drill borings:

1. **In the grass area on the Southwest corner of Genesee St and Countess Ave, Northwest of the Schiller Park Senior Center.**

For more information please contact:
Rosaleen Nogle, Principal Sanitary Engineer
Buffalo Sewer Authority
rnogle@buffalosewer.org.
(716) 851-4664 Ext. 4203

BUFFALO
SEWER AUTHORITY

UPCOMING WORK
IN THE
MASTEN COMMON COUNCIL DISTRICT

Buffalo Sewer through its Queen City Clean Waters program **is tackling stormwater challenges in Buffalo.**

This month, our team will be **conducting drilling boring** sites in your neighborhood for projects that are part of this Plan.

Our crews will wear yellow vests and hardhats as they drill borings:

1. **At the Northeast corner of the Scajaquada St and Colorado St intersection. Borings are in the grass area along the east side of Colorado Ave.**
2. **Along the East side of Humboldt Pkwy, between Northland Ave and East Delavan Ave.**
    a. **One traffic lane on Humboldt Pkwy will be closed between Northland Ave and East Delavan Ave.**

For more information please contact:
Rosaleen Nogle, Principal Sanitary Engineer
Buffalo Sewer Authority
rnogle@buffalosewer.org.
(716) 851-4664 Ext. 4203

BUFFALO
SEWER AUTHORITY

UPCOMING WORK
IN THE
UNIVERSITY COMMON COUNCIL DISTRICT

Buffalo Sewer through its Queen City Clean Waters program **is tackling stormwater challenges in Buffalo.**

This month, our team will be **conducting drilling boring** sites in your neighborhood for projects that are part of this Plan.

Our crews will wear yellow vests and hardhats as they drill borings:

1. **Along the North, South, and West sides of the Charter School of Inquiry. All borings will be in the grass or lawn areas.**
2. **On the lawn east of the Roosevelt Park.**
3. **Between the street and sidewalk along Lark St.**
4. **Along the north side of the road on Sidney St.**
    a. **One traffic lane on Sidney St. will be closed between Lark St and Humboldt Pkwy for two weeks.**

For more information please contact:
Rosaleen Nogle, Principal Sanitary Engineer
Buffalo Sewer Authority
rnogle@buffalosewer.org.
(716) 851-4664 Ext. 4203

BUFFALO
SEWER AUTHORITY

UPCOMING WORK
IN THE
NIAGARA COMMON COUNCIL DISTRICT

Buffalo Sewer through its Queen City Clean Waters program **is tackling stormwater challenges in Buffalo.**

This month, our team will be **conducting drilling boring** sites in your neighborhood for projects that are part of this Plan.

Our crews will wear yellow vests and hardhats as they drill borings:

1. **In the grass area along the East side of West Ave from Breckenridge St to Lafayette Ave.**
2. **In the grass area along the South side of Breckenridge St from Dewitt St to Herkimer St.**

For more information please contact:
Rosaleen Nogle, Principal Sanitary Engineer
Buffalo Sewer Authority
rnogle@buffalosewer.org.
(716) 851-4664 Ext. 4203

BUFFALO
SEWER AUTHORITY

EAST DELAVAN SEWER PROJECT

JUMP TO SURVEY

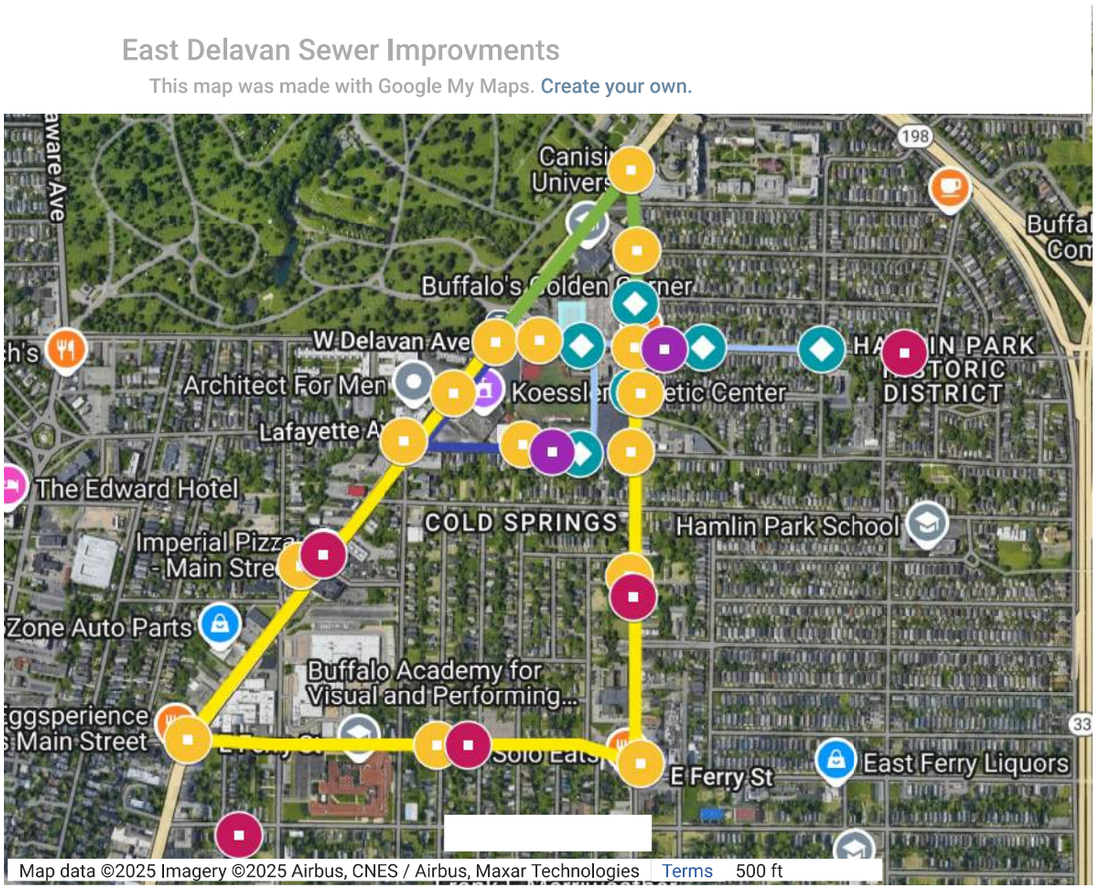
DRAFT SCOPE OF WORK

ABOUT THIS PROJECT

Buffalo Sewer Authority (BSA) is rebuilding and replacing the sewer system along East Delavan Avenue and Spillman Place.

The Buffalo Sewer Authority is currently designing and planning future construction of the Delavan Trunk Sewer Improvements at Spillman Place (SPP 333) project. The project will build new underground facilities to store rainwater and sewage, also known as combined sewage, that is generated during rainstorms and as a result of snowmelt. This stored combined sewage will then be sent to the Bird Island Wastewater Treatment Facility for treatment and discharge to the Niagara River.

PROJECT LOCATION



This project involves upgrades to the sewer collection system along East Delavan Avenue, Florida Street, and Spillman Place to control combined sewer overflow (CSO) discharges to Scajaquada Creek.

Scajaquada Creek, a major tributary of Lake Erie, daylights in Forest Lawn Cemetery and flows to Black Rock Canal

ENVIRONMENTAL BENEFITS

This project will benefit the environment by reducing water pollution into Scajaquada Creek and other downstream water bodies such as Hoyt Lake and Black Rock Canal.

COMMUNITY BENEFITS

BSA is committed to improving the community that it serves and wants your feedback about what is most important to you. The project will have community betterment initiatives, which may include revitalized trees and landscaping in the project vicinity, new water and sewer infrastructure, and workforce development opportunities.

TIMELINE

Construction on East Delavan and Spillman Place is expected to begin in 2026 and last up to five years.

TRAFFIC AND ROAD CLOSURES

Some sidewalks and roadways will be fully or partially closed during portions of the construction period. Based on the City of Buffalo guidelines, all traffic will be redirected or rerouted so you will be able to reach your destination.

Click here for a full list of Frequently Asked Questions. [FAQ document]

WHAT IS THE PURPOSE OF THE PROJECT?

WHAT IS THE PURPOSE OF THE PROJECT?

GOALS:

HOW DOES THIS PROJECT BENEFIT ME?

WHEN WILL THE CONSTRUCTION START AND END?

WILL THERE BE NOISE DURING THE CONSTRUCTION?

HOW WILL CONSTRUCTION AFFECT TRAFFIC IN THE AREA? WHAT ABOUT MEDICAL TRANSPORT?

WILL CONSTRUCTION CAUSE RODENT PROBLEMS?

HOW WILL THE CONSTRUCTION IMPACT LOCAL BUSINESSES AND SERVICES?

PARKING OR PUBLIC TRANSPORT

WILL TREES BE CUT DOWN AS PART OF THIS PROJECT?

COMMUNITY MEETINGS OR UPDATES PLANNED TO KEEP RESIDENTS INFORMED ABOUT THE PROGRESS OF THE CONSTRUCTION?

WILL CONSTRUCTION EXPOSE ASBESTOS?

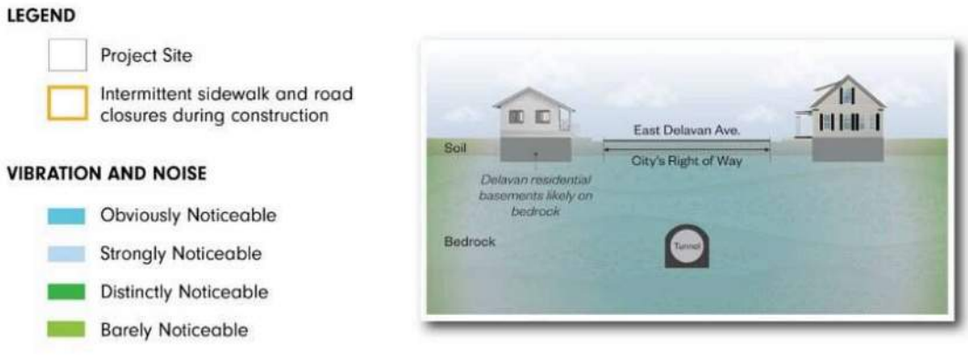
HOW WILL THIS PROJECT AFFECT AIR QUALITY?

WILL BUFFALO SEWER TAKE INTO ACCOUNT OTHER LARGE-SCALE INFRASTRUCTURE PROJECTS UNDERWAY IN THE AREA? IF SO, HOW?

SHARE YOUR FEEDBACK

This is an historic investment in our city's infrastructure that will improve water quality and environmental quality for future generations. BSA created an Enhanced Public Participation Plan (EPPP) to promote equity through community engagement. The EPPP details the methods BSA will use to share project information with the public and receive valuable feedback from the community.

PROJECT OPTIONS



WHICH DESIGN OPTION DO YOU PREFER?

BSA is evaluating different designs for the project that prevent water pollution from entering our precious water sources, including Scajaquada Creek and the Niagara River. Please take our brief survey to share your preferences, comments and concerns.

WHAT IS MOST IMPORTANT TO YOU?

BSA is investing in community betterment initiatives throughout the project. Please take our brief survey to share your priorities.

TAKE THE SURVEY

Workforce Development

Neighborhood Beautification (street trees, sidewalks)

Water and Sewer Infrastructure Improvements

Project location: Florida Street at Spillman Place.

CONTACT US

If you have any questions or comments about this project, please contact:

Regina Harris, Senior Engineer
rharris@buffalosewer.org
716-851-4664 ext. 4227

BUFFALO
SEWER AUTHORITY

Buffalo Sewer Authority
City Hall Room 1038
Buffalo, NY 14202
716-851-4664

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East Delavan Sewer Improvements Project (SPP 333 CSO-053_11)

Draft Scope of Work
October 4, 2024

BUFFALO SEWER AUTHORITY

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1. Project Overview

The Buffalo Sewer Authority (herein referred to as Buffalo Sewer) owns, operates, and maintains the combined sewage collection system within the City of Buffalo (City). Currently, this sewer system collects and conveys sanitary sewage and stormwater from several communities in the City of Buffalo and surrounding communities to the Bird Island Wastewater Treatment Facility (Bird Island WWTF), owned and operated by Buffalo Sewer.

The proposed project would build new underground facilities to store rainwater and sewage, also known as combined sewage, that is generated during rainstorms or as the result of snowmelt. Following the storm or snowmelt event, this stored combined sewage would be sent to the Bird Island WWTF for treatment and discharge via the WWTF's existing outfall to the Niagara River. This would reduce the number and volume of Combined Sewer Overflows, also known as CSOs, into Scajaquada Creek and other water bodies.

CSOs are necessary in older systems, like Buffalo's, to prevent combined sewage from backing up into buildings or flooding into streets during large rain events. During wet weather, untreated or partially treated combined sewage is diverted to receiving waterbodies in accordance with Buffalo Sewer's New York State Pollutant Discharge Elimination System (SPDES) permit, which is a permit that controls wastewater discharge. The SPDES program has been approved by the United States Environmental Protection Agency (USEPA) to help regulate wastewater and stormwater discharged in compliance with the Clean Water Act. The SPDES permit is regulated (issued, managed and modified by) the New York State Department of Environmental Conservation (NYSDEC).

In addition to the State level permitting on discharges, there are also national permitting requirements known as National Pollutant Discharge Elimination System (NPDES) permit program. Under NPDES, the USEPA has a national framework for controlling CSOs through the CSO Control Policy. This policy has led to broader collaboration between USEPA and communities across the United States to provide guidance on how these communities can achieve the goals of the Clean Water Act. The CSO Control Policy has two phases to help communities manage CSOs. During the first phase, a community must develop a Long-Term Control Plan (LTCP), which is a plan that describes how a community will comply with water quality standards as well as other CSO Policy and Clean Water Act requirements. During the second phase, communities with CSO's must continue to implement water quality controls, meet the goals of any LTCP, and conduct monitoring to verify and ensure that water quality standards are being met.

In 2014, Buffalo Sewer received approval of their multi-year LTCP from NYSDEC and the USEPA. In addition to several other projects throughout the system, the LTCP recommended constructing an offline CSO storage facility along East Delavan Avenue to temporarily store combined sanitary and stormwater that would typically overflow into Scajaquada Creek via a weir structure (a structure which manages the flow of water) at Sewer Patrol Point (SPP) 333 (CSO-053_11). This is referred to as the Buffalo Sewer's East Delavan Sewer Improvements Project (SPP 333 CSO-053_11). Another project identified in the LTCP in the vicinity of the East Delavan Sewer Improvements Project includes upsizing a pipe from the Buffalo Sewer's SPP 229A at Florida Street (CSO-053_10). This project is underway, and construction is anticipated to begin in fall 2024. Both the improvements at SPP 229A at Florida Street and the East

Delavan Sewer Improvements Project (SPP 333 CSO-053_11) are located within the Masten District of the City of Buffalo.

As projects that require funding and approval from New York State, they are subject to environmental review under the State Environmental Quality Review (SEQR) Act. The Buffalo Sewer Authority will serve as Lead Agency for the SEQR process and will work with NYSDEC to prepare the required environmental documentation consistent with Section 8-0113, Article 8 of the Environmental Conservation Law as set forth in 6 NYCCRR, Part 617 and the State Environmental Review Process (SERP) as required by the State Revolving Fund loan program. The project is currently listed as part of the 2024 Clean Water State Revolving Fund. An updated Intended Use Plan (IUP) was submitted to re-list the proposed project for the 2025 funding cycle.

The Buffalo Sewer Authority has determined that the East Delavan Sewer Improvements Project (SPP 333 CSO-053_11) (also referred to herein as the Proposed Action) requires the preparation of a Draft Environmental Impact Statement (DEIS) in accordance with SEQR. Public scoping is the first step in the environmental review process and is the period during which government agencies, elected officials, community organizations, groups, and individuals can review and provide comments on the Draft Scope of Work to Prepare a DEIS. This Draft Scope of Work (Draft Scope) describes the following: the purpose and need for the Proposed Action, a summary of the alternatives being considered for the Proposed Action, and the methodologies to be used in assessing the potential for impacts associated with the Proposed Action alternatives. Finally, the proposed impact assessment methodology for each DEIS environmental resource area is described to indicate how the potential for impacts will be assessed and disclosed in the DEIS.

Because the SPP 229A project is a separate and distinct project which constitutes upgrades to existing infrastructure within the existing utility right-of-way of Florida street, Buffalo Sewer has determined the project constitutes a Type II Action under SEQR, making it is exempt from environmental review. Therefore, the forthcoming EIS and this associated Draft Scope will focus on evaluation of the Proposed Action – construction of a CSO storage facility along East Delavan Avenue.

1.1 Background and Identification of the Proposed Action

Buffalo Sewer owns, operates, and maintains the combined sewage collection system within the City of Buffalo (City) and also uses this system to collect sanitary flow and stormwater from parts of the Towns of Alden, Cheektowaga, Elma, Lancaster, Tonawanda, and West Seneca; the Villages of Depew, Lancaster, and Sloan; and Erie County Sewer District Nos. 1 and 4. All flow collected within the system is conveyed to Buffalo Sewer's Bird Island WWTF.

The Buffalo Sewer combined sewer system covers 110 square miles. The City is located near several water bodies including Lake Erie, the Niagara River, Black Rock Canal, Cazenovia Creek, and the Scajaquada Creek. Historically, the City was developed as an end point to the Erie Canal, which brought industry and commerce to the area at its peak.

As development and settlement in the City grew, the Niagara River was first used as a convenient site of disposal for community sewage in the 1930's.[1] Prior to sewer systems being built, disposing of domestic wastewater was the responsibility of the individual and disposal of industrial waste was the responsibility of individual industrial firms. During this time there was an out of sight, out of mind attitude for wastewater disposal, particularly in urban areas across the United States.[2] In addition to discharge of sewage directly to the Niagara River, a sewer system was eventually established to carry combined sewage and storm water to the Buffalo River, Scajaquada Creek, and Black Rock Canal. However, this posed a significant environmental problem – the health of these water bodies became threatened as the discharge of untreated sewage from several points throughout the City increased as the City grew. In 1938, the Buffalo Sewer was established to help address water quality issues and the Bird Island WWTF was constructed. In addition to construction of the WWTF, intercepting sewers were also constructed, which are large pipes that carry wastewater from points throughout the City to the Bird Island WWTF for primary treatment. Primary sewage treatment involves the separation, purification, and discharge of liquid waste and the drying and disposal of solid waste, also known as sludge. With the help of federal and state grants, secondary treatment facilities were constructed and placed in service at the Bird Island WWTF in 1981. Secondary treatment uses bacteria to consume pollutants and can be more effective than primary treatment in improving the quality of wastewater discharges since primary treatment relies solely on mechanical methods to remove pollutants from wastewater.[3]

Today, the Buffalo Sewer's Bird Island WWTF is the second largest wastewater treatment plant in New York State. Currently, wastewater is treated at the Bird Island WWTF before it is discharged to the Niagara River via two permitted outfalls. As stated above, during wet weather, untreated or partially treated combined sewage is diverted to receiving waterbodies in accordance with Buffalo Sewer's SPDES permit.

1.2 Location

The Proposed Action is located within the Masten District neighborhood of the City of Buffalo, Erie County, New York as seen in **Figure 1**. The project area generally extends from a quarter to a half-mile around East Delavan Avenue between its intersection with Jefferson Avenue and contains a portion of Canisius University (Canisius) property to the north and south. The Forest Lawn Cemetery and Delaware Park are located to the north, and Humboldt Parkway borders the project area's eastern edge. The project area is west of the neighborhoods of Hamlin Park and east of Elmwood Village.

[1] Buffalo Sewer Authority. (2013). History. Retrieved August 1, 2024, from https://buffalosewer.org/history/

[2] Rossi, M. C. (1995). The history of sewage treatment in the City of Buffalo, New York. Middle States Geographer, 28, 9-19. Retrieved from https://msaag.aag.org/wp-content/uploads/2013/04/2_Rossi.pdf

[3] Rossi, M. C. (1995). The history of sewage treatment in the City of Buffalo, New York. Middle States Geographer, 28, 9-19. Retrieved from https://msaag.aag.org/wp-content/uploads/2013/04/2_Rossi.pdf

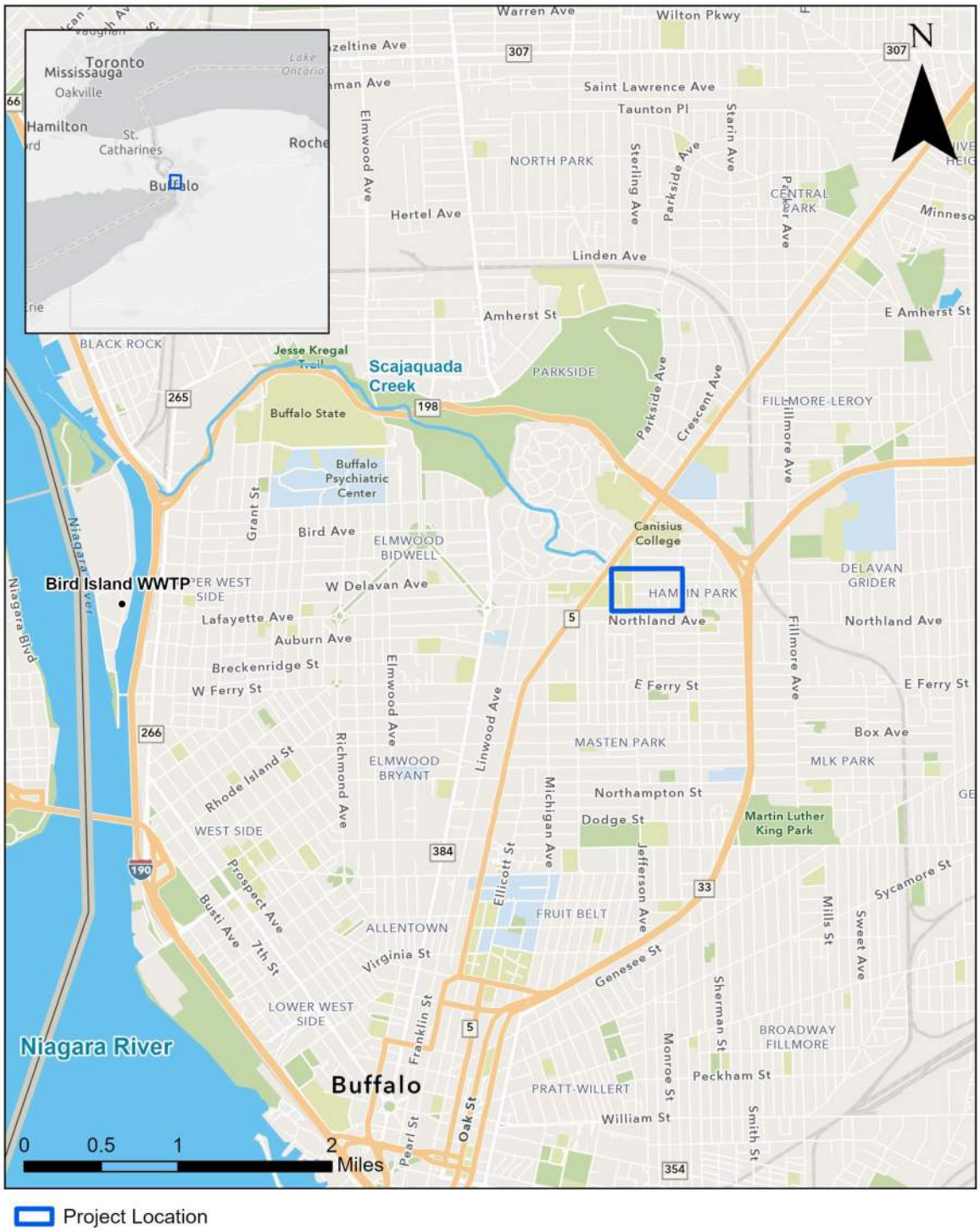

Figure 1: Project Location

1.3 The Proposed Action

This Proposed Action is intended to provide up to 1.5 million gallons (mg) of storage for combined sewage, with the goal of reducing the number of times the combined sewer collection system overflows, referred to as CSO activations. The number of CSO activations for a typical year varies by sewer patrol point within Buffalo Sewer's system and are listed in **Table 1-1** for SPP 229A and SPP 333. For SPP 333, there are currently up to 24 CSO activations within a typical year, based on the USEPA Storm Water Management Model (SWMM) documented in Buffalo Sewer's 2023 draft LTCP Optimization Selected Alternative Technical Memorandum (herein referred to as LTCP). According to the LTCP, the Proposed Action would reduce the frequency of typical year CSO activations from SPP 333 to the Scajaquada Creek.

Table 1-1: CSO Activations by Sewer Patrol Point During Typical Year Model

Sewer Patrol Point (SPP)	Number of Overflow Activations [1]
229A	6
333	24

(1) Based on the Buffalo Sewer Authority 2023 draft LTCP Optimization Selected Alternative TM from EPA SWMM model (2018 calibration with projects implemented between 2018 and 2023 included).

2. Purpose, Need, and Benefits

For Buffalo Sewer to comply with the approved LTCP, improvements must be implemented to minimize the number of CSO activations to the Scajaquada Drain (and downstream Scajaquada Creek) resulting from heavy rainfall events. [4] If no engineering intervention is taken, flows will continue to increase, causing further increases in the amount of CSO activations due to increasing urbanization and the expansion of impervious surfaces – surfaces that do not absorb water such as sidewalks, driveways, parking areas – within the City. Implementation of projects within Buffalo Sewer's LTCP will ultimately support the overall health and environmental conditions of the receiving waterbodies by reducing the frequency and volume of combined sewage entering the Scajaquada Creek via the Scajaquada Drain.

In addition to providing water quality benefits downstream, the Proposed Action will also implement community betterment initiatives which may include replanting of trees and landscaping in the project vicinity, new water and sewer pipes, and workforce development opportunities.

[4] The Scajaquada Drain carries CSO flow from SPP-229A and SPP-333 to Scajaquada Creek.

2.1 Project Description

To comply with the LTCP and reduce CSO activations within the study area, flow will be diverted at SPP-333, which is located at the southwest corner of Canisius property, to a proposed 1.5 mg offline storage structure. Flow will be held and subsequently discharged to the existing Scajaquada Tunnel sewer located along Florida Street at Spillman Place before it is conveyed to and treated at the Bird Island WWTF.

To address the requirements of SEQR, the DEIS will evaluate reasonable alternatives for providing the required 1.5 mg of offline storage for combined sewer flow at SPP-333. Two design alternatives that achieve the goals and objectives of the Proposed Action are expected to be analyzed in the DEIS, which include: (1) construction of an underground storage tunnel; and (2) construction of an underground deep storage tank. These alternatives are further discussed in Section 4.2.

The DEIS will not present a selected preferred alternative and will equally examine both alternatives. Before selecting a preferred alternative, Buffalo Sewer will seek community feedback through both the environmental review process (which includes preparation of the DEIS and associated public hearings) and implementation of the project's Enhanced Public Participation Plan, a requirement of Buffalo Sewer's SPDES permit. It's anticipated that the preferred alternative will be selected and discussed within the project's Final EIS (FEIS) following review of, and response to, public comments received on the DEIS.

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3. Local, State, and Federal Permits and Approvals

Implementation of the Proposed Action would require modification of the existing SPDES Permit for SPP 333 and additional approvals from state and local agencies. Local permits and approvals may be required for new construction, such as site plan approvals and building permits in the affected areas. An updated list of anticipated permits and approvals will be identified in the EIS, as needed. These actions and approvals may include:

State

- New York State Department of Environmental Conservation
    - SPDES General Permit for Construction Discharges
    - Beneficial Use Determination
- New York Natural Heritage Program
    - Consultation
- New York State Office of Parks, Recreation and Historic Preservation
    - Consultation
- New York State Environmental Facilities Corporation
    - Clean Water State Revolving Fund
- New York State Department of Transportation
    - Special Hauling Permit

County

- Erie County Department of Health
    - Sewer/Wastewater/Construction Permits

Local

- City of Buffalo
    - Special Use Permit
    - Building Permit(s)
- City of Buffalo Bureau of Forestry
    - Tree Work Permit

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4. Scope of the Environmental Impact Assessment

4.1 Environmental Review

This Draft Scope was created to outline the components of the DEIS and the methodology that will be used to conduct impact assessments within the DEIS. In accordance with SEQR, this Draft Scope has been published and publicly shared for review and comment. A Draft Scoping hearing on the project will be held to solicit comments from the public with respect to the content and methodologies that will be used to assess potential impacts of the Proposed Action within the DEIS. Both the NYSDEC and USEPA are considered involved agencies to the EIS process.

The detailed impacts to be evaluated and discussed in the DEIS will primarily occur during the construction phase for each of the two project alternatives, rather than during project operation. A description of each project alternative is provided below in Section 4.2.

4.2 Analytical Framework

This section outlines the analytical framework that will be used to evaluate both the potential benefits and impacts associated with the Proposed Action. The DEIS will also consider and assess cumulative associated impacts from the Proposed Action that may potentially occur within environmental resource areas evaluated. For each environmental resource area, there will be an evaluation of baseline conditions, conditions in the future without the Proposed Action, and conditions in the future with the Proposed Action.

Baseline Conditions. Baseline conditions, also sometimes referred to as existing conditions, will be evaluated to establish a baseline from which future conditions can be compared. These conditions will be developed based on data and studies collected and analyzed as part of the SEQR process.

Future Without the Proposed Action. The Future Without the Proposed Action will describe the conditions of the project site without enactment of the Proposed Action. In the Future Without the Proposed Action, there would be no reduction in CSO activations from SPP-333 into Scajaquada Creek.

Future With the Proposed Action. The Future With the Proposed Action will evaluate alternatives that support and comply with Buffalo Sewer's LTCP by reducing CSO activation events for SPP 333. Potential changes to the study areas which would result from the Proposed Action will be compared to the Future Without the Proposed Action to assess the potential for both benefits and significant adverse impacts.

A project study area ranging from a quarter-mile to a half-mile will be evaluated for the following environmental resource areas: Land Use, Zoning, Community Plans, and Public Policy; Community Facilities, and Services; Open Space and Recreation; Archeological, Historic, and Cultural Resources; Visual Resources and Community Character; Natural Resources; Socioeconomic Conditions; and Environmental Justice. The study area for the following environmental resource areas will be where direct impacts or changes may occur: Geology; Hazardous Materials; Water Resources and Sewer Infrastructure; Energy; Transportation; Air Quality, Greenhouse Gas Emissions, and Odor; Noise, Vibrations, and Light; and Public Health.

A summary of the Future Without the Proposed Action and alternatives for the Future With the Proposed Action that will be evaluated in the DEIS are as follows:

4.2.1 Future Without the Proposed Action – Alternative A

Alternative A is the future condition without the Proposed Action. Alternative A assumes that there would be no reduction or improvements in the frequency of combined sewer overflows (activations) in the project area. Although Buffalo Sewer's Amended Administrative Order with the USEPA stipulates a compliance schedule for implementation of the LTCP projects, and the mandate precludes Buffalo Sewer from evaluating a 'no-action' alternative, for the purposes of this Draft Scope and the DEIS, a no-action baseline alternative will be considered to provide a basis for comparison of impacts from other reasonable alternatives.

4.2.2 Future With the Proposed Action - Alternative B (Storage Tunnel)

Alternative B would consist of a 1.5 mg storage tunnel with a finished diameter of 14-ft beneath the East Delavan Avenue right-of-way which is between Meech Street (eastward) and Main Street (westward) as seen in **Figure 2.** The storage tunnel would extend approximately 1,500 linear feet (LF) in the east-west direction beneath East Delavan Avenue approximately 30-feet below grade. Alternative B would require approximately 0.40 acres of permanent land transfer from Canisius University to the City of Buffalo at the northern intersection of Spillman Place and Delavan Avenue.

Construction of Alternative B would take approximately three years and would involve temporary disturbances to Canisius property.

Alternative B involves construction activities that would be noticeable at businesses and residences along East Delavan Avenue, as well as limited impacts in the vicinity of homes/residences at Spillman Place and Florida Street.

4.2.3 Future With the Proposed Action - Alternative C (Deep Storage Tank)

Alternative C would consist of a deep storage tank with a storage volume of 1.5 mg beneath Canisius property at the corner of East Delavan Avenue and north of Spillman Place, as seen in **Figure 3**. The top of the deep storage tank would be approximately 20 feet below grade. The deep storage tank would extend approximately 165 LF in the north-south direction and 65 LF in the east-west direction along the western edge of Canisius property. An equipment building that would house electrical and HVAC equipment and instrumentation systems would be located above ground on Canisius property. Alternative C would require approximately 0.20 acres of permanent land transfer from Canisius University to the City of Buffalo at the northern intersection of Spillman Place and Delavan Avenue.

Construction would take approximately two years and would involve temporary land disturbance that would primarily impact Canisius property with limited impact in the vicinity of homes/residences at Spillman Place and Florida Street.

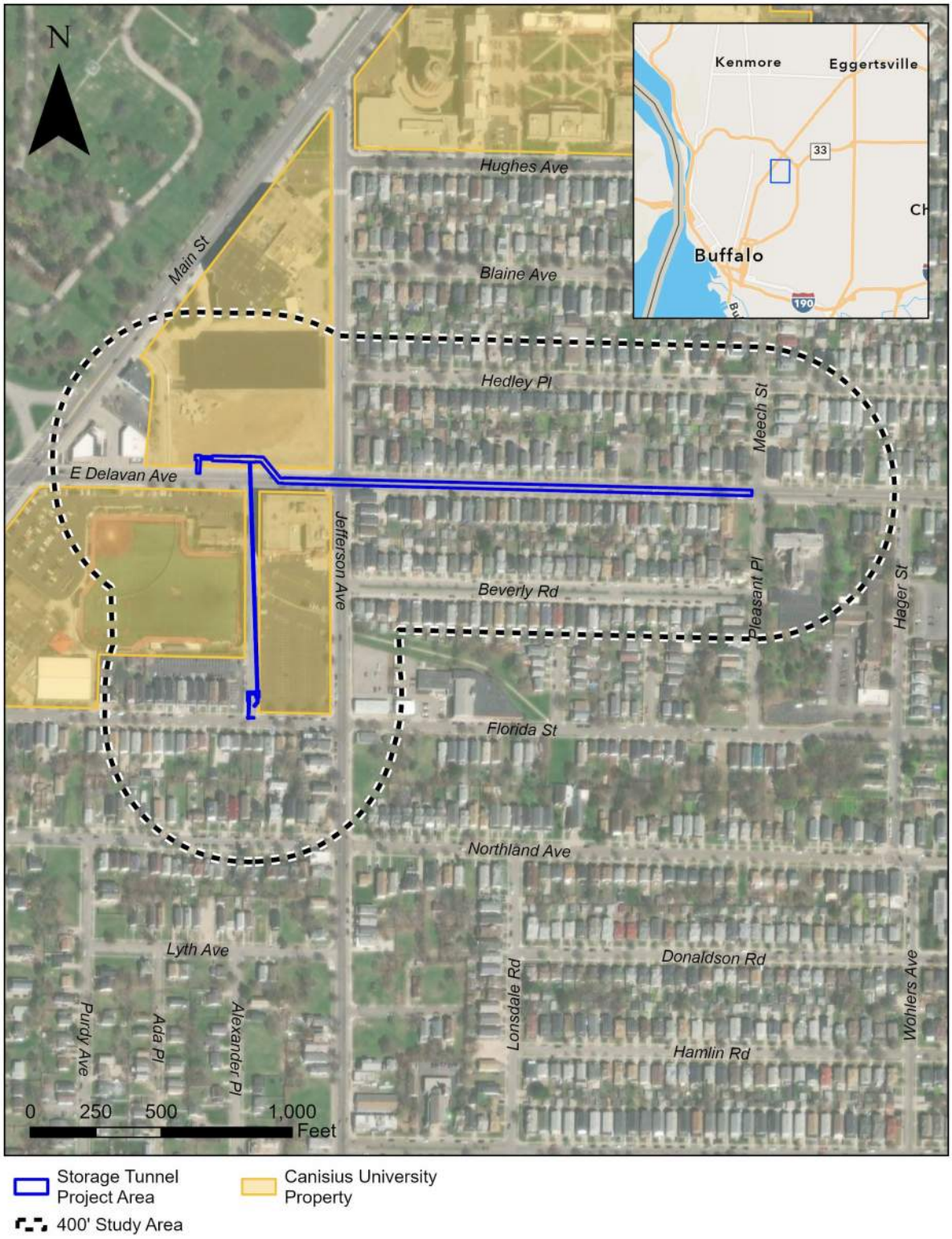

Figure 2: Project Site – Storage Tunnel

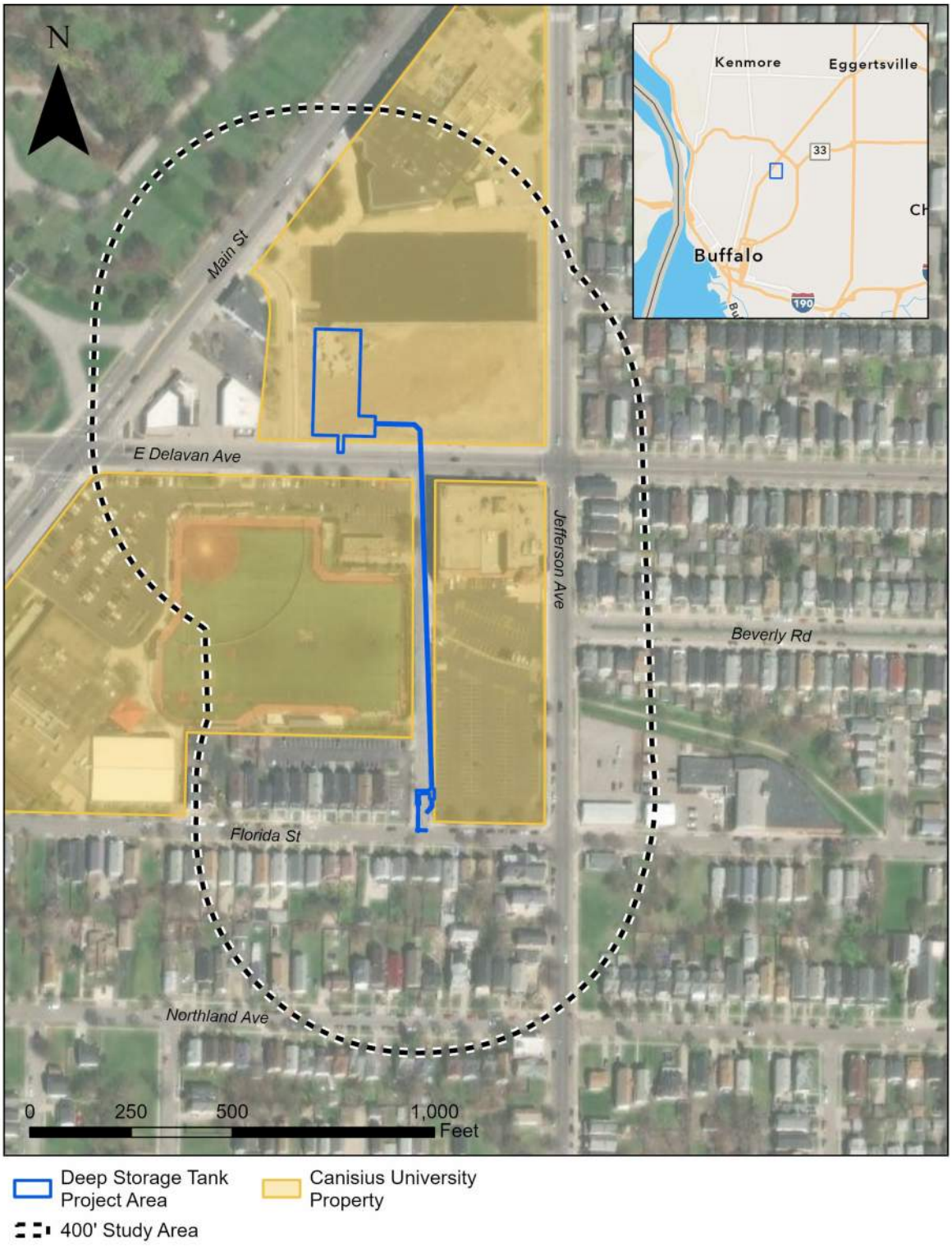

Figure 3: Project Site Map – Deep Storage Tank

4.3 Summary of Proposed Methodologies for Environmental Resource Area Analysis

This section summarizes the methodologies to be used to evaluate the potential for significant adverse impacts and potential benefits of the Proposed Action on various environmental resource areas in accordance with SEQR.

4.3.1 Land Use, Zoning, Community Plans, and Public Policy

The Land Use, Zoning, Community Plans, and Public Policy analysis will assess the Proposed Action's compatibility with the study area's land use and zoning characteristics, community plans, and public policy initiatives. This includes assessing whether the Proposed Action would be consistent with development trends within the study area. The analysis presented in this section of the DEIS will also support the evaluation of other sections such as open space, visual resources and community character, natural resources, and public health.

4.3.1.1 Baseline Conditions

The baseline conditions assessment will describe existing land use, zoning, community plan and public policy conditions. Appropriate existing land use and zoning (**Figure 4** and **Figure 5)** will be mapped and a description of land uses within the project study area will be presented within the DEIS. Land use data will be compiled and mapped using published data, any gaps in published data will be supplemented with field surveys and desktop aerial photography. Relevant public policies, local plans, and assessment of the Coastal Zone Management Act (CZMA) of 1972 (16 U.S.C. §§1451-1464); the New York State Coastal Zone Management Program; Scenic Areas of Statewide Significance (SASS) and any Local Waterfront Revitalization Programs (LWRP) within or adjacent to the study area will also be described.

4.3.1.2 Future Without the Proposed Action (Alternative A)

This section will disclose and describe any pending land use and zoning actions in the project study area unrelated to the Proposed Action but occurring prior to or during the timeframe of the Proposed Action. It will also present any planned changes to local public policies that could impact the Proposed Action. This section will also identify any other specific development projects that could affect the study area prior to or during the timeframe of the Proposed Action.

4.3.1.3 Future With the Proposed Action (Alternative B and C)

This section will discuss potential impacts to land uses and zoning patterns within the project study area as well as describe any known potential easements or land acquisition associated with each Proposed Action alternative. An assessment will be made to determine whether the Proposed Action is compatible with existing land uses, existing zoning, land use patterns, and relevant trends in the study area. This assessment will also evaluate whether the Proposed Action alternatives are consistent with public policies and State and local plans applicable to the study area.

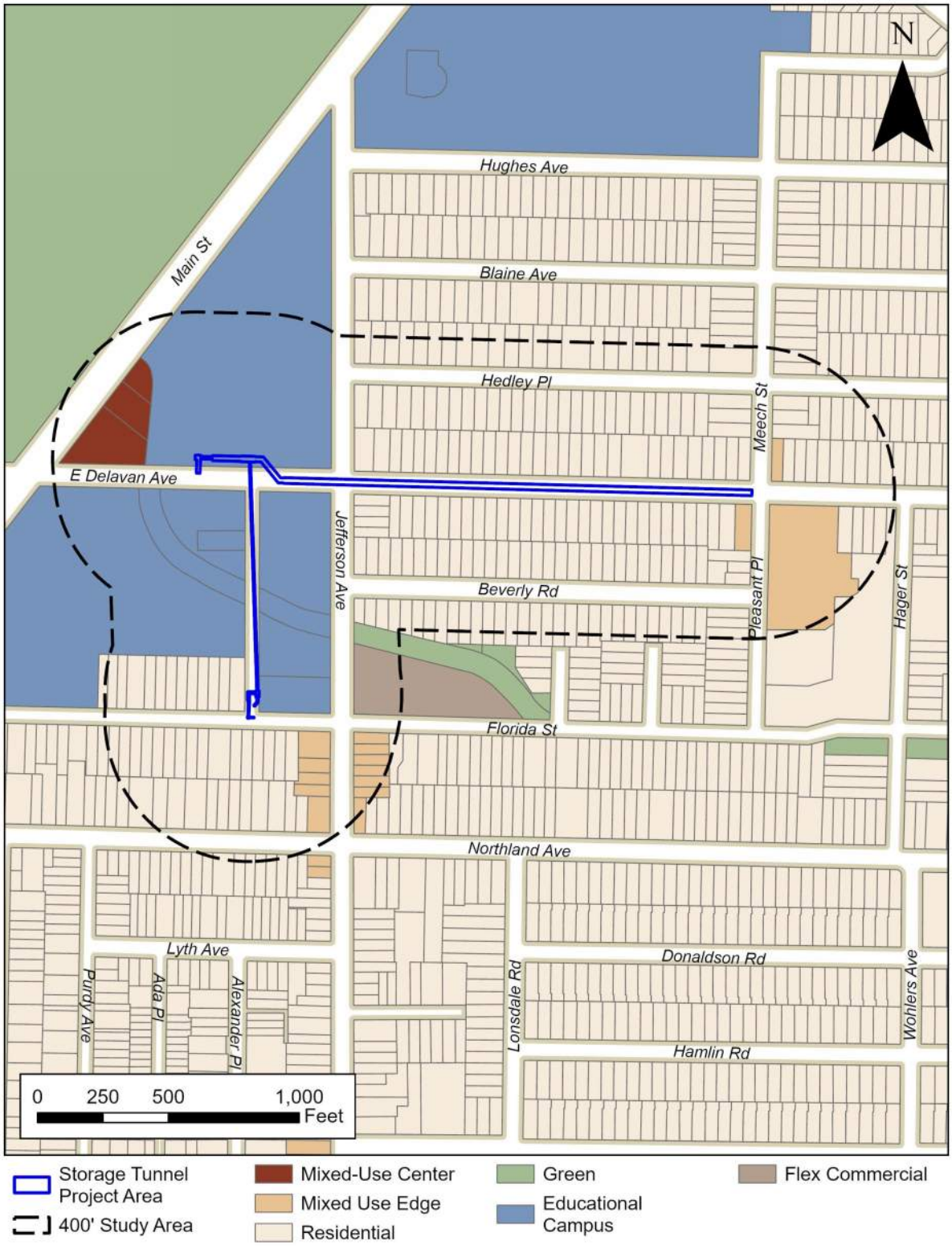

Figure 4: Zoning – Storage Tunnel

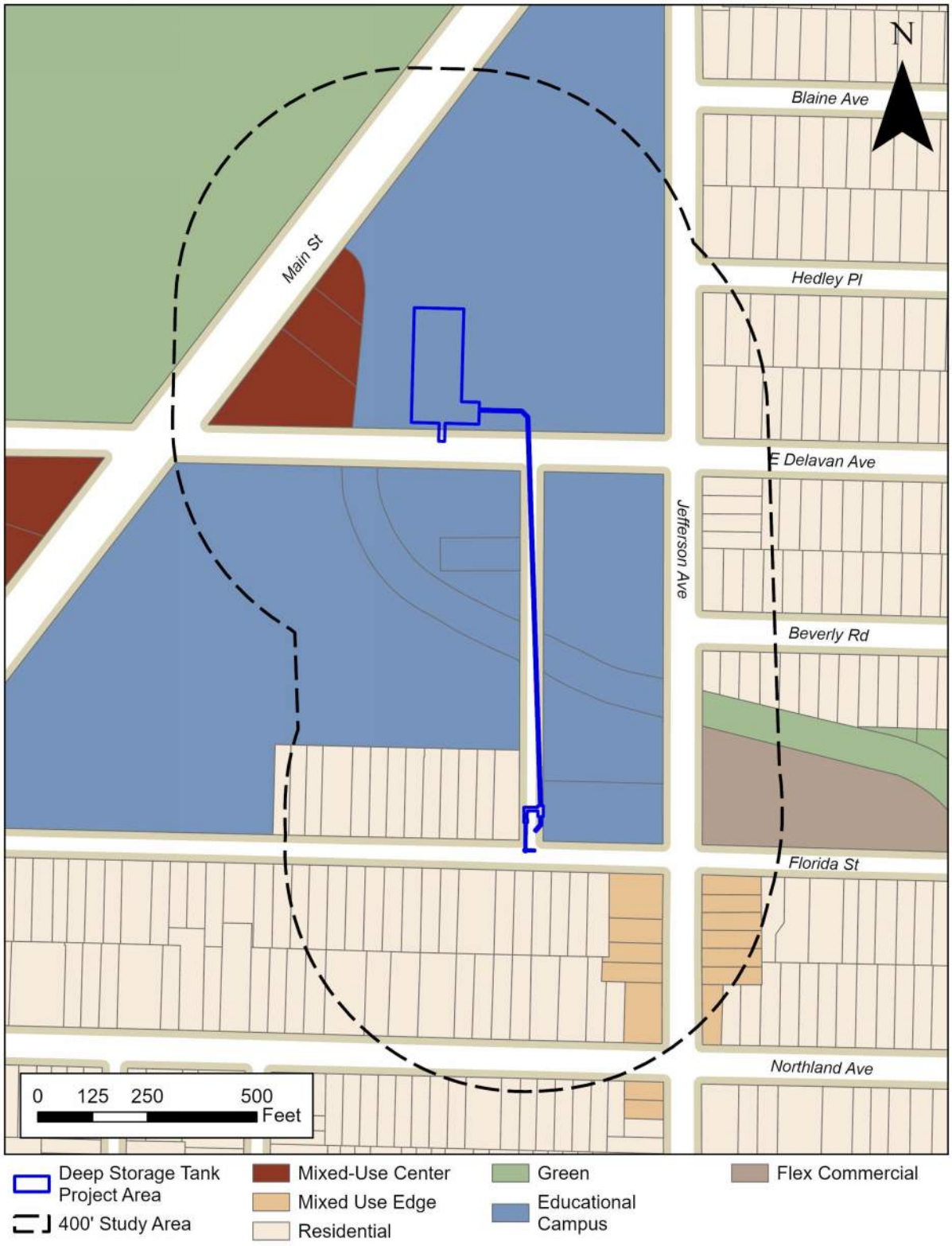

Figure 5: Zoning – Deep Storage Tank

4.3.2 Community Facilities, and Services

This section will describe and identify all community facilities and services such as police, fire, emergency medical services, libraries, daycares, and schools within or serving the project study area. In addition to identifying existing community facilities and services, this section will also assess whether the Proposed Action would interfere with the use or enjoyment of public resources.

4.3.2.1 Baseline Conditions

The baseline conditions for this section will identify and map local community facilities and services within and serving the study area.

4.3.2.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any changes nor impact to community facilities and services such as police, fire, emergency medical services, libraries, daycares, and schools within or serving the project study area in the Future Without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community Plans, and Public Policy section will be reviewed to ensure that new demands for community facilities and services that may occur in the vicinity of the study area in the timeframe that the Proposed Action would be implemented are considered in the DEIS.

4.3.2.3 Future With the Proposed Action (Alternative B and C)

It is not anticipated that the Future With the Proposed Action would impact community facilities and services. However, if, during the analysis, it is determined that there could be an impact, the DEIS would assess any expected uses of or disruptions to the surrounding community facilities and services. This would include an analysis of any temporary changes to the use of or access to community facilities and services associated with construction of the Proposed Action.

4.3.3 Open Space and Recreation

This section of the DEIS will describe elements of the Proposed Action that would have the potential to affect open space and recreation within the project study area. An assessment will be prepared to determine whether either the construction or operation of the Proposed Action would have a potential to impact any open space or recreational resources within the DEIS.

4.3.3.1 Baseline Conditions

Baseline conditions for this section would include calculating total population within the study area and mapping existing open spaces and recreational areas within the project vicinity (e.g. Scajaquada Trail, Horrace "Billy" Johnson Park, Forest Lawn Cemetery, Delaware Park, etc.).

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4.3.3.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact on Open Space and Recreation in the Future Without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community Plans, and Public Policy section will be reviewed to determine whether new constraints on or development of open space and recreational resources may occur in the vicinity of the project study area in the timeframe that the Proposed Action would be implemented.

4.3.3.3 Future With the Proposed Action (Alternative B and C)

This assessment will describe the compatibility of the Proposed Action with existing open space in the study area, relevant open space trends, and the 2021 City of Buffalo Parks Master Plan. Any direct impacts to open space or recreational resources or the pedestrian experience during construction will be described and evaluated within this section.

4.3.4 Geology

This section of the DEIS will include an assessment of the geological features within the project area through field surveys and desktop analysis. The quantity and type of excavated material that would be removed from the site to support construction of the Proposed Action will also be described. This will include an assessment of excavated material removal methodology.

4.3.4.1 Baseline Conditions

Prior investigations and observations of the geologic conditions of the study area will be used to identify existing topographic and geologic conditions. A geotechnical engineering report and a custom resource soil report has been prepared and will be used to describe the baseline geological conditions of the project area within this section.

4.3.4.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact on Geology in the Future Without the Proposed Action.

4.3.4.3 Future With the Proposed Action (Alternative B and C)

The Future With the Proposed Action would include excavating, drilling, blasting, and tunneling in bedrock during construction. All potential impacts to geological features from construction will be documented and discussed in this section. In addition, this section will discuss the handling and disposal of excavated materials will be presented in this section.

4.3.5 Archaeological, Historic, and Cultural Resources

This section will describe and analyze existing historic and archaeological resources in the vicinity of the project study area, in accordance with the requirements of Section 106 of the National Historic

Preservation Act of 1966 since federal funding is being sought for the project through the Clean Water State Revolving Fund. Section 106 mandates that projects consider the effect of their actions on any properties listed on or meeting the criteria for listing on the National Register. Compliance under Section 106 fulfills the requirements of Section 14.09 of the New York State Historic Preservation Act. This section will include an assessment of the potential for impacts to historical and cultural resources that could occur from construction activities associated with the Proposed Action.

4.3.5.1 Baseline Conditions

A desktop review of archaeological, historic, and cultural resources will be conducted by utilizing existing databases and correspondence from the State Historic Preservation Office (SHPO) of the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP), the City of Buffalo Historic Preservation Board, and local plans, as well as information from the Land Use, Zoning, and Public Policy analysis. The Baseline Conditions section will describe the historic districts and structures within the study area including the Hamlin Park Historic District, 60 Hedley Place, and St. Vincent de Paul R.C. Church and Rectory.

4.3.5.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact to Archaeological, Historic, and Cultural Resources in the Future Without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community Plans, and Public Policy section and information from OPRHP and City's Historic Preservation Board will be reviewed to ensure that any new information or historic listings that may be planned in the vicinity of the study area in the timeframe that the Proposed Action would be implemented are considered in the DEIS.

4.3.5.3 Future With the Proposed Action (Alternative B and C)

An assessment on potential impacts to archeological, historic, and cultural resources will be analyzed within this section using both desktop review and results of consultations with State and local agencies. This section will also identify any potential impacts that may occur to these resources as the result of construction of the Proposed Action. If excavation occurs in a potentially sensitive cultural resource area, additional desktop and field surveys will be conducted in consultation with federal, State, and local requirements and summarized within the DEIS. Historic districts and structures in the study area will also be analyzed within this section to assess any potential physical, contextual, or visual impacts that could result from the Proposed Action.

4.3.6 Visual Resources and Community Character

This section will describe and evaluate the existing visual resources and community character of the project study area using both mapping and photographs. This section of the DEIS will also disclose the potential for observable impacts to visual resources or community character that may occur during construction and operation of the Proposed Action. It will evaluate whether the Proposed Action is consistent with the architectural scale and character of the study area.

4.3.6.1 Baseline Conditions

Baseline conditions will identify visual resources such as water bodies, landmarks, historic resources, parks, and critical environmental areas in or with views of the project study area. This section will also describe the general neighborhood character within the project study area. Description of community characteristics will include noting the predominant architectural scale and character, existing natural landscape, and identification of recognized public resources of the project study area. Photo documentation will be provided for the Canisius University land and areas along East Delavan Avenue and Florida Street.

4.3.6.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact to Visual Resources and Community Character in the Future without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community Plans, and Public Policy section will be reviewed to ensure that changes to visual resources or views are not anticipated to occur in the project study area in the timeframe that the Proposed Action would be implemented.

4.3.6.3 Future With the Proposed Action (Alternative B and C)

This section will describe any activities associated with the Proposed Action that may be visible to the public including temporary impacts on visual resources that may occur during construction. This section will also evaluate any visual changes to the area associated with the equipment building that would be housed atop Canisius property for electrical and HVAC equipment once construction is complete in the Future With the Proposed Action. Other portions of the project would primarily be located underground.

4.3.7 Natural Resources

Natural resources include vegetation, plants, wetlands, habitats used by species of special concern and National Natural Landmarks. This section will identify natural resources in the project study area and determine if there would be a potential for these resources to be impacted as a result of construction and operations of the Proposed Action.

4.3.7.1 Baseline Conditions

This section will utilize information gathered from consultations with government agencies – including the New York Natural Heritage Program and US Fish and Wildlife Service, desktop analysis, and field surveys, as needed, to identify and describe natural resources within the study areas, including street trees, that could potentially be impacted by the Proposed Action.

4.3.7.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact on study area Natural Resources in the Future without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community

Plans, and Public Policy section will be reviewed to determine whether changes to natural resources may occur in the vicinity of the project site in the timeframe that the Proposed Action would be implemented.

4.3.7.3 Future With the Proposed Action (Alternative B and C)

This section will discuss both direct and indirect impacts that the Future With the Proposed Action may have on natural resources. This will include a description of any required tree removal and associated natural resources restoration that would occur as part of the Proposed Action in accordance with the requirements of the City of Buffalo Bureau of Forestry.

4.3.8 Socioeconomic Conditions

This section will discuss the demographic and economic conditions within the study area that would be affected by the Proposed Action. This section will also include a summary and assessment of any impacts on the rates for Buffalo Sewer's customers as a result of implementation of the Proposed Action.

4.3.8.1 Baseline Conditions

This section will include an analysis of socioeconomic data which will include residential population, housing, and income metrics using the latest available U.S. Census data and similar sources. The Baseline Conditions section will also describe current sewer rates for Buffalo Sewer's customers.

4.3.8.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact on socioeconomic conditions in the Future without the Proposed Action. However, an assessment of projects or study area changes identified within the Land Use, Zoning, Community Plans, and Public Policy section will be conducted to see if they would have the potential to change socioeconomic conditions or future sewer rates in the study area.

4.3.8.3 Future With the Proposed Action (Alternative B and C)

The DEIS will also analyze data from the U.S. Census Bureau or other, similar sources on demographics, income, and housing to determine whether anticipated future changes to socioeconomic conditions in the study area, or sewer rates, may be further affected by implementation of either Proposed Action alternative. The Proposed Action alternatives would not directly displace any residential or business resources within the study area.

4.3.9 Hazardous Materials

Hazardous materials are materials that could be harmful to people, plants, animals and the environment. This section will describe existing hazardous materials within the study area, if present, and methods for any storage or disposal of hazardous materials or contaminants during construction and operation of the Proposed Action.

4.3.9.1 Baseline Conditions

This section will describe the existing hazardous materials conditions in the project study area through completion of a Phase I Environmental Site Assessment (ESA) prepared in accordance with the most recent ASTM 1527-13 Standard. This type of assessment involves desktop review of databases that track sites and activities where hazardous materials are present. The DEIS will also disclose any spills or remedial actions that have occurred or been conducted at or adjacent to the project study area through desktop review of the Spills Incidents database and Environmental Site Remediation database. Finally, this section will summarize any potential soil or groundwater contamination that may be present in the study area based on any testing completed as part of project planning.

4.3.9.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact on study area hazardous materials in the Future without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community Plans, and Public Policy section will be reviewed to determine whether changes to hazardous material disturbance or storage may occur in the vicinity of the project site in the timeframe that the Proposed Action would be implemented.

4.3.9.3 Future With the Proposed Action (Alternative B and C)

As mentioned above, a Phase I ESA will be conducted within the project site. All anticipated soil and groundwater disturbance associated with the Proposed Action will be described to identify the potential for hazardous materials to be encountered during construction. In the event contaminants or hazardous materials may be encountered during construction of either Proposed Action alternative, hazardous materials handling and/or testing and disposal methods would be conducted in accordance with all regulatory requirements and will be outlined within this section. In addition, a description of any hazardous materials that may be used during construction or operation of the Proposed Action will be presented in this section along with controls that would be in place to prevent their potential release into the environment.

4.3.10 Water and Sewer Infrastructure

This section of the DEIS will assess water resources (i.e. surface water, groundwater, and floodplains) and drinking water and sewer infrastructure within the study area.

4.3.10.1 Baseline Conditions

Baseline conditions will be described by preparing an inventory and description of existing nearby water bodies and drinking water and sewer infrastructure as well as any floodplains that overlap the study area. A description of existing combined sewer outfall conveyance infrastructure and drinking water infrastructure will be presented for the study area, including individual residential service lines. A description of the SPDES Permit and its requirements will also be presented in this section.

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4.3.10.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact on Water Resources and Sewer Infrastructure in the Future without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community Plans, and Public Policy section will be reviewed to determine whether changes to water resources or sewer infrastructure may occur in the vicinity of the project site in the timeframe that the Proposed Action would be implemented.

4.3.10.3 Future With the Proposed Action (Alternative B and C)

This section will describe how the Future With the Proposed Action will impact or benefit existing water resources and drinking water and sewer infrastructure within the study area for each alternative. This section will also evaluate how the Future With the Proposed Action would help Buffalo Sewer comply with their LTCP and SPDES Permit and associated requirements. Any additional potential benefit to drinking water or sewer infrastructure associated with the Proposed Action will also be presented in this section.

4.3.11 Energy

This section will describe the energy usage associated with the Proposed Action. This includes energy that would be required to power construction equipment.

4.3.11.1 Baseline Conditions

A qualitative assessment of energy use and demands within the project study area will be presented within this section of the DEIS.

4.3.11.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact on energy in the Future without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community Plans, and Public Policy section will be reviewed to determine whether changes to energy use and availability may occur in the vicinity of the project site in the timeframe that the Proposed Action would be implemented.

4.3.11.3 Future With the Proposed Action (Alternative B and C)

This section will assess whether the Future With the Proposed Action would impact any existing utility infrastructure that is operated by National Grid. This will include a qualitative discussion of energy demands that would be required during construction to power equipment.

4.3.12 Transportation

This section of the DEIS will assess any impacts the Proposed Action would have on traffic and transportation in the project study area. Traffic studies and analyses will be completed as part of this

section. A total of two detours (one for trucks and one for vehicles) are anticipated to be required to support construction of either Proposed Action alternative.

4.3.12.1 Baseline Conditions

This section will summarize traffic studies being conducted that are designed to describe baseline conditions for transportation in the study area. To establish baseline traffic conditions along the proposed traffic detour routes, Buffalo Sewer will conduct traffic counts at a total of 16 locations seen in **Figure 6**. Buffalo Sewer will collect traffic counts and direction of movement data at key project intersections that may be affected by the changed traffic patterns. This section of the DEIS will summarize the count data to identify traffic composition and flow within the project study area. In addition, existing traffic and pedestrian safety information will be evaluated within the project area using the New York State Department of Transportation (NYSDOT) CLEAR database and presented within the DEIS.[5]

4.3.12.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact on Transportation in the Future without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community Plans, and Public Policy section will be reviewed to determine whether changes to transportation may occur in the vicinity of the project site in the timeframe that the Proposed Action would be implemented.

4.3.12.3 Future With the Proposed Action (Alternative B and C)

This section will discuss any temporary closures of lanes or sidewalks, and traffic detours that would be required to support construction of the Proposed Action and may result in potential impacts on parking, pedestrians, or traffic in the project study area. This section will also describe the potential for the Future With the Proposed Action to increase passenger car and truck traffic in the vicinity of the project due to construction activities. Finally, it will disclose changes to traffic patterns that may be needed to construct the Proposed Action, such as the two detours. Potential impacts to traffic in the study area because of the detours will be determined using Synchro traffic modeling.[6] This section of the DEIS will also include a Traffic Safety Issue Assessment and Emergency Services Impact Assessment.

[5] The CLEAR Crash Data Viewer is an application provided by NYSDOT that is available to authorized users for the visualization, query and analysis of NYS crash data.
[6] A Synchro traffic model is used to determine the capacity of roadway networks and simulate how changes to traffic patterns can affect travel time.

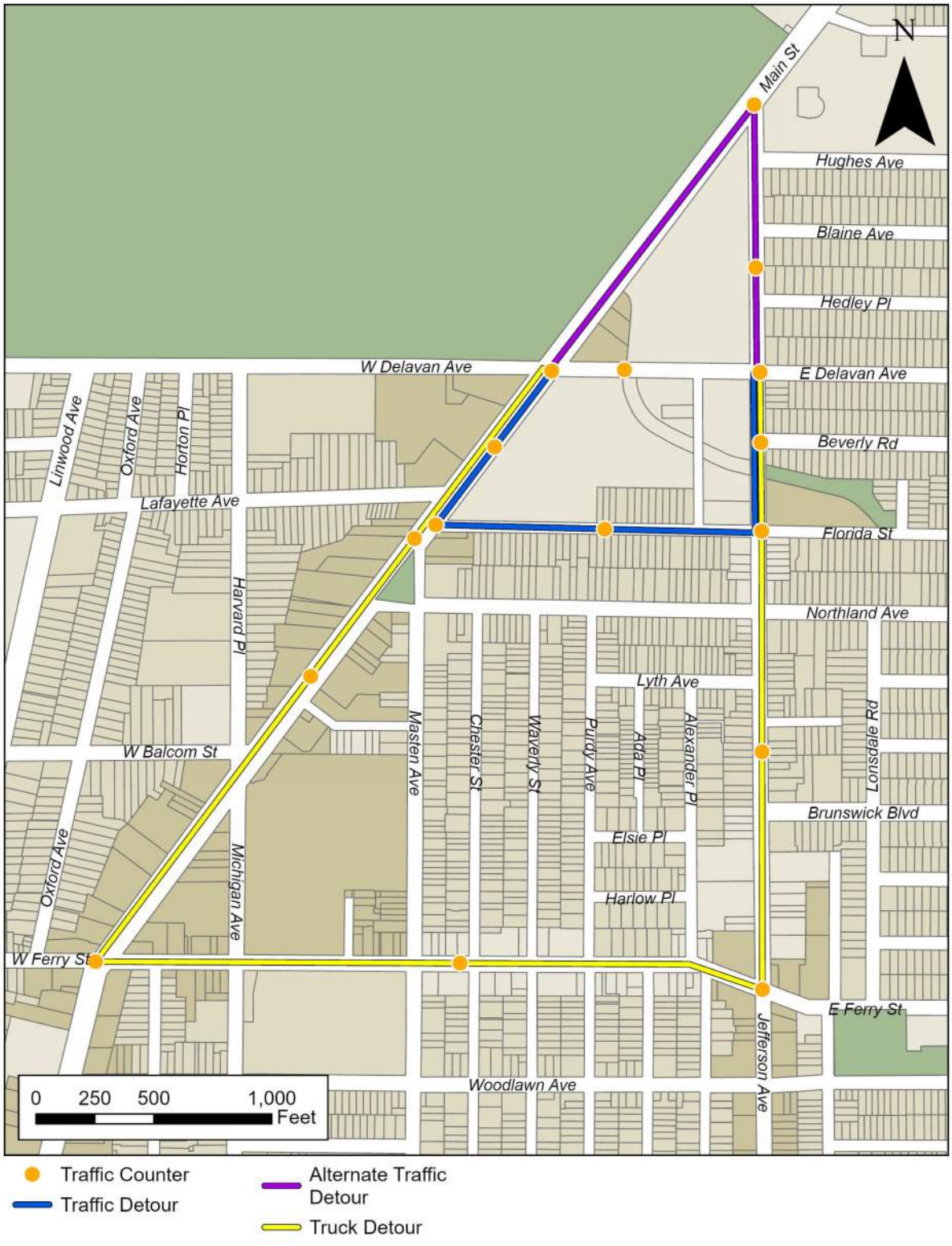

Figure 6: Traffic Detour Map

4.3.13 Air Quality, Greenhouse Gas Emissions, and Odor

This section will present both mobile and stationary source emissions that may be associated with the Proposed Action and compare anticipated conditions to background conditions in the area to identify any changes that may occur as a result of construction or operation of the Proposed Action. The section will also discuss the potential for odors to occur in the study area as a result of operation of the Proposed Action.

4.3.13.1 Baseline Conditions

The section will summarize the desktop studies of air quality conditions within vicinity of the project using data from nearby NYSDEC air quality monitoring stations. This section will also summarize the results of baseline air quality monitoring that will be conducted at six locations throughout the study area as shown in **Figure 7**. There will be a total of six stationary monitors and one handheld mobile monitoring device which will be used to monitor and record hydrogen sulfide concentrations as well as detect other gasses such as such as carbon monoxide, sulfur dioxide, oxygen, and volatile organics present throughout the area within a single day testing event.

4.3.13.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact on air quality, greenhouse gas emissions, and odor in the Future Without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community Plans, and Public Policy section will be reviewed to determine whether changes to air quality, greenhouse gas emissions, and odor may occur in the vicinity of the project site in the timeframe that the Proposed Action would be implemented.

4.3.13.3 Future With the Proposed Action (Alternative B and C)

An assessment will be prepared for the Future With the Proposed Action to estimate emissions that would be emitted from construction equipment and any construction-related mobile sources such as construction delivery vehicles. These emissions will be compared to ambient (baseline) conditions in the study area, identifying potential changes in conditions at any sensitive receptors such as residences and schools. Measures that would be used to reduce emissions during construction, such as the inclusion of truck washing stations to reduce particulate matter emissions, will be described in this section. In addition, an evaluation of hydrogen sulfide concentrations that would occur from operation of the Proposed Action will be presented to describe how odors may be perceived at receptors in the study area. As needed, a hydrogen sulfide monitoring plan will be developed and disclosed in this section.

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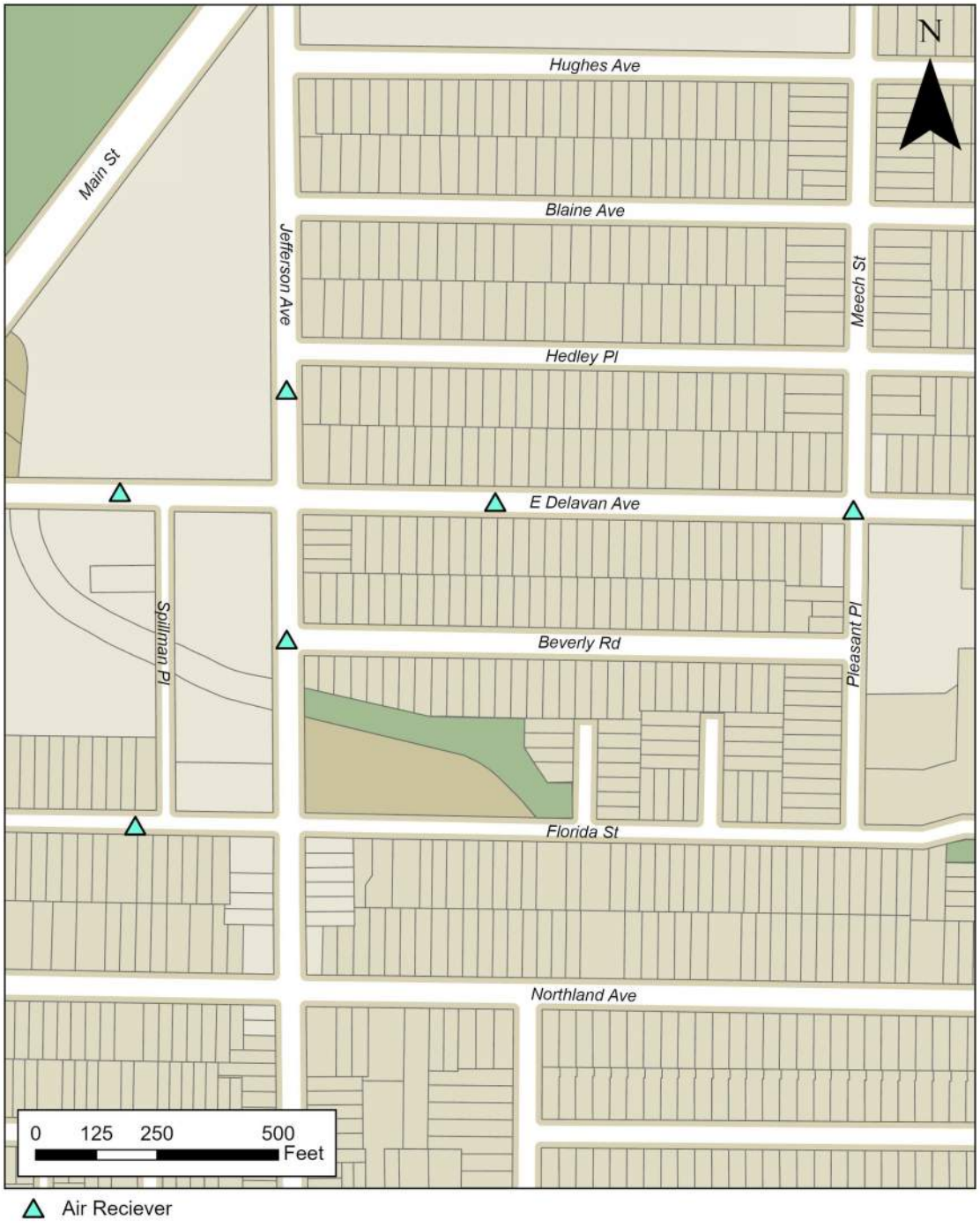

Figure 7: Air Monitoring Locations

4.3.14 Noise, Vibrations, and Light

This section will include a description of the existing ambient noise conditions within the project area and identify any noise sensitive receptors such as schools and residences. A vibrations study will also be conducted to assess vibration that may occur in the study area as a result of construction of the Proposed Action. This section will also include an assessment of the use of light associated with the Proposed Action.

4.3.14.1 Baseline Conditions

This section will include summaries of the assessments on both long-term (24-hour) and short-term (15-to-25-minute) measurements of background noise within the project area. These summaries will be based on the results of noise monitoring which will utilize two long-term field noise measurements at two different locations, as well as two short-term field noise measurements collected at each of the four different locations (as shown in **Figure 8**), for a total of eight short-term field noise measurements. In addition, noise associated with background traffic in the study area will be measured and discussed in this section. Sensitive receptors to noise, vibrations, and light will be identified.

4.3.14.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact on Noise, Vibrations and Light in the Future Without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community Plans, and Public Policy section will be reviewed to determine whether changes to noise, vibrations, or light may occur in the vicinity of the project site in the timeframe that the Proposed Action would be implemented.

4.3.14.3 Future With the Proposed Action (Alternative B and C)

The Future With the Proposed Action will require drilling and blasting of bedrock for construction of the proposed infrastructure improvements. This section will estimate and describe the anticipated noise and vibrations that would be generated from construction as the Proposed Action based on the equipment to be utilized and mobile sources that may be present in the study area. A Traffic Noise Model (TNM) will also be conducted to model noise emissions associated with any increased traffic that may occur in the study area during construction of the Proposed Action. A vibration study will also be conducted to describe the level and duration of vibrations that may be reasonably anticipated to occur during blasting of the deep storage tank and tunnel. Lighting that would be needed to support construction and operation of the Proposed Action will be disclosed and discussed. As needed, any controls that would be put in place to minimize noise emissions, light, or vibrations in the study area will be presented in this section.

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Figure 8: Noise Locations

4.3.15 Public Health

This section will rely on other sections to identify the potential of the Proposed Action to cause any unmitigated significant adverse impact to public health (i.e., adverse changes in air quality, greenhouse gas emissions, climate change; water and sewer infrastructure; hazardous materials; or noise and vibrations).

4.3.15.1 Baseline Conditions

This section will describe the baseline public health conditions in the project area using information from the following technical resource areas: air quality, greenhouse gas emissions, and climate change; water and sewer infrastructure; hazardous materials; and noise, vibrations, and light.

4.3.15.2 Future Without the Proposed Action (Alternative A)

It is not anticipated that there would be any impact on Public Health in the Future Without the Proposed Action. However, planned development identified in the Land Use, Zoning, Community Plans, and Public Policy section will be reviewed to determine whether projects resulting in changes public health may occur in the vicinity of the project site in the timeframe that the Proposed Action would be implemented.

4.3.15.3 Future With the Proposed Action (Alternative B and C)

This section will collectively consider the assessments of the Future With the Proposed Action from the air quality, greenhouse gas emissions, odor, hazardous materials, and noise, vibrations and light sections within the DEIS. If any impacts are identified, they will be explored further in the DEIS to determine whether they could result in any overall impacts to Public Health.

4.3.16 Environmental Justice

The environmental justice section will be conducted to determine if there are any project impacts that may affect vulnerable populations (minority or low-income).

4.3.16.1 Baseline Conditions

This section will include a quantitative analysis of demographic data (race, ethnicity, poverty status, and average household income) of the project study utilizing U.S. Census Bureau data and other available data sources from local and State agencies. This section will use that information to identify vulnerable populations within the study area. A description of the Enhanced Public Participation Plan will also be included to discuss the community engagement strategies that will be employed by Buffalo Sewer as part of Commissioner Policy-29, Environmental Justice and Permitting (CP-29). CP-29 is a framework that aims to incorporate and address environmental justice concerns into the NYSDEC environmental permit review process and NYSDEC's administration of SEQR.

4.3.16.2 Future Without the Proposed Action (Alternative A)

An assessment on future projected demographics of the study area and vulnerable populations with the study area will be presented in this section.

4.3.16.3 Future With the Proposed Action (Alternative B and C)

This section will evaluate the overall potential that the Future With the Proposed Action could adversely affect vulnerable populations within the study area. This includes whether the Future With the Proposed Action could impact minority and low-income communities by causing adverse environmental or health impacts. The DEIS will also summarize and discuss the public participation efforts with both alternatives B and C as well as discuss what has resulted from the Enhanced Public Participation Plan.

4.4 Mitigation Measures

Where significant adverse impacts of the Proposed Action are identified, measures will be identified and assessed to mitigate those impacts. These mitigation measures will be discussed within this section of the DEIS.

4.5 Cumulative Effects

The cumulative effects of each of the alternatives, considered in conjunction with other projects being constructed and/or operated within the same vicinity in the time frame the Proposed Action would be implemented will be addressed in this section of the DEIS. Information on other projects that may be planned or occurring in the study area and could overlap with the Proposed Action will be identified as part of the Land Use, Zoning, Community Plans, and Public Policy section.

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EAST DELAVAN SEWER IMPROVEMENTS

Collecting Data on Air Quality, Noise, and Traffic

What Is Buffalo Sewer Measuring?

As part of this project, Buffalo Sewer is monitoring air quality, noise levels, and traffic volume. The goal of data gathering is to analyze existing air, noise, and traffic conditions to understand the temporary impacts to the community that could occur during construction.

You may see workers counting vehicles or inspecting monitors, or you may notice devices mounted to light poles or tripods throughout the project area. The data gathered will be included in a formal Environmental Impact Statement which will be available to the public for review and comment.

AIR QUALITY MONITORING

To understand the existing air quality in your neighborhood, air quality monitoring stations will be set up in secure locations for one or two days. Workers will set up monitors and return to inspect them at least once per hour. Workers will also use identical hand-held meters that measure air quality throughout the project area.

The monitors:

- Require less than 5 minutes to set up and take down,
- Do not emit any noise or odors,
- Are battery operated, and
- Electronically record data.

Air quality data collection will be performed by **Lu Engineers, a local Certified Minority-owned Business Enterprise (MBE) in the City of Buffalo.**

NOISE MONITORING

Outdoor noise levels will be gathered in your neighborhood.

- Noise monitoring equipment will be temporarily mounted to light poles near the project site.
- These units are battery operated.
- They are measuring overall background noise levels, not recording voices or other street noises.

Noise monitoring will be performed by **Watts Architecture and Engineering, a local Certified Minority-owned Business Enterprise (MBE) in the City of Buffalo.**

TRAFFIC COUNTS

The number of cars passing by will be counted as part of this project.

- Workers will install strips across the roads in your neighborhood.
- You may see a worker with a clipboard nearby verifying those numbers.

Traffic counting will be performed by **Azar Design Co. (formerly Foit-Albert Associates), a local Certified Minority-owned Business Enterprise (MBE) in the City of Buffalo.**

Air quality monitoring equipment

Contact us:

If you have any questions or comments about this project, please contact:
Regina Harris, Senior Engineer
rharris@buffalosewer.org
716-851-4664 ext. 4227

BUFFALO SEWER AUTHORITY

Hazen

Clementine Gold Group

buffalosewer.org/eastdelavansewer

EAST DELAVAN SEWER IMPROVEMENTS

Collecting Data on Air Quality, Noise, and Traffic

Monitoring Location Area

EAST DELAVAN SEWER IMPROVEMENTS

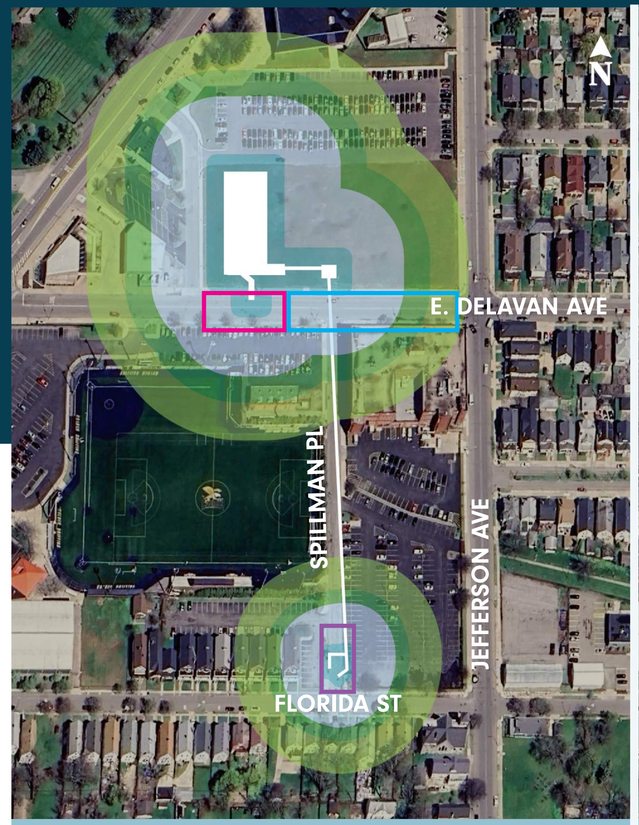
PROJECT OPTIONS

INTERMITTENT SIDEWALK AND ROAD CLOSURES

- 6 months during construction
- 1 year during construction
- 2 years during construction
- 3 years during construction

VIBRATION AND NOISE

- Obviously Noticeable
- Strongly Noticeable
- Distinctly Noticeable
- Barely Noticeable



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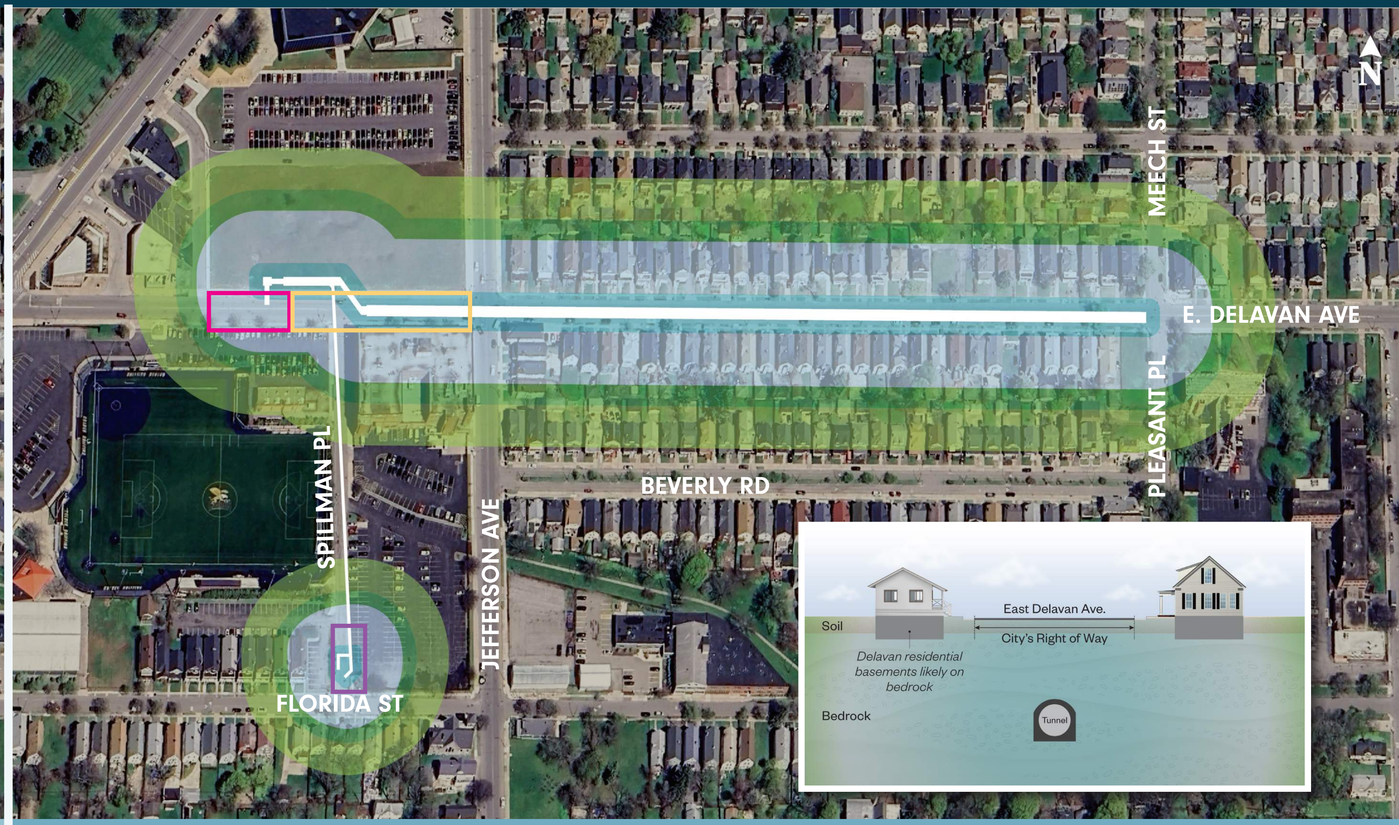
DEEP TANK



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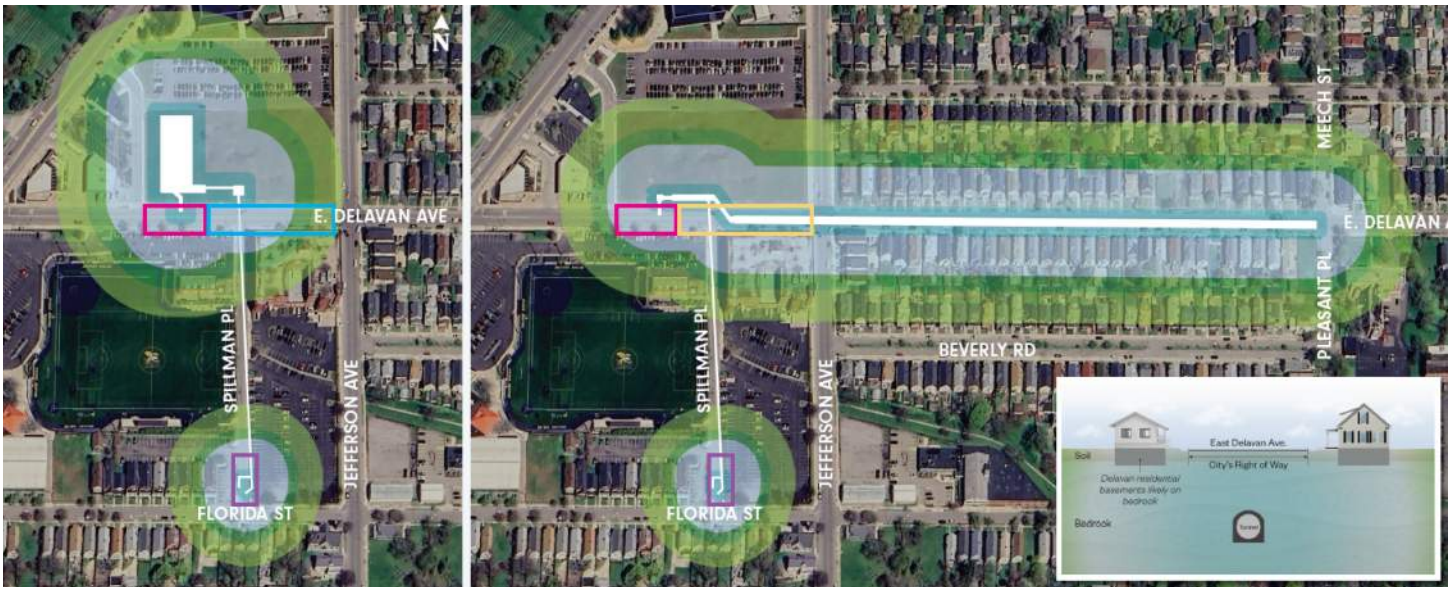
VIBRATION & NOISE	Vibrations and noise will be heard and felt during construction, primarily confined to project site.	Vibrations and noise will be heard and felt during construction in residential areas on East Delavan Avenue.
DURATION OF CONSTRUCTION	2 YEARS	3 YEARS
COST OF CONSTRUCTION	$70 to $90 million	$90 to $110 million

EAST DELAVAN SEWER IMPROVEMENTS

DRAFT SCOPE OF WORK

Notice of Public Hearing



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The project will reduce the number and volume of Combined Sewer Overflows into Scajaquada Creek.

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DRAFT SCOPE OF WORK ACCESS

IN-PERSON

Buffalo Sewer Authority Main Office
Room 1038 City Hall
65 Niagara Square, Buffalo, NY 14202

Central Library
1 Lafayette Square, Buffalo, NY 14203

ONLINE

www.buffalosewer.org/eastdelavansewer/

SUBMIT WRITTEN COMMENTS BY 11/1/24 TO:

Regina Harris, EIT, Senior Engineer
Buffalo Sewer Authority
Room 1038 City Hall
65 Niagara Square Buffalo, NY 14202
716-851-4664
QueenCityCleanWaters@buffalosewer.org

AT NORTHLAND

TUESDAY, OCTOBER 15, 2024
6:00 PM - 8:00 PM
Northland Workforce Training Center
683 Northland Ave
Buffalo, NY 14211

Dinner by Manna.
Childcare & activities for ages 5-12
Spanish and American Sign Language interpretation services will be provided.
Se habla español.

ON ZOOM

THURSDAY, OCTOBER 17, 2024
12:00 PM - 2:00 PM

Virtual Public Hearing link can be found on or after October 4th at:

BUFFALO SEWER AUTHORITY

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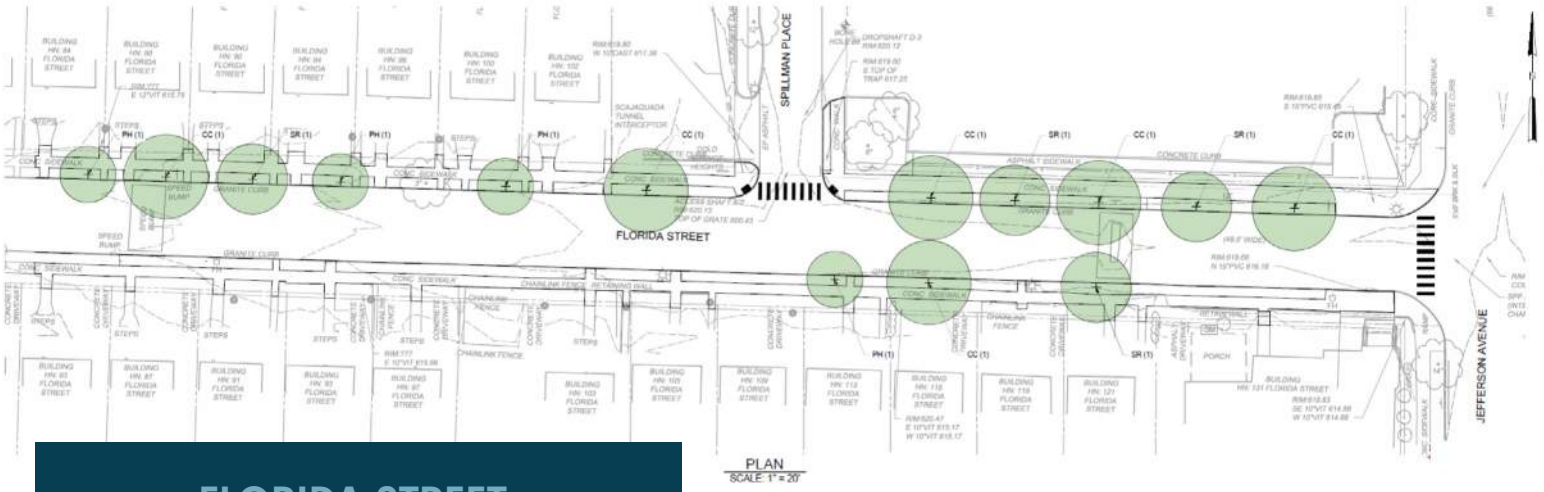
Clementine Gold Group

buffalosewer.org/eastdelavansewer



FLORIDA STREET SEWER RECONSTRUCTION

TREE SURVEY

Dear Resident,

A tree located within the City of Buffalo public right-of-way near your residence will be removed as part of sewer upgrades in your neighborhood. Buffalo Sewer will plant a new tree on your street once sewer construction is completed, and they would like your input!

City arborists have determined that the three tree species listed at right are best for this neighborhood. Without creating a monoculture (where a single species dominates) residents may help determine which trees are replanted.

Planting will take place during the spring or fall season. Wooden stakes and ties will be installed to help the trees grow and mature during the first year that they are planted and will be removed after the first year.

Thank you!

Which tree do you like best?

Eastern redbud
Cercis canadensis

Spire cherry
Prunus x hilleri "Spire"

Japanese tree lilac
Syrginga reticulata "Ivory Silk"

Contact us:

If you have any questions or comments about this project, please contact:
Regina Harris, Senior Engineer
rharris@buffalosewer.org
716-851-4664 ext. 4227

BUFFALO SEWER AUTHORITY

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buffalosewer.org/eastdelavansewer

BUFFALO
SEWER AUTHORITY

Consultant, Contractor, and Vendor
Informational Session for Upcoming BSA Capital Projects Solicitations

QUEEN CITY CLEAN WATERS

Between Fall 2024-Summer 2025, Buffalo Sewer Authority (BSA) will be requesting proposals and soliciting bids for several consultant and construction contracts as part of its Queen City Clean Waters program.

Design consultants, construction contractors, and vendors interested in learning more about upcoming capital projects opportunities are encouraged to attend this Informational "Open House" Session (virtual) scheduled for Wednesday, October 16, 2024 at 10:00 am EST.

In particular, BSA aims to create space for Disadvantaged, Woman, and Minority Business Enterprise (D/W/MBE) firms to connect with Primes and other partners, advancing our mission of community impact and local job creation.

The agenda of this meeting will provide a detailed overview of the upcoming projects and an opportunity for potential proposers/bidders to ask questions, understand contract requirements, and build relationships between potential prime/subcontractors and vendors.

- Bird Island Treatment Facility Upgrades
- Combined Sewer Overflow (CSO) Storage
- Real-Time Control Smart Sewers
- Sewer Improvements & Modifications

Wednesday, October 16th
10:00 - 11:30 am EST

via Microsoft Teams

(An invitation with meeting details will be sent after registering)

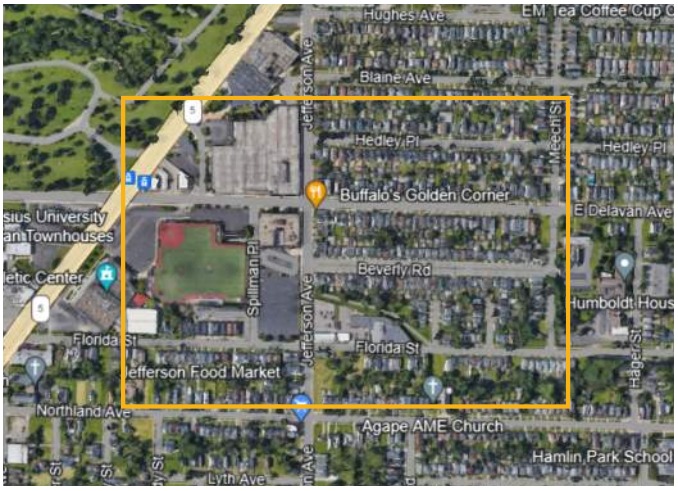
Register to Attend:

Scan the QR code to the right or go to forms.office.com/r/Bv6xJVN5eD

EAST DELAVAN SEWER IMPROVEMENTS

Community Survey

PROJECT LOCATION



1. I am interested in this project because...
(Check all that apply)

- ☐ I live in the area.
- ☐ I work in the area.
- ☐ I own property in the area.
- ☐ I own a business in the area.
- ☐ I am a student, faculty, or staff member at Canisius University.
- ☐ I commute through the area.
- ☐ I am a member of this community.

2. How many years have you spent in this area?
(living, working, studying, commuting, etc.)

_____

3. Buffalo Sewer is evaluating 2 design options for sewer improvements. Which design seems preferable to you?

☐ Deep Tank ☐ Tunnel

Why? _____

4. I am most concerned about...
(check one)

- ☐ Pollution in our waterways
- ☐ Aging infrastructure
- ☐ Noise and vibration during construction
- ☐ Sidewalk and roadway access during construction

5. Buffalo Sewer is investing in community betterment initiatives throughout the project. What is most important to you? (check one)

- ☐ Neighborhood Beautification
- ☐ Workforce Development
- ☐ Water and Sewer Infrastructure Improvements

6. DEMOGRAPHIC INFORMATION

ZIP CODE _____

AGE _____

RACE / ETHNICITY _____

GENDER _____

EAST DELAVAN SEWER IMPROVEMENTS

Community Survey - optional

Do you want to be contacted by a project team member for more information?

☐ Yes, by email

☐ Yes, by phone/text

CONTACT INFORMATION

NAME _____

_____

ADDRESS _____

_____

_____

EMAIL _____

PHONE _____

Contact us:

If you have any questions or comments about this project, please contact:
Regina Harris, Senior Engineer
rharris@buffalosewer.org
716-851-4664 ext. 4227

Buffalo Sewer is rebuilding and replacing the sewer system along East Delavan Avenue and Spillman Place.

The project will build new underground facilities to store rainwater and sewage, also known as combined sewage, that is generated during rainstorms and as a result of snowmelt. This stored combined sewage will then be sent to the Bird Island Wastewater Treatment Facility for treatment and discharge to the Niagara River.

ENVIRONMENTAL BENEFITS

This project will benefit the environment by reducing water pollution into Scajaquada Creek and other downstream water bodies such as Hoyt Lake and Black Rock Canal.

COMMUNITY BENEFITS

Buffalo Sewer is committed to improving the community that it serves and wants your feedback about what is most important to you. The project will have community betterment initiatives, which may include revitalized trees and landscaping in the project vicinity, new water and sewer infrastructure, and workforce development opportunities.

WHEN WILL THIS PROJECT HAPPEN?

Construction on East Delavan and Spillman Place is expected to begin in 2026 and last up to five years.

TRAFFIC AND ROAD CLOSURES

Some sidewalks and roadways will be fully or partially closed during portions of the construction period. Based on the City of Buffalo guidelines, all traffic will be redirected or rerouted so you will be able to reach your destination.

WHAT IS MOST IMPORTANT TO YOU?

Buffalo Sewer is investing in community betterment initiatives throughout the project.

Workforce Development

Neighborhood Beautification
(street trees, sidewalks)

Water and Sewer Infrastructure Improvements

SHARE YOUR FEEDBACK

If you have any questions or comments about this project, please contact:

Regina Harris, Senior Engineer
rharris@buffalosewer.org
716-851-4664 ext. 4227

For more information, visit our website **buffalosewer.org/eastdelavansewer** or scan the QR code.

EAST DELAVAN SEWER IMPROVEMENTS

BUFFALO SEWER AUTHORITY

Clementine Gold Group

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EAST DELAVAN
SEWER IMPROVEMENTS

WE'LL BE WORKING IN YOUR NEIGHBORHOOD OCTOBER 14-18, 2024

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EAST DELAVAN
SEWER IMPROVEMENTS

Collecting data on air quality, noise, and traffic in your neighborhood.

As part of the East Delavan Sewer Improvements project, contractors with Buffalo Sewer will be monitoring air, quality, noise and traffic in your neighborhood. The goal of data gathering is to analyze existing conditions to understand the temporary impacts to the community that could occur during construction.

You may see workers counting vehicles or inspecting monitors, or you may notice devices mounted to light poles or tripods throughout the project area. The data gathered will be included in a formal Environmental Impact Statement which will be available to the public for review and comment.

BUFFALO
SEWER AUTHORITY

For more information about the project, see our website or contact:

Regina Harris, Senior Engineer
rharris@buffalosewer.org
716-851-4664 ext. 4227

PROJECT OPTIONS

Buffalo Sewer is evaluating different designs for the project that prevent water pollution from entering our precious water sources like Scajaquada Creek and the Niagara River.

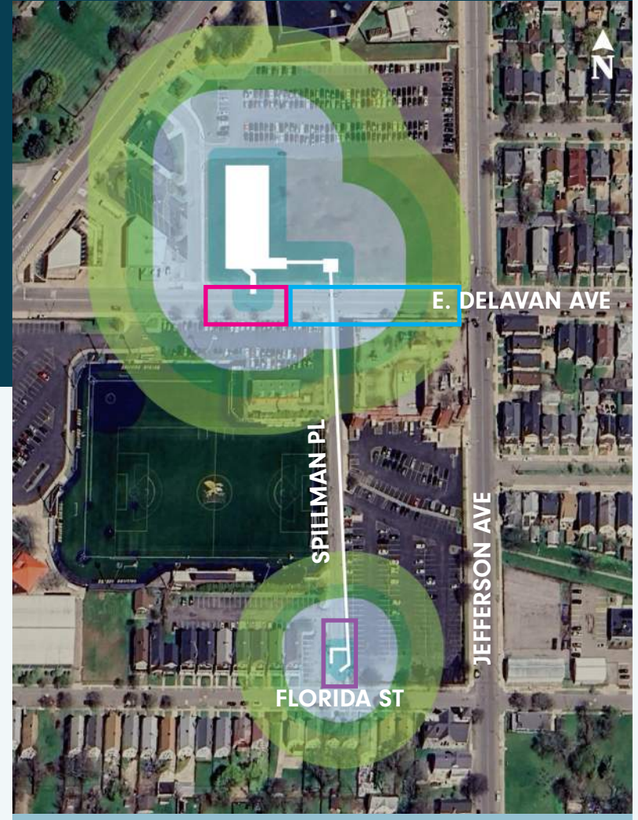
PROJECT SITE

INTERMITTENT SIDEWALK AND ROAD CLOSURES

- 6 months during construction
- 1 year during construction
- 2 years during construction
- 3 years during construction

VIBRATION AND NOISE

- Obviously Noticeable
- Strongly Noticeable
- Distinctly Noticeable
- Barely Noticeable



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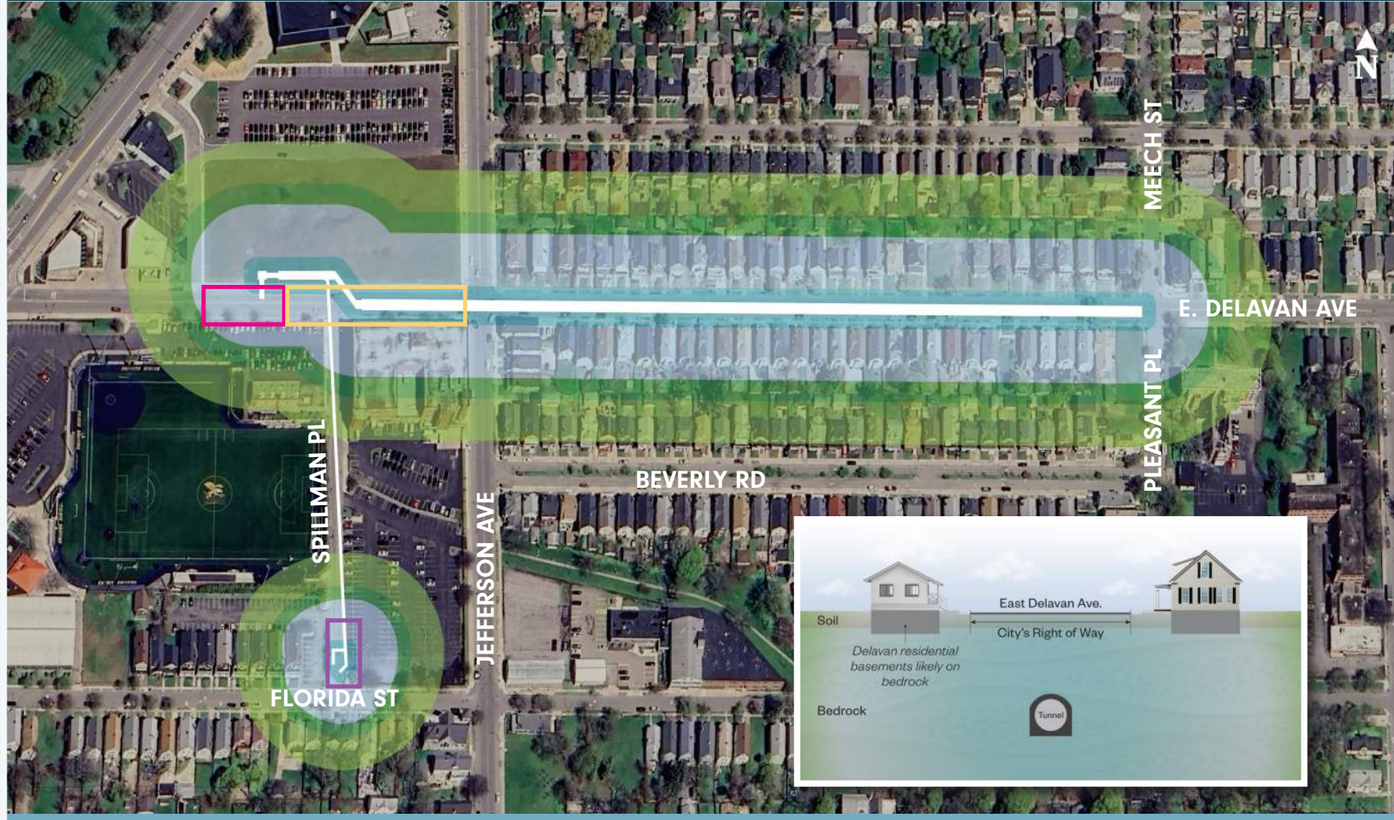

OPTION B

TUNNEL

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VIBRATION & NOISE	Vibrations and noise will be heard and felt during construction, primarily confined to project site.	Vibrations and noise will be heard and felt during construction in residential areas on East Delavan Avenue.
DURATION OF CONSTRUCTION	2 YEARS	3 YEARS
COST OF CONSTRUCTION	$70 to $90 million	$90 to $110 million

FLORIDA STREET SEWER RECONSTRUCTION

This project is part of Buffalo Sewer's continuing efforts to reduce water pollution into Scajaquada Creek and improve the air and water quality in your neighborhood.

Anticipated Construction:
Fall 2024 - Spring 2025

- This estimated $2.3 million project is funded through New York State and federal grants and loans and you the ratepayer.
- Traffic detours will be posted during the work day.
- Construction crews with safety vests and flags may direct traffic on Florida Street during daytime hours. You will still be able to enter and exit your home with guidance from the construction crews.
- New sewer pipes and water pipes will be provided.
- A public meeting is being scheduled in the near future in your community!

Contact us:

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buffalosewer.org/eastdelavansewer

EAST DELAVAN SEWER IMPROVEMENTS

Frequently Asked Questions

What is the purpose of the project?

This project will upgrade the Buffalo Sewer's sewer system along East Delavan Avenue, Florida Street, and Spillman Place. New underground facilities will store rainwater and sewage, (also known as combined sewage), and send it to the Bird Island Wastewater Treatment Facility.

GOALS:

- Reduce the number and volume of Combined Sewer Overflows, also known as CSOs,
- Prevent combined sewage from backing up into buildings or flooding streets during large rain events, and
- Improve the water quality in Scajaquada Creek, Hoyt Lake, and Black Rock Canal.

How does this project benefit me?

This project will support the overall health of the community and protect our environment by:

- Reducing pollution entering our waterways and
- Reducing future flooding events.

It also includes community betterment initiatives, like:

- New trees and revitalized landscaping in the project vicinity,
- New water and sewer pipes, and
- Workforce development opportunities.

When will the construction start and end?

- Construction on Florida Street is planned to start in the Fall of 2024 and end in the Spring of 2025.
- Construction on East Delavan and Spillman Place is anticipated to begin in 2026 and last up to 5 years.

Will there be noise during the construction?

Yes, while construction is happening, when you are in the vicinity of the construction activities you will experience more noise than usual.

How will construction affect traffic in the area? What about medical transport?

It is anticipated some roadways will be fully or partially closed during portions of the construction period. Traffic will be redirected or rerouted so you will be able to reach your destination. All traffic will be redirected based on the City of Buffalo guidelines.

How will the construction impact local businesses and services?

Construction won't impact local businesses, and detours will ensure emergency services can access all locations despite any road closures.

Will there be changes to parking or public transportation during construction?

Temporary changes to parking and public transportation may occur during construction, but services will continue with rerouted routes. Updates will be provided in advance.

Will trees be cut down as part of this project?

- On Florida Street, some trees located within the public right-of-way will be removed.
- Buffalo Sewer will plant new trees once construction is completed.
- Working with the City of Buffalo Bureau of Forestry, residents may help determine the species of the new trees.

Are there any community meetings or updates planned to keep residents informed about the progress of the construction?

Community engagement began in August 2024, with updates via council district breakfasts, community events, and a project advisory committee of local residents and stakeholders.

- Interested in joining the East Delavan advisory Committee (EDAC)?
  Email: **info@clementinegoldgroup.com**

EAST DELAVAN SEWER IMPROVEMENTS

Frequently Asked Questions (continued)

Will construction expose asbestos?

Asbestos pipe is rare in Buffalo, however, a small amount is present in this area. It will be replaced with PVC or reinforced concrete pipe.

Construction contractors who disturb asbestos materials must be certified and licensed according to New York State law, as regulated by the Department of Labor.

During construction, the contractor will follow all local, state, and federal regulations to protect the health of workers and people in the area and mitigate the spread of contaminants into the environment.

Visit the NYSDOL website for more information about asbestos removal.

Will construction cause rodent problems?

While construction is underway, contractors will be required to implement a pest control plan to monitor and control rodents that may be disturbed in the construction area.

Will either design option increase access to sanitary sewer lines?

No. Access to sanitary sewer lines in the project area will be maintained before, during, and after construction with either design option. The intent of both designs is to reduce water pollution in our city.

How will this project affect air quality?

Buffalo Sewer will monitor air quality before and after construction to ensure the project doesn't negatively impact your neighborhood's air quality.

Workers will use hand-held and tripod-mounted monitors to detect chemical odors. The data will be included in an Environmental Impact Statement which will be available to the public for review and comment.

Contact us:

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EAST DELAVAN SEWER IMPROVEMENTS

DRAFT SCOPE OF WORK

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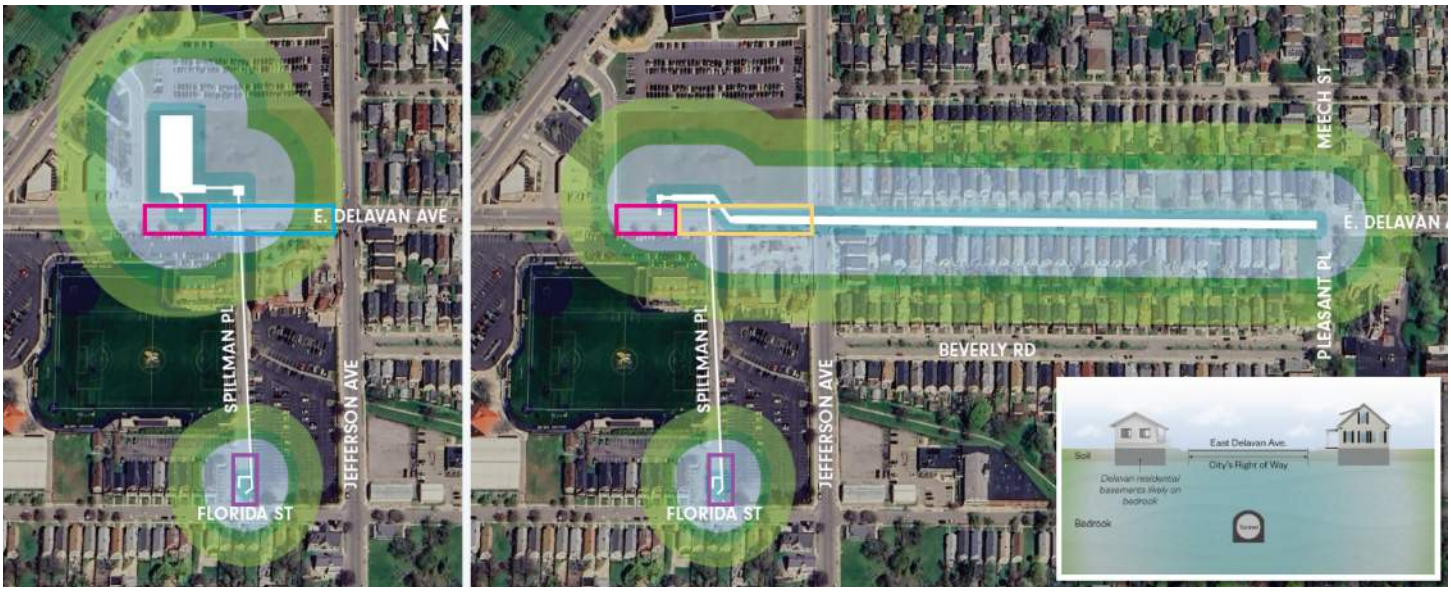

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BUFFALO SEWER AUTHORITY

Hazen

Clementine Gold Group

buffalosewer.org/eastdelavansewer

Attachment D to the Semi-Annual Status Report: March 2025

Preliminary Engineering Reports

Buffalo Sewer Authority: Buffalo Parks Green Infrastructure Feasibility Study

This report analyzes the feasibility of installing Green Infrastructure Stormwater Management practices at five parks in Buffalo, NY.

Stantec

Applicant:
Rosaleen Nogle - Buffalo Sewer Authority

July 31, 2024

Prepared by:
Bernadette Callahan, PE

Project/File:
195113414

B. Callahan

Stantec Consulting Services Inc.

Revision	Description	Author	Date	Quality Check	Date	Independent Review	Date
0	Issued to Client	STA	7/31/24	BMC	7/30/24	BMR	7/31/24
1	Issued as Final	STA	8/13/24	BMC	8/13/24	BMR	8/13/24

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Executive Summary

This report analyzes the feasibility of installing green infrastructure practices at five existing parks within the City of Buffalo. As part of their ongoing initiative to protect public health and the Great Lakes Waterways, the Buffalo Sewer Authority (BSA) has retained Stantec Consulting Services, Inc (Stantec) to prepare a feasibility study to document the prospect of retrofitting green infrastructure practices into public park lands throughout the City of Buffalo (Buffalo).

Buffalo uses a combined sewer system, which is a type of wastewater collection system where both stormwater (rain and snow melt) and sanitary sewage are collected in a single pipe. This type of system works well during dry seasons and low rain or snow events. However, during heavy storms or wet seasons, stormwater overwhelms the combined system. The local wastewater treatment plant and connected infrastructure have a limited capacity before they back up into basements and cause flooding. For this reason, excess flows from the combined sewer system are permitted to overflow into local waterways to provide relief for the system.

Buffalo has 53 combined sewer outfalls that release diluted wastewater into Buffalo's lakes, rivers, and tributaries. Combined sewer outfalls cause poor water quality which can lead to closed beaches, increased algae, and reduced oxygen in water which poses a risk to marine life.

BSA's primary goal since its inception in 1935 has been to protect the environment, public health, and improve water quality. To achieve their goal, BSA has worked with the community and local, state, and federal stakeholders to develop a Long-Term Control Plan which complies with all state and federal guidelines. The plan documents BSA's combined sewer system concerns, deficiencies, and their plan and timeline for correction.

BSA's Long-Term Control Plan focuses on using a comprehensive approach to improve water quality, which includes green infrastructure stormwater management practices (green infrastructure). Green infrastructure is a type of stormwater management that is designed to imitate nature by capturing and treating stormwater where it lands. These practices slow down stormwater flow which allows the wastewater treatment plant more time to treat incoming flows and, in turn, reduces the volume of diluted wastewater entering Buffalo's waterways. Green infrastructure also increases groundwater recharge, reduces flooding, and provides an extra layer of treatment for stormwater flows. The benefits of green infrastructure extend far beyond stormwater management. Green infrastructure can create safer streets, increase public engagement, provide educational opportunities, and improve neighborhood aesthetics.

BSA launched the Rain Check Program in 2015, a dedicated green infrastructure program which documents BSA's strategies for addressing goals outlined in the Long-Term Control Plan. A copy of Buffalo's Rain Check Program 1.0 and Rain Check Program 2.0 reports are provided in Appendix A. As part of the Rain Check 2.0 program rollout, six priority combined sewer basins were identified for green infrastructure improvements within Buffalo's East Side, downtown, and South Buffalo neighborhoods. These basins encompass a quarter of the City's land area and almost half of its population. The six priority

basins were chosen to have the greatest impact on water quality and public health in Buffalo, to improve basins with high numbers of combined sewer overflow events, to leverage other investments in the area, and to decrease impervious cover where its percentage is highest.

In June 2021, BSA secured a $54 Million Environmental Impact Bond, the largest bond issued in the U.S. to date, to install green infrastructure within the six priority basins. BSA is utilizing these funds to identify and implement green infrastructure retrofits on public property and within the public right-of-way. However, it has become apparent that funding is insufficient to meet the minimum outcome threshold required by the Environmental Impact Bond of at least 200 acres of impervious surface managed through the implementation of green infrastructure practices. BSA is requesting funding through the Green Resiliency Grant (GRG) Program to supplement the funding allocated from the Environmental Impact Bond. As a public benefit corporation, BSA meets the applicant eligibility criteria for this funding.

For this phase of the Rain Check Program, BSA is focusing on the retrofit rehabilitation and improvements of five Buffalo parks:

- Eddie Dawson Park at 23 Roetzer Street
- Genesee Gateway Triangle between Genesee Street, Walden Avenue, and East Parade Circle
- Hennepin Park at 1207 Bailey Street
- Lincoln Park at 69 Peck Street
- Martin Luther King Jr. Park at 175 North Parade Avenue

A GIS-based desktop analysis involving a review of GIS-based soils, topography, and land use was performed to identify suitable green infrastructure practices at these locations. In addition, our team performed a site visit to confirm site conditions and met with City of Buffalo Department of Public Works staff to ensure the selected systems were appropriate. The following green infrastructure practices were identified:

Stormwater tree trenches: Stormwater tree trenches are below-grade stormwater management systems that are situated adjacent to the roadway under sidewalk and landscaped areas. The trench is comprised of stone and pipe storage and can be designed to accommodate tree pits along the streetscape.

Porous asphalt pavement: Porous asphalt pavement is a type of pavement that is designed to allow stormwater to flow freely through the asphalt surface into a subsurface stone drainage layer.

Rain gardens: Rain gardens are landscaped areas featuring a mix of native plants and soil designed to clean and filter stormwater runoff.

Underground storage: Underground storage chambers or vaults are subsurface stormwater systems suitable for sites within densely developed urban areas. These systems can be designed as an arched structure, a vault, or a large diameter pipe and allow for infiltration or detention depending on the underlying soils.

The EFC GRG program requires that the total stormwater runoff reduction (RR_v) provided by all practices must meet or exceed 100,000 cubic feet per year. This is calculated by taking the total RRv for each practice and multiplying it by 40 events per year. RR_v is the total reduction of water quality volume (WQ_v) through runoff reduction techniques and standard stormwater management practices with RR_v reduction capacity. The proposed practices at the five parks will provide a total RR_v as outlined in Table 1.

Table 1. Provided Water Quality Volume (WQ_v) & Runoff Reduction Volume (RR_v)

Park Name	P (in)	Rv	A (ac)	Total Water Quality Volume (WQ_v) (cf)	Stormwater Runoff Reduction (RR_v) (cf)	Annual RR_v (RR_v x 40) (cf)
Eddie Dawson Park	0.9	0.95	0.90	0	842	33,680
Genesee Gateway Triangle	0.9	0.95	0.39	462	750	30,000
Hennepin Park	0.9	0.95	8.95	11,696	0	0
Lincoln Park	0.9	0.95	0.48	260	513	20,520
Martin Luther King Jr. Park	0.9	0.95	2.82	34	2,945	117,800
		Total	**13.54**	**12,452**	**5,050**	**202,000**

BSA intends to assign these projects to up to three (3) engineering design firms that have been pre-qualified and awarded contracts to support the Rain Check program. The proposed project schedule starts on September 16, 2024 and ends January 13, 2028 (Table 2).

Table 2. Proposed Project Schedule

Description	Start Date	Duration (Weeks)	End Date
Notice to Proceed - Design	9/16/2024	0	9/16/2024
Public Notice for Site Work	9/19/2024	4	10/17/2024
Geotechnical Investigation and Survey	10/20/2024	16	2/9/2025
60% Design	2/12/2025	12	5/7/2025
90% Design	5/10/2025	16	8/30/2025
100% Design	9/2/2025	6	10/14/2025
Public Notice for Bidding	10/17/2025	4	11/14/2025
Procurement for Contractor	11/17/2025	8	1/12/2026
Construction	1/15/2026	104	1/13/2028

A detailed preliminary opinion of probable project costs estimate (construction and engineering) was prepared by Stantec for the five park sites. A detailed itemized breakdown summary per park site is included as Appendix D. Unit prices for the cost estimate are based on a combination of Department of Transportation (DOT) average unit prices and average bid prices for recently received bids for projects with similar scope and in similar economic climates. A summary of the estimated project costs for each of the park site is summarized in Table 3.

Table 3. Summary of Estimated Project Costs

Park Name	Preliminary Estimated Construction Costs	Construction Contingency Cost (35%)	Engineering Design Costs (15%)	Engineering During Construction Costs (15%)	Escalation Costs (7%)	Preliminary Anticipated Total Project Cost
Eddie Dawson Park	$295,383	$103,384	$44,307	$44,307	$20,677	$508,059
Genesee Gateway Triangle	$242,891	$85,012	$36,434	$36,434	$17,002	$417,773
Hennepin Park	$2,538,668	$888,534	$380,800	$380,800	$177,707	$4,366,509
Lincoln Park	$242,294	$84,803	$36,344	$36,344	$16,961	$416,746
Martin Luther King Jr. Park	$2,177,386	$762,085	$326,608	$326,608	$152,417	$3,745,104
Total Costs	**$5,496,622**	**$1.923,818**	**$824,493**	**$824,493**	**$384,764**	**$9,454,191**

1 Project Objectives

BSA launched the Rain Check Program in 2015, a dedicated green infrastructure program which documents BSA's strategies for addressing goals outlined in the Long-Term Control Plan. A copy of Buffalo's Rain Check Program 1.0 and Rain Check Program 2.0 reports are provided in Appendix A. As part of the Rain Check 2.0 program rollout, six priority combined sewer basins were identified for green infrastructure improvements within Buffalo's East Side, downtown, and South Buffalo neighborhoods. These basins encompass a quarter of the City's land area and almost half of its population. The six priority basins were chosen to have the greatest impact on water quality and public health in Buffalo, to improve basins with high numbers of combined sewer overflow events, to leverage other investments in the area, and to decrease impervious cover where its percentage is highest.

For this phase of the Rain Check Program, BSA is focusing on the retrofit rehabilitation and improvements of five Buffalo parks, including the following:

- Eddie Dawson Park at 23 Roetzer Street
- Genesee Gateway Triangle between Genesee Street, Walden Avenue, and East Parade Circle
- Hennepin Park at 1207 Bailey Street
- Lincoln Park at 69 Peck Street
- Martin Luther King Jr. Park at 175 North Parade Avenue

1.1 System Design Parameters

The green infrastructure systems are designed to provide water quality treatment using a design storm of 0.9 inches. Runoff reduction calculations were generated using Hydrologic Soil Group "D" soils.

1.2 Practice Selection

A GIS-based desktop analysis involving a review of GIS-based soils, topography, and land use was performed to identify suitable green infrastructure practices at these locations. In addition, our team performed site visits to confirm site conditions and met with City of Buffalo Department of Public Works staff to ensure the selected systems were appropriate. The following green infrastructure practices were identified:

Stormwater tree trenches: Stormwater tree trenches are below-grade stormwater management systems that are situated adjacent to the roadway under sidewalk and landscaped areas. The trench is comprised of stone and pipe storage and can be designed to accommodate tree pits along the streetscape.

Porous asphalt pavement: Porous asphalt pavement is a type of pavement that is designed to allow stormwater to flow freely through the asphalt surface into a subsurface stone drainage layer.

Rain gardens: Rain gardens are landscaped areas featuring a mix of native plants and soil designed to clean and filter stormwater runoff.

Underground storage: Underground storage chambers or vaults are subsurface stormwater systems suitable for sites within densely developed urban areas. These systems can be designed as an arched structure, a vault, or a large diameter pipe and allow for infiltration or detention depending on the underlying soils.

Additional details on the parks, proposed practices, and stormwater designs are provided in the following sections.

1.2.1 Stormwater Tree Trenches

Stormwater tree trenches are below-grade stormwater management systems that are situated adjacent to the roadway under sidewalk and landscaped areas. The trench is comprised of stone and pipe storage and can be designed to accommodate tree pits along the streetscape. Benefits include additional shade, reduction of heat island effect, carbon sequestration, and improved air quality from the addition of trees. Strategically placed trees may also aid in providing additional privacy and screening from adjacent residents and properties. A detail of the stormwater tree trench cross section is presented in Figure 1. A full set of details for all proposed green infrastructure practices is included in Appendix C.

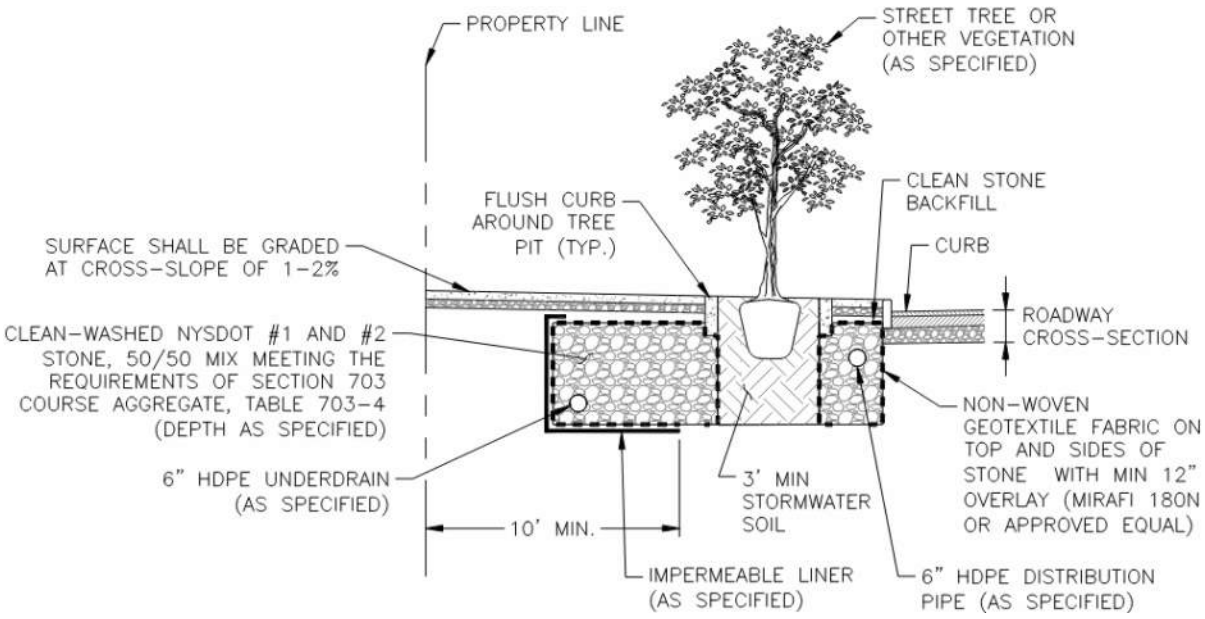

Figure 1. Proposed Stormwater Tree Trench Design

Stormwater tree trenches in soils with infiltration rates over 0.5 inches per hour will be designed in accordance with infiltration trenches using the New York State Department of Environmental Conservation

Design Manual (Design Manual), while stormwater tree trenches in soils with infiltration rates less than 0.5 inches per hour will be designed as flow through systems.

According to the Design Manual, stormwater tree trenches designed with underdrains provide 45% volume reduction of the contributing Water Quality Volume (WQ_v) in HSG C soils, and 30% volume reduction of the contributing WQv in HSG D soils, while stormwater tree trenches designed without underdrains (infiltration systems) provide 100% volume reduction of the contributing WQ_v.

1.2.2 Porous Asphalt

Porous asphalt is a type of pavement that is designed to allow stormwater to flow freely through the asphalt surface into a subsurface stone drainage layer.

Porous asphalt is proposed to replace traditional asphalt paving within select park locations and circulation areas. BSA has implemented a variety of porous asphalt projects throughout the city and has found the benefits to include reduced snow collection and reduction in ice formation, cooler asphalt temperatures (contributing to reduced heat island effect), and safer travel conditions due to reduced ice formation. A detail of the proposed porous asphalt cross section is presented as Figure 2. A full set of details for all proposed green infrastructure practices is included in Appendix C.

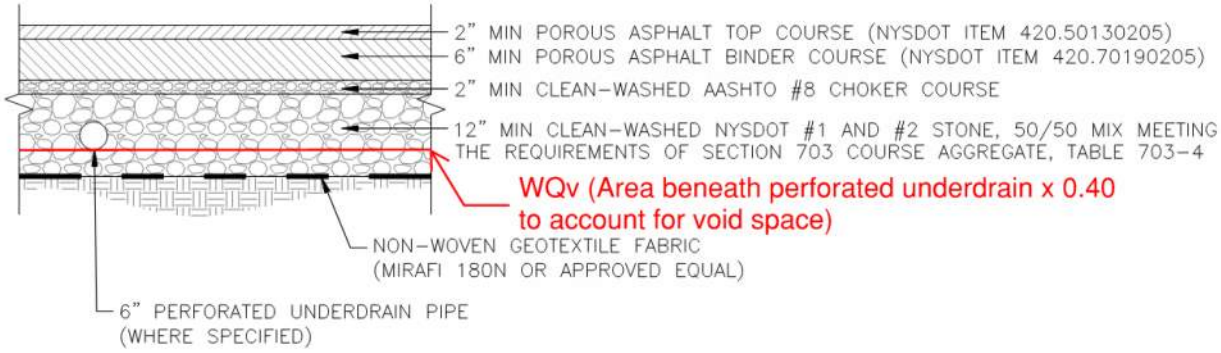

Figure 2. Proposed Porous Asphalt Design

Cleanouts with caps will be included within the system, along with observation wells. The storage reservoir beneath the perforated underdrain pipe, when required, will be adjusted as needed to ensure appropriate attenuation and treatment are provided, and to ensure a 10-year, 24-hour precipitation event can safely pass without rising into the pavement to prevent freeze/thaw damage.

According to the Design Manual, infiltration porous pavement systems with underdrains provides 100% volume reduction of the contributing WQ_v beneath the underdrain invert, while porous pavement systems with underdrains which are not suitable for infiltration do not provide volume reduction of the contributing WQv.

1.2.3 Rain Gardens

Rain gardens are landscaped areas featuring a mix of native plants and soil designed to clean and filter stormwater runoff. Rain gardens are proposed within underutilized landscaped areas within the park lands. Benefits of rain gardens include visual aesthetics, improved air quality, wildlife habitat, carbon sequestration, and a reduction in the heat island effect. In areas where the contributing drainage area is greater than 1,000 square feet, the rain gardens will be designed as bioretention areas.

A detail of the proposed rain garden is presented as Figure 3. A full set of details for all proposed green infrastructure practices is included in Appendix C.

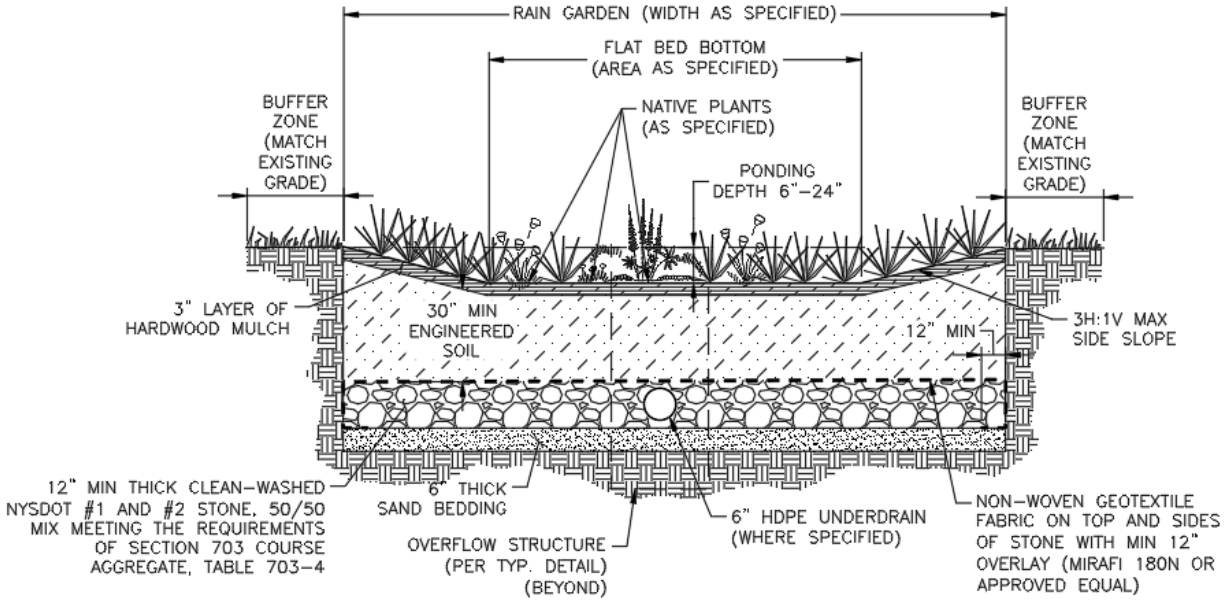

Figure 3. Proposed Rain Garden Design

Rain gardens will be designed to provide an overflow mechanism for the 10-year, 24-hour precipitation event. Pretreatment will be provided with a gravel diaphragm and grass filter strip sized according to the contributing area and site conditions.

According to the Design Manual, rain gardens designed with underdrains provide 40% RRv of the contributing WQ_v.

1.2.4 Underground Storage

Underground storage chambers or vaults are subsurface stormwater systems suitable for sites within densely developed urban areas. These systems can be designed as an arched structure, a vault, or a large diameter pipe and allow for infiltration or detention depending on the underlying soils. A benefit of

underground storage chambers or vaults includes a reduction in the required surface area, as space above these practices can be used for other applications. A detail of the proposed underground storage area is presented as Figure 4. A full set of details for all proposed green infrastructure practices is included in Appendix C.

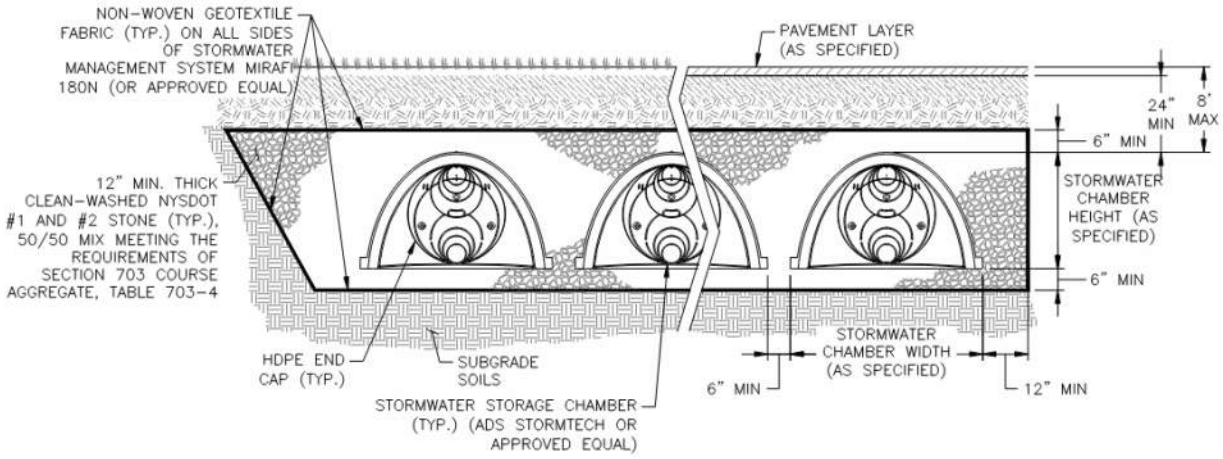

Figure 4. Proposed Underground Storage System

Underground Storage Systems in soils with infiltration rates over 0.5 inches per hour will be designed as infiltration systems while Underground Storage Systems in soils with infiltration rates less than 0.5 inches per hour will be designed as flow through systems for attenuation.

According to the Design Manual, underground stormwater storage systems can provide up to 100% WQ_v when designed as infiltration systems with appropriate pre-treatment controls, and infiltration practices are considered a standard stormwater management practice with 100% RR_v. In areas where infiltration is not possible, the Underground Storage Systems will be used for attenuation and slow release of the contributing water quality treatment volume. Systems which do not infiltrate are not eligible for RRv credit.

1.3 Design Deviations

In January 2017, the Mayor of Buffalo signed the Unified Development Ordinance into law. The UDO marked the first revision to Buffalo's Zoning Laws since 1953. The ordinance, also known as the "Buffalo Green Code", was adopted in accordance with Buffalo's comprehensive plan and promotes the interest and welfare of the Buffalo Community.

Section 7.3 of the Buffalo Green Code, "Site Development – Stormwater", provides technical design guidelines specific to Buffalo's combined sewer system. Since these projects are considered retrofit stormwater management practices, they will be designed to only provide water quality treatment and will not be subject to the flood control requirements outlined in Section 7.3.

The five parks reviewed for this feasibility study are located within combined sewer areas with soils of varying permeability. In soils with infiltration rates over 0.5 inches per hour, stormwater management

practices will be designed to infiltrate to the greatest extent practical. In areas where infiltration is infeasible, filtration and/or attenuation practices will be utilized to attenuate and slowly release the water quality treatment volume over a 24-to-72-hour period. All practices will be designed with appropriate pretreatment practices. In addition, practice-specific design deviations are proposed and are described in the following subsections.

1.3.1 Stormwater Tree Trenches

The proposed design deviates from the Design Manual in that rather than utilizing structural soil or proprietary soil cell product between tree pits, a mixture of NYSDOT #1 and #2 stone is proposed. The #1 and #2 stone will provide increased structural support and additional attenuation volume to reduce peak flows to the combined sewer system.

If soils are deemed suitable for infiltration within a proposed practice area, the thickness of the stone may be reduced to meet this requirement. In these instances, the practice will be widened to ensure the appropriate storage volume is provided.

1.3.2 Porous Asphalt

The proposed design deviates from the Design Manual in that the binder course thickness is increased to six inches (as opposed to three inches), while the choker course thickness is decreased to two inches (as opposed to four inches).

1.3.3 Rain Gardens

None.

1.3.4 Underground Storage

The proposed design deviates from the Design Manual in that infiltration may not be possible. In these instances, the underground storage will be designed as an attenuation system, with a slow-release orifice which will attenuate the water quality treatment volume.

2 Existing Conditions

A desktop analysis was performed of five parks to determine their suitability for GI improvements. A summary of that analysis is included in this section.

2.1 Eddie Dawson Park

Eddie Dawson Park is located at 23 Roetzer Street in Buffalo, NY. The 1.9-acre park is bordered on the north by Genesee Street, to the south by Walden Ave, to the west by Roetzer Street, and to the east by railroad tracks. This centrally located park provides patrons with a variety of amenities including picnic areas, playgrounds, sports fields, and walking trails.

The topography within the park slopes from east to west towards the existing interceptors along Roetzer Street. Slopes within the park range from 1% to 5%, with localized areas near the railroad tracks up to 15%.

According to the USDA Web Soil Survey, soil within and surrounding Eddie Dawson Park is classified as Urban Land, and the depth to bedrock and groundwater is greater than six feet. This information will be confirmed during the design phase. The USDA Web Soil Survey Maps are included within Appendix A.

A review of the New York State Environmental Resource Mapper (NYSERM) indicates no federal or state wetlands, significant natural communities, or rare plants or animals are present within the proposed project site.

A review of the New York State Environmental Assessment Form Mapper (NYSEAF Mapper) indicates the Eddie Dawson Park is not in a 500-year floodplain nor within an agricultural district. This site is located within an Environmental Justice Area. The NYSEAF Mapper indicated the park is near sites which may be listed on or eligible for inclusion on the national or state register; however, no impact is proposed to these features.

The Eddie Dawson Park is within 2,000 ft of a NYSDEC environmental remediation site, located at 318 Urban Street (Site Code No. 915151, a State Superfund Site), which is approximately 0.4 miles away.

A cursory analysis of the surrounding utilities demonstrates:

- Streetlights are located on the southern and northern side of Genesee Street, which may indicate that there are underground electrical lines. A hydrant is located at the intersection of Genesee Street and Roetzer Street. The land near the park within the right-of-way is utilized as open space. A sidewalk is in the right-of-way on the northern side of the street; the road verge appears unused with gravel and concrete.
- The eastern side of the park is bound by a raised railroad track.
- A combined sewer main runs along the center of Roetzer St. Overhead utility lines are present on the eastern side of the street. A hydrant is located at the intersection of Roetzer Street and Walden

Ave, which suggests that the water main travels along the western side of the road. Interceptors are present on both sides of the street. Sidewalk runs along the eastern side of the street. The grassed road verge is on both sides of the street.

- The southern portion of the park is bounded by Walden Street. Walden Street has a sidewalk to the north, along with streetlights, which may indicate that there are underground electrical lines. The road verges on the northern side of the street consists of green space; to the south it consists of concrete parking for the Buffalo Trade Center.

The Eddie Dawson Park is considered a suitable candidate for a GI retrofit as the topography of the site naturally slopes to combined sewer interceptors located along the eastern side of Roetzer Street. Additional details on the proposed retrofits and design will be provided in a later section.

2.2 Genesee Gateway Triangle

The Genesee Gateway Triangle is located at the intersection of Genesee Street and Walden Ave (Genessee & Ellicott right-of-way) in Buffalo, NY. The 0.02-acre park is bordered on the north by Genesee Street, to the south by Walden Ave, and to the east by East Parade Circle. This centrally located park provides pedestrians with a shaded travel way as they traverse through to their destinations.

The topography within the park gently slopes to the southeast towards the existing interceptors along Genesee Street and Walden Avenue. Slopes within the parcel range from 1% to 3%.

According to the USDA Web Soil Survey, soil within and surrounding the Genesee Gateway Triangle is classified as Urban Land, and the depth to bedrock and groundwater are greater than six feet. This information will be confirmed during the design phase. The USDA Web Soil Survey Maps are included within Appendix A.

A review of the NYSERM indicates no federal or state wetlands, significant natural communities, or rare plants or animals are present within the proposed project site.

A review of the NYSEAF Mapper indicates the Genesee Gateway Triangle is not within a 500-year floodplain nor is it within an agricultural district. This site is located within an Environmental Justice Area. The NYSEAF Mapper indicated the park is near sites which may be listed on or eligible for inclusion on the national or state register; however, no impact is proposed to these features.

The Genesee Gateway Triangle is within 2,000 ft of a NYSDEC environmental remediation site, located at 1055 Genesee Street (Site Code No. C915211, a State Brownfield Site), which is approximately 0.2 miles away.

A cursory analysis of the surrounding utilities indicates:

- Streetlights are located on all sides of the Genesee Gateway Triangle, which may indicate that there are underground electrical lines.

- Sidewalks are located on the northern and southern sides of Walden Road. Two manholes are located within the northern side of the street.
- Sidewalks are located on the northern and southern sides of Genesee Street. A manhole is located in the sidewalk on the northern side of the street. Receivers (stormwater Inlets) are located on both sides of the street.

The Genesee Gateway Triangle is considered a suitable candidate for a GI retrofit because there is plenty of green space available, there appear to be minimal utilities, it contains flat topography, and it has accessible locations to tie into the existing combined sewer system. Additional detail on the proposed retrofits and design will be provided in a later section.

2.3 Hennepin Park

The Hennepin Park is located at 1207 Bailey Street in Buffalo, NY. The 6.79-acre park is bordered on the north by Hennepin Street, to the south by Ludington Street, to the east by Greene Street, and to the west by Bailey Ave. The park services the surrounding single-family residences and provides a variety of amenities including a basketball court, a hockey rink, a playground, and tennis courts.

The topography within the park is generally flat, with drainage generally directed towards a low-lying area in the center of the park. Drainage around the park periphery flows towards the interceptors on the surrounding streets. Slopes within the parcel range from 1% to 5%.

According to the USDA Web Soil Survey, soil within and surrounding Hennepin Park is classified as Urban land-Odessa complex, and the depth to bedrock and groundwater is greater than six feet. This information will be confirmed during the design phase. The USDA Web Soil Survey Maps are included within Appendix A.

A review of the NYSERM indicates no federal or state wetlands, significant natural communities, or rare plants or animals are present within the proposed project site.

A review of the NYSEAF Mapper indicates the Hennepin Park is not in a 500-year floodplain or an agricultural district. The site is not within an Environmental Justice Area, nor is the park located near any sites which may be listed on or eligible for inclusion on the national or state register.

A cursory analysis of the surrounding utilities indicates:

- Streetlights surround Hennepin Park, which may indicate that there are underground electrical lines. Sidewalks surround the park on both sides of the street. The road verges are used for street trees, streetlights, signs, and hydrants.
- Combined sewer mains run along the center of Hennepin Street, Ludington Street, Bailey Avenue, and Green Street.

- Hydrant locations at the intersections surrounding Hennepin Park indicate that a water main likely travels along the southern side of Ludington Street, along the western side of Green Street, along the southern side of Hennepin Street, and along the eastern side of Bailey Ave.

Hennepin Park is considered a suitable candidate for a GI retrofit because there is plenty of green space available, there are minimal utilities, it contains flat topography, and it has suitable locations to tie into the existing storm infrastructure. Additional detail on the proposed retrofits and design will be provided in a later section.

2.4 Lincoln Park

The Lincoln Playground at Lincoln Park is located at 69 Peck Street in Buffalo, NY. The 2.75-acre park is bordered on the north and east by private property, to the south by Amity Street, and to the west by Peck Street. The park services the surrounding single-family homes and includes a variety of amenities including basketball courts, a splash pad, and open space.

The topography within the park gently slopes to the southwest to the existing interceptor along the intersection of Peck Street and Amity Street. Slopes within the parcel range from 1% to 3%.

According to the USDA Web Soil Survey, soil within and surrounding Lincoln Park is classified as urban land-cayuga complex and urban land-schoharie complex. The depth to bedrock and groundwater is greater than six feet. This information will be confirmed during the design phase. The USDA Web Soil Survey Maps are included within Appendix A.

A review of the NYSERM indicates no federal, or state wetlands or significant natural communities are present within the proposed project site. The NYSERM mapper indicated the Peregrine Falcon may be present at the site. Development restrictions may need to be implemented to avoid impacts to this species; this will be confirmed during the design phase.

A review of the NYSEAF Mapper indicates Lincoln Park is not in a 500-year floodplain or an agricultural district. The site is within an Environmental Justice Area. The NYSEAF Mapper indicated that the park is near sites which may be listed on or eligible for inclusion on the national or state register, but no impact is proposed to these features.

A cursory analysis of the surrounding utilities indicates that:

- A combined sewer main travels through the center of the parcel and flows towards the north.
- An overhead utility travels along the southern side of Amity Street and along the western side of Peck Street.
- Sidewalk is located along both sides of Peck Street. The road verge is utilized for driveway aprons and utility poles. Hydrants are located on the western side of Peck Street and Amity Street, and further north along the western side of Peck Street; this may indicate that a watermain travels along the western side of Peck Street.

Lincoln Park is considered a suitable candidate for a GI retrofit as there is plenty of green space available, flat topography, and suitable locations to tie into the existing combined sewer system. Additional detail on the proposed retrofits and design will be provided in a later section.

2.5 Martin Luther King Jr. Park

The Martin Luther King Park, formerly known as the Parade and Humbolt Park, is located at 175 Northern Parade Ave in Buffalo, NY. The 56.13-acre park is bordered on the north by Northern Parade Avenue, to the south by Best Street, to the east by East Parade Avenue, and to the west by Kensington Expressway. The Park is managed by the Buffalo Olmsted Parks Conservancy and includes amenities such as a 500-foot diameter wading pool, a splash pad, a playground, basketball courts, tennis courts, walking paths, and several historical buildings.

The topography within the park gently slopes to the southeast towards the existing interceptors along East Parade Avenue and Best Street. Slopes within the park range from 1% to 5%, with localized areas up to 10%.

According to the USDA Web Soil Survey, soil within and surrounding the Martin Luther King Jr. Park is classified as Urban land-Cayuga complex, Urban land-Collamer complex, and Urban land-Schoharie complex. The depth to bedrock and groundwater is greater than six feet. This information will be confirmed during the design phase. The USDA Web Soil Survey Maps are included within Appendix A.

A review of the NYSERM indicates no federal or state wetlands, significant natural communities, or rare plants or animals are present within the proposed project site.

A review of the NYSEAF Mapper indicates that the Martin Luther King Jr. Park is not within a 500-year floodplain nor is it within an agricultural district. The site is within an Environmental Justice Area. The NYSEAF Mapper indicated that the park is near sites which may be listed on or eligible for inclusion on the national or state register, but no impact is proposed to these features.

The Martin Luther King Jr. Park is located within 2,000 ft of an existing NYSDEC environmental remediation site, located at 1055 Genesee Street (Site Code No. C915211, a State Brownfield Site), which is approximately 0.2 miles away from the proposed improvements.

A cursory analysis of the surrounding utilities indicates that:

- Overhead utilities travel along the south side of Best Street and along the eastern side of East Street. Streetlights are present on the northern side of North Parade Ave. and may indicate that there are underground utilities.
- Sidewalks are located on both sides of Best Street and East Parade Street. Sidewalks are located along the northern side of North Parade Street. The verge is utilized for utility poles, street trees, streetlights, and decorative boulders.
- Interceptors are located around the perimeter of the site and generally direct flow to the south.

Martin Luther King Jr. Park is considered a suitable candidate for a GI retrofit as there is ample green space available and suitable locations to tie into existing interceptors. Additional detail on the proposed retrofits and design will be provided in a later section.

3 Project Description

The GI practices recommended in the Design Manual were analyzed to determine the most suitable options for the five selected parks based on the results of the desktop analysis.

3.1 Park Green Infrastructure Selection

3.1.1 Eddie Dawson Park

At Eddie Dawson Park, two stormwater tree trenches are proposed within the public right-of-way of Roetzer Street to collect and manage approximately 0.90 acres of impervious surface from the park and public right-of-way. Stormwater tree trenches were considered ideal for this park as they will provide additional shade for park patrons and residents utilizing the sidewalks while minimizing the required footprint for treatment. The stormwater tree trenches will be strategically sited to maximize the contributing impervious area to the practice, in existing, low-lying areas to minimize the required earthwork to install the practices.

An old driveway apron, totaling approximately 1,000 sf, will be removed and replaced with turf grass along Roetzer Street. This area is also included on Figure 1 in Appendix C.

The NYSDEC GI Worksheets are also included in Appendix C.

3.1.2 Genesee Gateway Triangle

At Genessee Gateway Triangle, two rain gardens are proposed within public lands bounded by Genesee Street, Walden Avenue, and East Parade Circle to collect and manage approximately 0.39 acres of impervious surface from the public right-of-way. Rain gardens were considered an ideal practice for this park due to the ample, open, unused green space. The rain gardens will be sited strategically to avoid impacts to any landscaping features, including existing street trees and decorative boulders.

The NYSDEC runoff reduction worksheets are included in Appendix C.

3.1.3 Hennepin Park

At Hennepin Park, a large disconnection project is proposed to route smaller storm events to an underground stormwater storage system within Hennepin Park. The underground stormwater storage system will be placed below a basketball court which will be renovated as part of the project. The system has been designed to collect and manage approximately 8.95 acres of impervious surface from the public right-of-way. The underground stormwater storage system was considered ideal as the surrounding topography slopes towards this location and there is limited available space.

The proposed underground stormwater storage system will be designed with an appropriate pretreatment system to attenuate and treat the contributing WQ_v. Pretreatment systems to be considered include ADS water quality units, hydrodynamic separator units or other approved equivalents which meet the

requirements of the New Jersey Corporation for Advanced Technology (NJCAT) or the Washington State Technology Assessment Protocol – Ecology (TAPE). These systems will be sized to treat the contributing 2-year WQ_v and include an elevated bypass manifold to accommodate and bypass the inflow from larger storm events. The elevated bypass manifold elevation will be set high enough above the incoming 2-year WQ_v event to ensure 100% treatment. An example detail of an isolator row and elevated bypass manifold is included for reference in Figure 5.

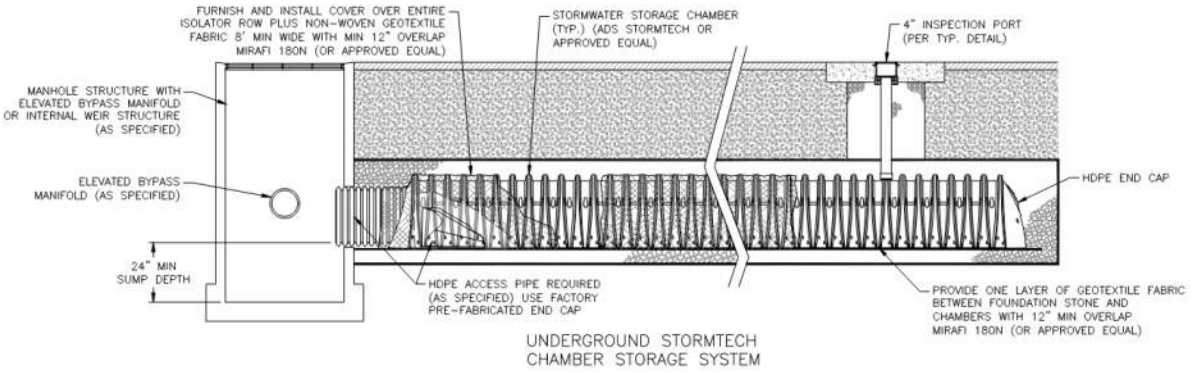

Figure 5. Underground Storage System Isolator Row

The NYSDEC runoff reduction worksheets are included in Appendix C.

3.1.4 Lincoln Park

At Lincoln Park, two stormwater tree trenches are proposed within the public right-of-way of Peck Street to collect and manage approximately 0.48 acres of impervious surface from the park and public right-of-way. In addition, a rain garden is proposed within the park adjacent to Amity Street to collect and manage approximately 0.92 acres of impervious area from the public right-of-way. Stormwater tree trenches were considered ideal for this park as they will provide additional shade for park patrons and residents utilizing the sidewalks while minimizing the required footprint for treatment. The stormwater tree trenches will be strategically sited to maximize the contributing impervious area to the practice in existing, low-lying areas to minimize the required earthwork to install the practices.

Rain gardens were considered an ideal practice for this park due to the ample, open, unused green space. The rain gardens will be sited strategically to avoid impacts to any landscaping features, including existing street trees and decorative boulders.

The NYSDEC runoff reduction worksheets are included in Appendix C.

3.1.5 Martin Luther King Jr. Park

At Martin Luther King Jr. Park, two sections of porous asphalt paving and one rain garden are proposed for the internal road networks along Martin Luther King Jr. Park and Humboldt Parkway South. In addition, three stormwater tree trenches are proposed along North Parade Avenue and East Parade Avenue to

collect and manage 1.1 acres of impervious surface from the park and public right-of-way. In total, these systems manage approximately 2.82 acres of impervious surface from the park and public right-of-way.

The porous asphalt paving was considered ideal along the internal road networks along Martin Luther King Jr. Park due to the limited available space within the southern area of the park and slower vehicular travel speeds. The rain garden was considered an ideal practice near the southeast corner of the wading pool due to the open, unused green space. The stormwater tree trenches were considered ideal along the northern and eastern perimeter of the park as they will provide additional shade for park patrons and residents utilizing the sidewalks while minimizing the required footprint for treatment.

All stormwater features will be strategically sited to maximize the contributing impervious area to the practice, and will be placed in existing, low-lying areas to minimize the required earthwork to the greatest extent practical. The NYSDEC runoff reduction worksheets are included in Appendix C.

3.2 Park Summary

The EFC GRG program requires that the total stormwater runoff reduction (RR_v) provided by all practices must meet or exceed 100,000 cubic feet per year. This is calculated by taking the total RR_v for each practice and multiplying it by 40 events per year. RR_v is the total reduction of WQ_v through runoff reduction techniques and standard stormwater management practices with RR_v reduction capacity. The proposed practices at the five parks will provide a combined total WQ_v and RR_v as outlined in Table 4 through Table 9.

Table 4. Park Summary – Eddie Dawson Park

Eddie Dawson Park						
Proposed Practices	**Practice ID**	**System Area (SF)**	**Impervious Area Managed (SF)**	**Estimated Loading Ratio (1:X)**	**RRv Applied (CF)**	**WQv (CF)**
Flow-through stormwater planter	DPW-001	1,126	23,392	21	500	0
Flow-through stormwater planter	DPW-002	1,257	15,945	13	342	0
Total		**2,383**	**39,337**		**842**	**0**

Table 5. Park Summary – Genesee Gateway Triangle

Genesee Gateway Triangle						
Proposed Practices	**Practice ID**	**System Area (SF)**	**Impervious Area Managed (SF)**	**Estimated Loading Ratio (1:X)**	**RRv Applied (CF)**	**WQv (CF)**
Rain Garden (flow through)	DPW-003	2,100	9,685	28	500	190
Rain Garden (flow through)	DPW-004	1,000	7,323	29	250	272
Total		**3,100**	**17,008**		**750**	**462**

Table 6. Park Summary – Hennepin Park

Hennepin Park						
Proposed Practice	**Practice ID**	**System Area (SF)**	**Impervious Area Managed (SF)**	**Estimated Loading Ratio (1:X)**	**RRv Applied (CF)**	**WQv (CF)**
Underground Infiltrators	DPW-005	13,000	389,862	30	0	11,696
Total	**DPW-006**	**13,000**	**389,862**		**0**	**11,696**

Table 7. Park Summary – Lincoln Park

Lincoln Park						
Proposed Practice	**Practice ID**	**System Area (SF)**	**Impervious Area Managed (SF)**	**Estimated Loading Ratio (1:X)**	**RRv Applied (CF)**	**WQv (CF)**
Stormwater Planter	DPW-007	719	7448	10	159	
Stormwater Planter	DPW-008	638	6739	11	144	
Rain Garden	DPW-009	400	6593	29	210	260
Total		**1,757**	**13,332**		**513**	**260**

Table 8. Park Summary – Martin Luther King Jr. Park

MLK JR Park						
Proposed Practice	**Practice ID**	**System Area (SF)**	**Impervious Area Managed (SF)**	**Estimated Loading Ratio (1:X)**	**RRv Applied (CF)**	**WQv (CF)**
Porous Pavement*	DPW-010	36783	36783	1	655.25	
Rain Garden	DPW-011	3191	11008	4	750	34
Porous Pavement*	DPW-012	18322	18322	1	326.25	
Storm Planter	DPW-013	620	13258	21	283	
Storm Planter	DPW-014	1582	17342	11	371	
Storm Planter	DPW-015	1882	26142	14	559	
Total		**62,380**	**122,855**		**2,945**	**34**
*Assumed only 25% of the proposed porous pavement areas would be able to infiltrate						

Table 9. Provided Water Quality Volume (WQ_v) & Runoff Reduction Volume (RR_v)

Park Name	**P (in)**	**Rv**	**A (ac)**	**Total Water Quality Volume (WQ_v) (cf)**	**Stormwater Runoff Reduction (RR_v) (cf)**	**Annual RR_v (cf) (RR_v x 40)**
Eddie Dawson Park	0.9	0.95	0.90	0	842	33,680
Genesee Gateway Triangle	0.9	0.95	0.39	462	750	30,000
Hennepin Park	0.9	0.95	8.95	11,696	0	0
Lincoln Park	0.9	0.95	0.48	260	513	20,520
Martin Luther King Jr. Park	0.9	0.95	2.82	34	2,945	117,800
		Total	**13.54**	**12,452**	**5,050**	**202,000**

The proposed green infrastructure retrofits are in the conceptual design phase; geotechnical testing will be needed within the proposed practice areas to determine the soil profile and potential infiltration rates. As such, the following assumptions were made when calculating the RRv for each park:

- Stormwater Tree Trenches: all stormwater tree trenches were conservatively assumed to be within HSG D soils, and as such, a 30% volume reduction of the contributing WQv will be provided.
- Porous Pavement: it was conservatively assumed that 25% of the porous pavement areas will be able to infiltrate. The NYSDEC GI worksheets were used to calculate the overall contributing RRv if infiltration were possible, then, that number was multiplied by 0.25 to calculate the assumed RRv which would be provided.
- Rain Gardens: all rain gardens were conservatively assumed to be designed as flow through systems, and as such, a 40% volume reduction of the contributing WQv will be provided.
- Underground Systems: it was conservatively assumed that the underground systems will not be able to infiltrate and as such, will not provide any RRv reduction.

The total RR_v provided by the proposed practices will meet the requirements of the EFC GRG program. NYSDEC GI worksheets are included within Appendix C.

4 Proposed Project Schedule

The EFC GRG grant is made available partly through the Clean Water, Clean Air, and Green Jobs Environmental Bond Act of 2022 (Bond Act). The Bond Act was approved on November 8th, 2022 to make $4.2 billion available for community and environmental projects. According to the EFC GRG grant, projects must not currently be under construction as of June 1, 2024 and construction must begin by June 1, 2026 for program commitments.

BSA intends to assign these projects to up to three (3) engineering design firms that have been pre-qualified and awarded contracts to support the Rain Check program. The proposed project schedule is outlined in Table 10.

Table 10. Proposed Project Schedule

Description	Start Date	Duration (Weeks)	End Date
Notice to Proceed - Design	9/16/2024	0	9/16/2024
Public Notice for Site Work	9/19/2024	4	10/17/2024
Geotechnical Investigation and Survey	10/20/2024	16	2/9/2025
60% Design	2/12/2025	12	5/7/2025
90% Design	5/10/2025	16	8/30/2025
100% Design	9/2/2025	6	10/14/2025
Public Notice for Bidding	10/17/2025	4	11/14/2025
Procurement for Contractor	11/17/2025	8	1/12/2026
Notice to Proceed - Construction	1/15/2026	104	1/13/2028

5 Anticipated Regulatory Approval and Permits

The required regulatory approvals and required permits will be pursued during the design process; this will be included within the consultant's scope of work. It is assumed that the proposed action will be considered a common plan under the New York State Environmental Quality Review Act (SEQR), and that approvals will be granted for the proposed action, rather than for individual parks.

The following permits and regulatory approvals are anticipated:

- NYS Office of Parks and Recreation (NYSOPRHP) Letter of No Effect
- NYS Department of Transportation
- NYSDEC Letter of No Impact to Endangered Species
- NYSDEC Notice of Intent for Coverage under GP-0-20-000
- United States Fish and Wildlife Service (USFW) Signoff
- City of Buffalo Engineering Department – Street Cut Permit
- SEQR Negative Declaration

Any additional permits which are identified during the design and approval process will be added to the consultant's scope of work.

6 Preliminary Opinion of Probable Project Costs

A detailed preliminary opinion of probable project costs estimate (construction and engineering) was prepared by Stantec for the five park sites, a detailed itemized breakdown summary per park site is included as Appendix D. Unit prices for the cost estimate are based on a combination of DOT average unit prices and average bid prices for recently received bids for projects with similar scope and in similar economic climates. A summary of the estimated project costs for each of the park sites is summarized in Table 11.

Table 11. Summary of Estimated Project Costs

Park Name	Preliminary Estimated Construction Costs	Construction Contingency Cost (35%)	Planning and Engineering Design Costs (20%)	Engineering During Construction Costs (15%)	Escalation Costs (7%)	Preliminary Anticipated Total Project Cost
Eddie Dawson Park	$295,383	$103,384	$59,076	$44,307	$20,677	$522,828
Genesee Gateway Triangle	$242,891	$85,012	$48,579	$36,434	$17,002	$429,917
Hennepin Park	$2,538,668	$888,534	$507,733	$380,800	$177,707	$4,493,442
Lincoln Park	$242,294	$84,803	$48,459	$36,344	$16,961	$428,860
Martin Luther King Jr. Park	$2,177,386	$762,085	$435,477	$326,608	$152,417	$3,853,974
Total Costs	**$5,496,622**	**$1,923,818**	**$1,099,324**	**$824,493**	**$384,764**	**$9,729,021**

BSA has budget available to meet the 10% match requirement per the GRG.

7 Long-Term Operation and Maintenance

The long-term operation and maintenance of all GI practices installed on park property will be the responsibility of the BSA. BSA will coordinate with Buffalo Parks to develop a mutually agreed upon memorandum of understanding which will define the GI maintenance footprint and access frequency requirements.

BSA is a public benefit corporation with over 200 employees and an annual operating budget of approximately $55 million. BSA will utilize their annual maintenance budget, funded by sewer district users, to cover the costs for their dedicated maintenance team to maintain the new GI practices. GI maintenance activities will be performed on a monthly and yearly basis. A maintenance schedule for each GI type is included in Table 12 through Table 15.

Table 12. Maintenance Activities for Porous Asphalt Pavement

Practice	Porous Asphalt Pavement
Monthly	Ensure paving area is clean of debris
	Ensure the pavement dewaters between storms
	Ensure that the area is clear of sediments
	Vacuum sweep to keep surface free of sediments
	Use only salt for ice management
	Verify adjacent vegetation shows no signs of erosion and run-on to permeable pavement
Yearly	Verify if any public hazards are present
	Remove graffiti as needed
	Verify there are no complaints from residents
As Needed	Ensure the pavement dewaters between storms
	Mow upland and adjacent areas, and seed bare areas
	Inspect after heavy storm events as needed to ensure practice is operating as intended (no ponding, erosion, etc.)

Table 13. Maintenance Activities for Rain Gardens

Practice	Rain Gardens
Monthly	Remove debris and trash
	Ensure soil media and inflow/outflow locations are free from debris
	Prune and replace dead or dying vegetation
	Check for plant thinning
	Check for evidence of invasive species
	Inspect for sediment build-up and surface ponding
Yearly	Remove and replace mulch, if needed
	Verify that sediment accumulation doesn't yet require cleanout
	Verify that inlets are in good condition and there is no evidence of erosion
	Verify that the top stone layer doesn't require replacement
As Needed	Inspect after heavy storm events as needed to ensure practice is operating as intended (no ponding, erosion, etc.)

Table 14. Maintenance Activities for Stormwater Tree Trenches

Practice	Stormwater Tree Trenches
Monthly	Remove debris and trash
	Check tree health
	Check for evidence of invasive species
	Inspect for sediment build-up and surface ponding
	Ensure soil media and inflow/outflow locations are free from debris
Yearly	Remove and replace mulch, if needed
	Verify that sediment accumulation doesn't yet require cleanout
	Verify that Inlets in good condition, no evidence of erosion
As Needed	Remove debris and trash
	Inspect after heavy storm events as needed to ensure practice is operating as intended (no ponding, erosion, etc.)

Table 15. Maintenance Activities for Underground Storage

Practice	Underground Storage
Monthly	Visually inspect isolator row and other system components for sediment accumulation Visually inspect manhole and sump for trash and sediment accumulation
Yearly	Visually inspect isolator row and other system components for sediment accumulation Visually inspect manhole and sump for trash and sediment accumulation
As Needed	If upon visual inspection sediment is encountered, use a stadia rod to determine the volume of sediment. When the average volume of sediment exceeds three inches throughout the isolator row, the row should be cleaned out using a jet vac process. A maximum water pressure of 2000 psi is recommended.

8 Conclusion

Based on the desktop analysis of the existing site conditions, site visit, and ongoing discussions with the City of Buffalo Department of Public Works, the Eddie Dawson Park, Genesee Gateway Triangle, Hennepin Park, Lincoln Park, and Martin Luther King Jr. Park are all viable candidates for green infrastructure practice retrofits. Stormwater tree trenches, porous asphalt pavement, rain gardens, and underground storage are proposed to manage runoff from 13.54 acres of impervious areas. Receiving a green infrastructure resiliency grant would provide BSA the means to advance their ongoing Rain Check program and achieve their Long-Term Control Plan goal to invest $380 million in Green Infrastructure over the next 20 years to eliminate combined sewer overflows.

Appendix A Background Information

A.1 Park Location Map

A.2 Map of Priority CSO Areas

A.3 Rain Check 1.0 Report

A.4 Rain Check 2.0 Report

A.5 USDA Web Soil Survey Results

A.1 Park Location Map

A.2 Map of Priority CSO Areas

A.3 Raincheck 1.0 Report

A.4 Raincheck 2.0 Report

A.5 USDA Web Soil Survey Results

Appendix B Site Photos

Appendix C - Proposed Green Infrastructure Retrofits

C.1 Green Infrastructure Park Improvement Figures

C.2 Proposed Green Infrastructure Details

C.3 NYSDEC WQ_v Worksheets

C.1 Green Infrastructure Park Improvement Figures

C.2 Proposed Green Infrastructure Details

C.3 NYSDEC WQ_v Worksheets

Appendix D Cost Estimate

Stantec

Stantec is a global leader in sustainable architecture, engineering, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

Appendix A Background Information

A.1 Park Location Map

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A.5 USDA Web Soil Survey Results

A.1 Park Location Map

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A.2 Map of Priority CSO Areas

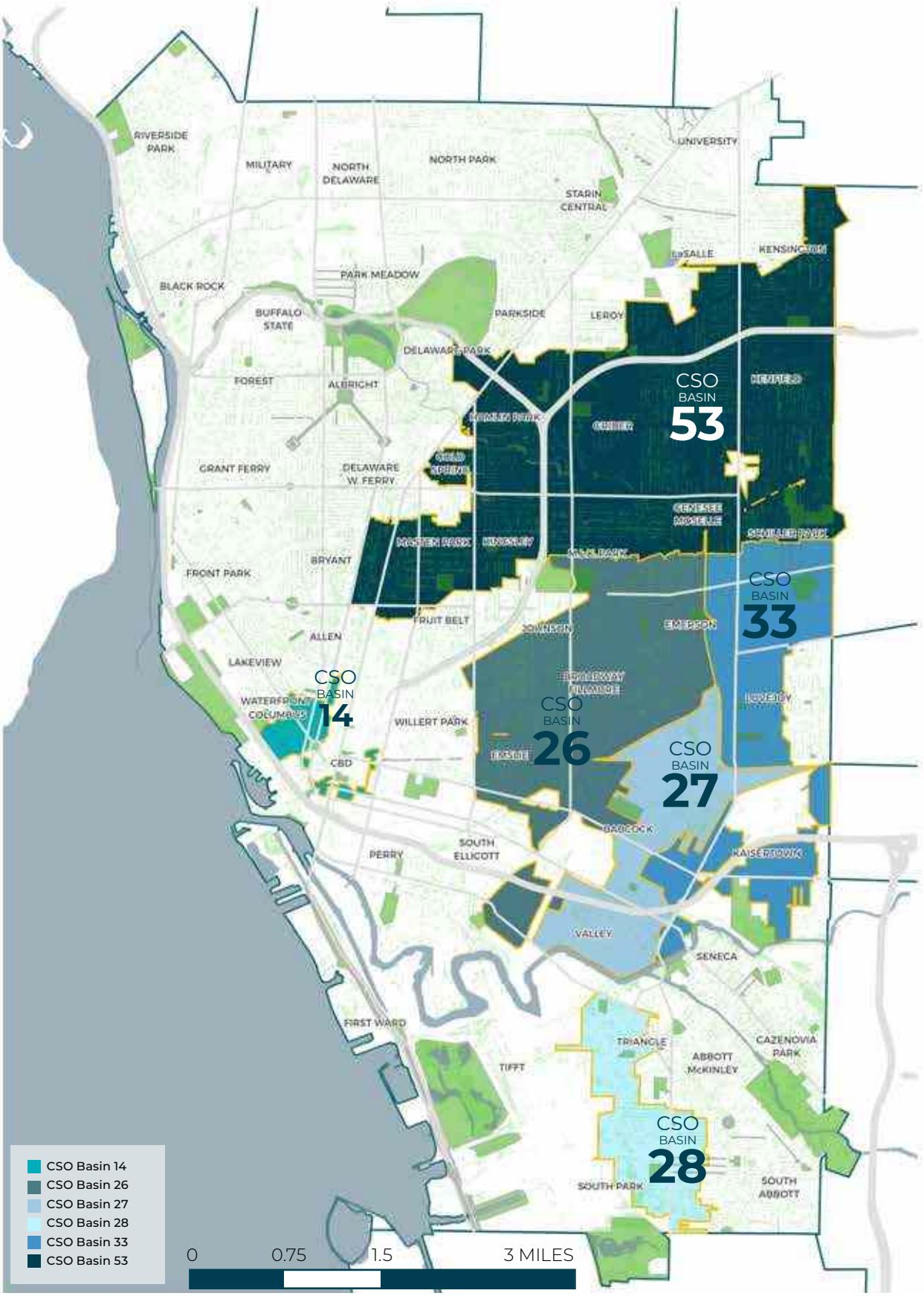

Figure 0.2: Map of Rain Check 2.0's six priority CSO Basins.

A.3 Raincheck 1.0 Report

The First Generation of Green Infrastructure in Buffalo

RAINCHECK

Spring 2018

Acknowledgements

The Buffalo Sewer Authority (Buffalo Sewer) extends its gratitude to the many partner agencies, community organizations, and customers that have contributed to the ongoing success of Rain Check.

Through Mayor Byron W. Brown's leadership, the program benefited from unprecedented partnerships across City Hall, including support from the Department of Public Works, Parks & Streets; the Mayor's Office of Strategic Planning; and the Department of Permits and Inspections Services.

Buffalo Sewer is grateful to the Community Foundation for Greater Buffalo for its support in launching the Rain Check brand, communications campaign and public education materials that helped get the program started. Community groups from across the city helped shape projects and inform what green infrastructure can do for the City of Buffalo and its neighborhoods.

Buffalo Sewer also acknowledges the many consultants who designed green infrastructure projects in Buffalo and supported the planning for the initiative.

Finally, Buffalo Sewer thanks the many state and federal government agencies and foundations that have supported the programmatic development of Rain Check as well as the implementation of green infrastructure projects in Buffalo.

Project management and technical support

ARCADIS

Report prepared by

University at Buffalo
The State University of New York
School of Architecture and Planning
UB Regional Institute

Foreword

A message from Buffalo Sewer Authority

BUFFALO
SEWER AUTHORITY

Buffalo Sewer Board of Directors

Herbert L. Bellamy
CHAIRMAN

John D. Kennedy, Sr.
VICE CHAIRMAN

Christopher Roosevelt
ASSISTANT VICE CHAIRMAN

Eleanor Petrucci
SECRETARY

Protecting public health and the environment from water pollution.

Buffalo Sewer protects public health and our Great Lakes waterways from water pollution. To do this, we capture dirty water, treat and clean it so that it can be safely returned to our rivers and lakes. Established in 1935, Buffalo Sewer serves more than 550,000 customers in the City of Buffalo and 11 surrounding municipalities. Every day, Buffalo Sewer collects and cleans sewage and waste from homes, businesses and factories, as well as roadways, parking lots and rooftops. Buffalo Sewer also builds and maintains infrastructure—pipes, tanks and structures below ground, and landscape installations above ground—through over $20 million in capital projects each year. These investments are levers to engage and educate communities, create employment opportunities and revitalize disinvested neighborhoods.

With the Rain Check program, Buffalo Sewer is championing green infrastructure solutions with a comprehensive approach to improve local water quality. As part of Buffalo's Long Term Control Plan, approved by state and federal regulatory agencies in 2014, Buffalo Sewer committed to investing $380 million over 20 years on projects to reduce combined sewer overflows into local waterways. Working hand-in-hand with local, state, and national water protection partners, Buffalo Sewer is implementing a careful balance of traditional gray infrastructure projects with smart approaches and green solutions. We champion green infrastructure solutions because they provide opportunities for a holistic approach to managing stormwater, while positively impacting the city's triple bottom line and supporting Mayor Byron W. Brown's vision to make Buffalo a more sustainable, equitable city.

While much remains to be done, Buffalo Sewer and its partners across government and in the community are forging progress on sustainable, equitable water management through green infrastructure. Together, we have already completed a number of green infrastructure projects on roadways, parking lots and vacant lots across Buffalo. We are hard at work investing in, planning for and implementing the next generation of green infrastructure projects in Buffalo to protect our Great Lakes and ensure that every resident can access and benefit from clean, healthy water resources.

Oluwole A. McFoy, P.E.

GENERAL MANAGER

RAINCHECK is Buffalo's green infrastructure program.

Officially launched in 2015, Rain Check aims to protect and restore the health of Buffalo's waterways by addressing today's most pressing water-related challenge–stormwater. This report describes what that challenge is, the unique role green infrastructure plays in addressing it, what we've done so far, and how we'll take green infrastructure to the next level.

Table of Contents

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Water is Buffalo's greatest resource.

Buffalo is an important part of the Great Lakes system where **one-fifth of the world's freshwater** flows past our shores. For our people and businesses, **water gives life to Buffalo**. It is critical to our history and shapes our quality of life. In a world where water will only become more valuable, it is Buffalo's greatest resource to protect in the 21st Century and beyond.

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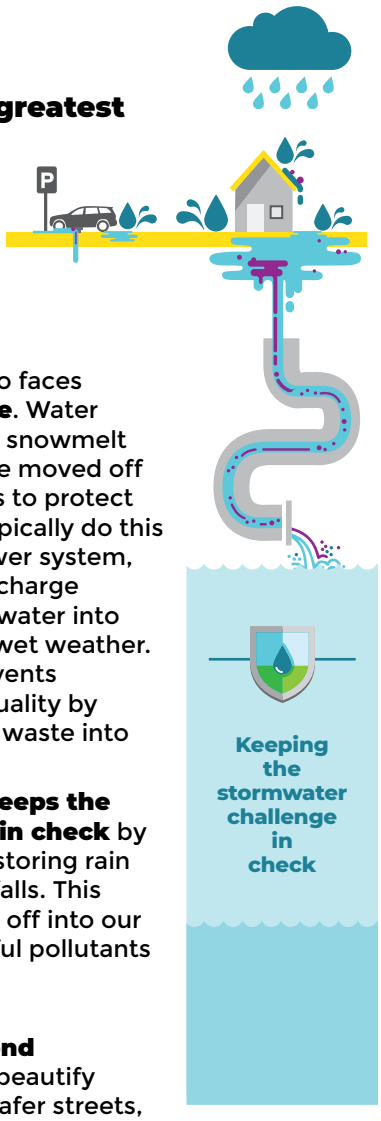
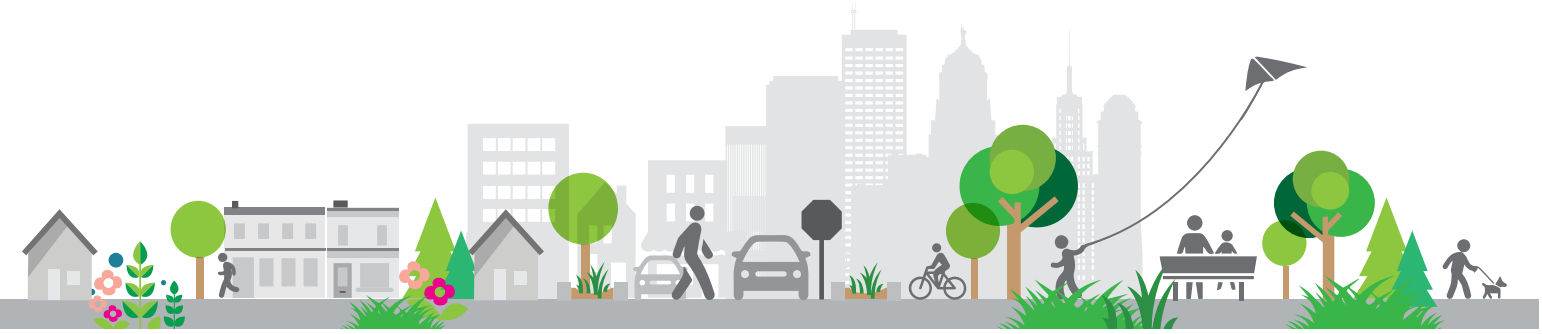
Stormwater is the greatest challenge to the health of our water and green infrastructure helps keep it in check.



Like all U.S. cities, Buffalo faces a **stormwater challenge**. Water generated from rain and snowmelt (stormwater) needs to be moved off our streets and buildings to protect health and safety. We typically do this by directing it to our sewer system, which is designed to discharge excess waste and stormwater into local waterways during wet weather. These sewer overflow events can impair local water quality by dumping pollutants and waste into our waterways.

Green infrastructure keeps the stormwater challenge in check by absorbing, diverting, or storing rain and snowmelt where it falls. This prevents it from running off into our sewers and keeps harmful pollutants out of our waterways.

The **benefits of green infrastructure go beyond** protecting water. It can beautify neighborhoods, create safer streets, save money, cultivate public engagement and education, and generate green job opportunities.



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What we've learned from the first generation of green infrastructure in Buffalo.

The first generation of green infrastructure in Buffalo focused on tackling the parts of our built environment that create the most runoff from stormwater—streets, parking lots, and roofs. Projects created **green streets** that manage stormwater with elements that beautify neighborhoods, **green parking lots** that collect and soak up water, **greening of vacant lots after demolitions** to absorb rain and snowmelt, and engaging homeowners to keep stormwater out of the sewer with **rain barrels** and downspout disconnections.

Green Streets

Green Parking Lots

Demolitions and Vacant Lot Restoration

Rain Barrels and Downspout Disconnections

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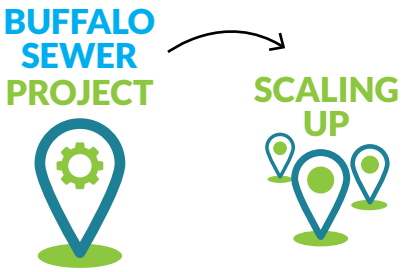
How we'll take green infrastructure to the next level.

The next chapter of green infrastructure in Buffalo will look to **scale up and expand the types of projects** we take on, continuing to make **community engagement** and education a priority, and finding **new partnerships** to tackle collaborative projects across the city.

Community engagement

Community partnerships



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Water is Buffalo's greatest resource

Great Lakes Watershed

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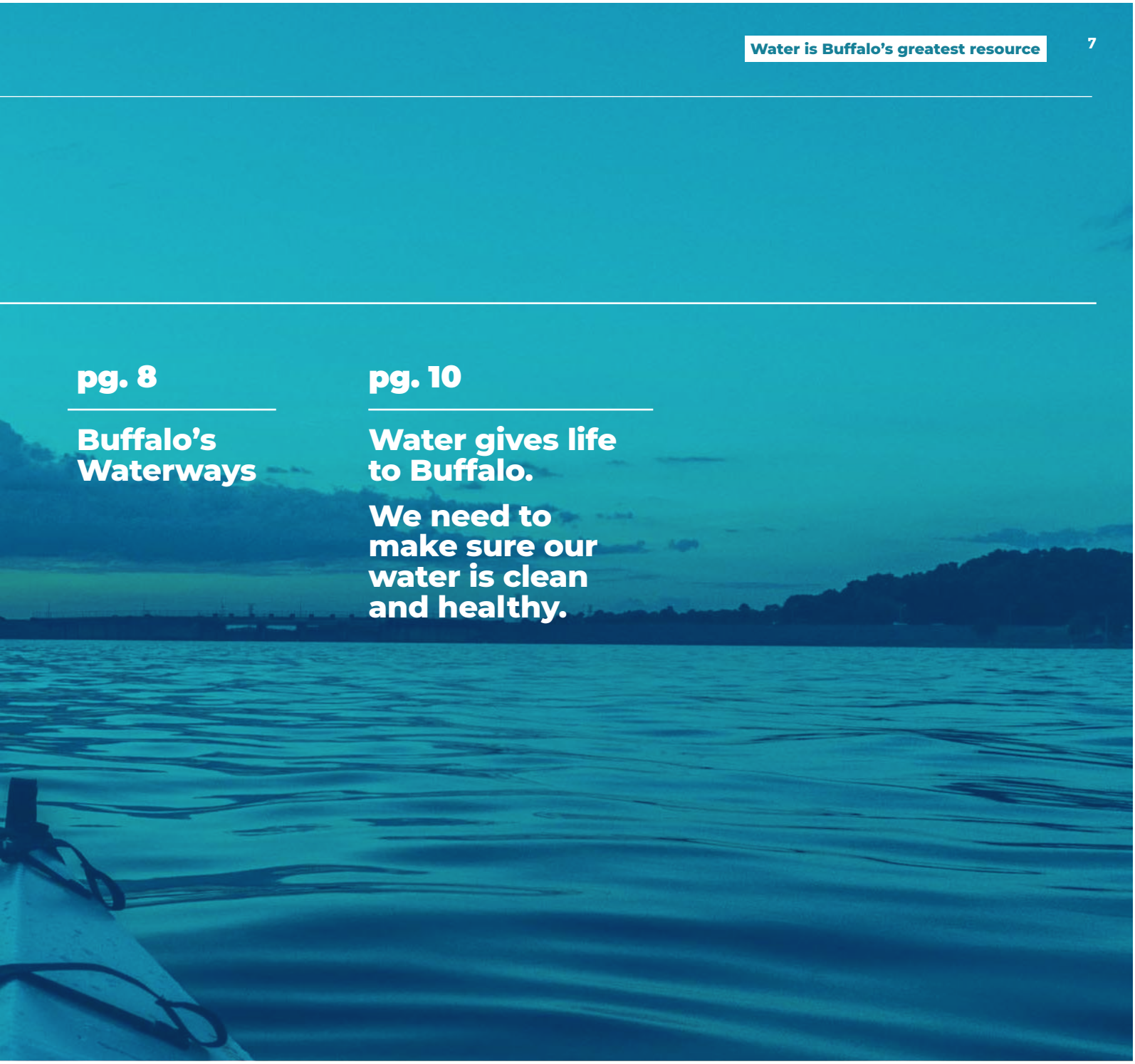
of the world's freshwater flows past Buffalo as it moves from the western Great Lakes through the Niagara River and into Lake Ontario.

Buffalo has a special place in the Great Lakes system. All the water that drains into the western Great Lakes flows past Buffalo and into the Niagara River before running over Niagara Falls, into Lake Ontario, and into the Saint Lawrence River. This makes the City of Buffalo a steward for all the water in the Great Lakes—about one-fifth of the world's freshwater.

The creeks and streams that run through the City of Buffalo also drain into the Great Lakes system. So while the health of local waterways depends on the health of this broader system, what we do to care for our local waterways can also have big impacts on water quality throughout the Great Lakes. And the water quality in the Great Lakes has huge impacts on the environment, public health, and economy of all communities across the basin. Buffalo is a critical link and an important player in this Great Lakes mega-region, which contains 18 percent of U.S. population and 17 percent of Gross Domestic Product (GDP).[1]



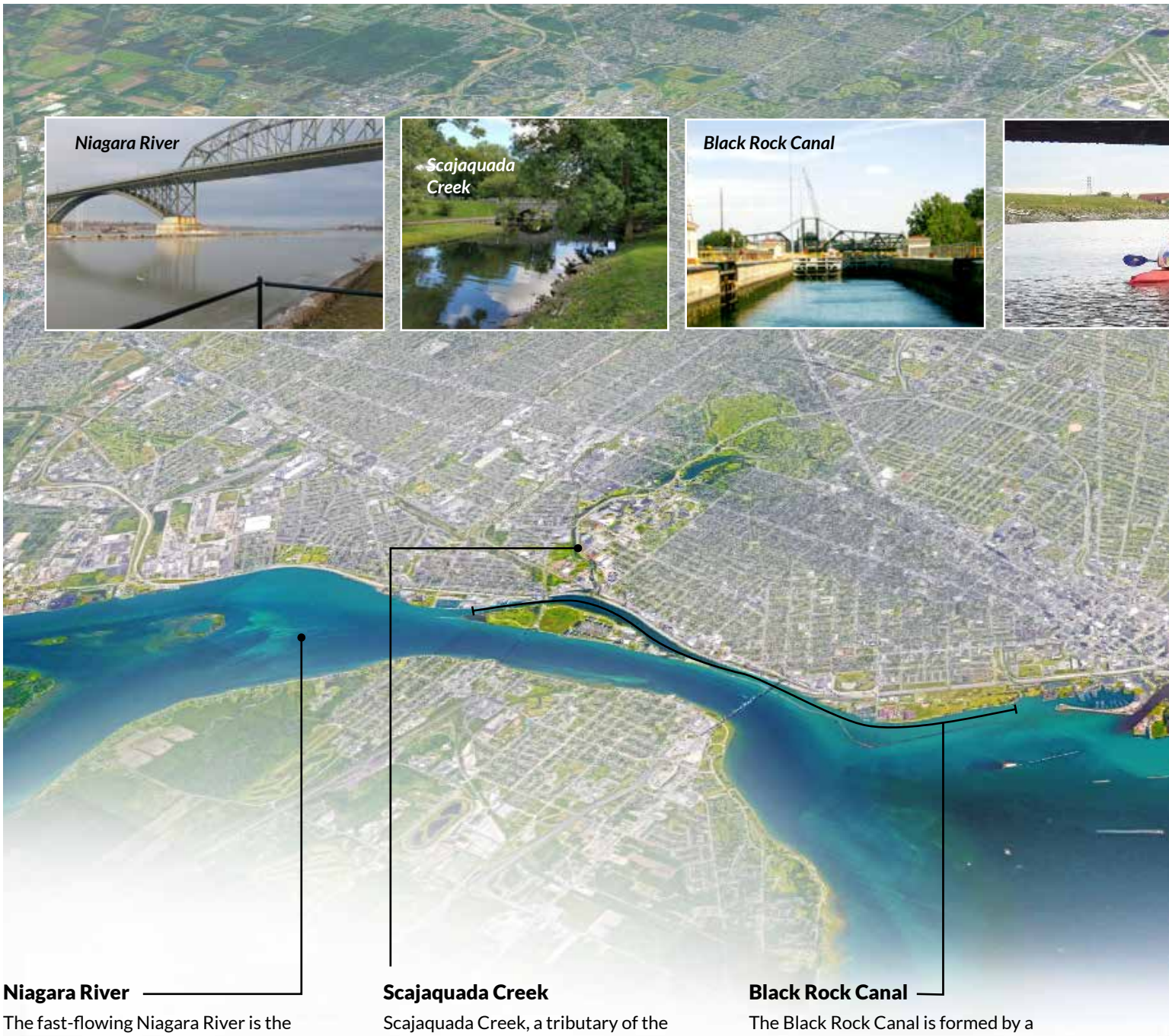
pg. 8

Buffalo's Waterways

pg. 10

Water gives life to Buffalo.

We need to make sure our water is clean and healthy.



Niagara River

The fast-flowing Niagara River is the distinctive waterway of the Buffalo Niagara region. The 37-mile river feeds the world-famous Niagara Falls, connects Lake Erie to Lake Ontario and forms part of the border between the U.S. and Canada. Today, the Niagara River is widely used by residents and tourists for fishing, boating, sight-seeing and recreation.

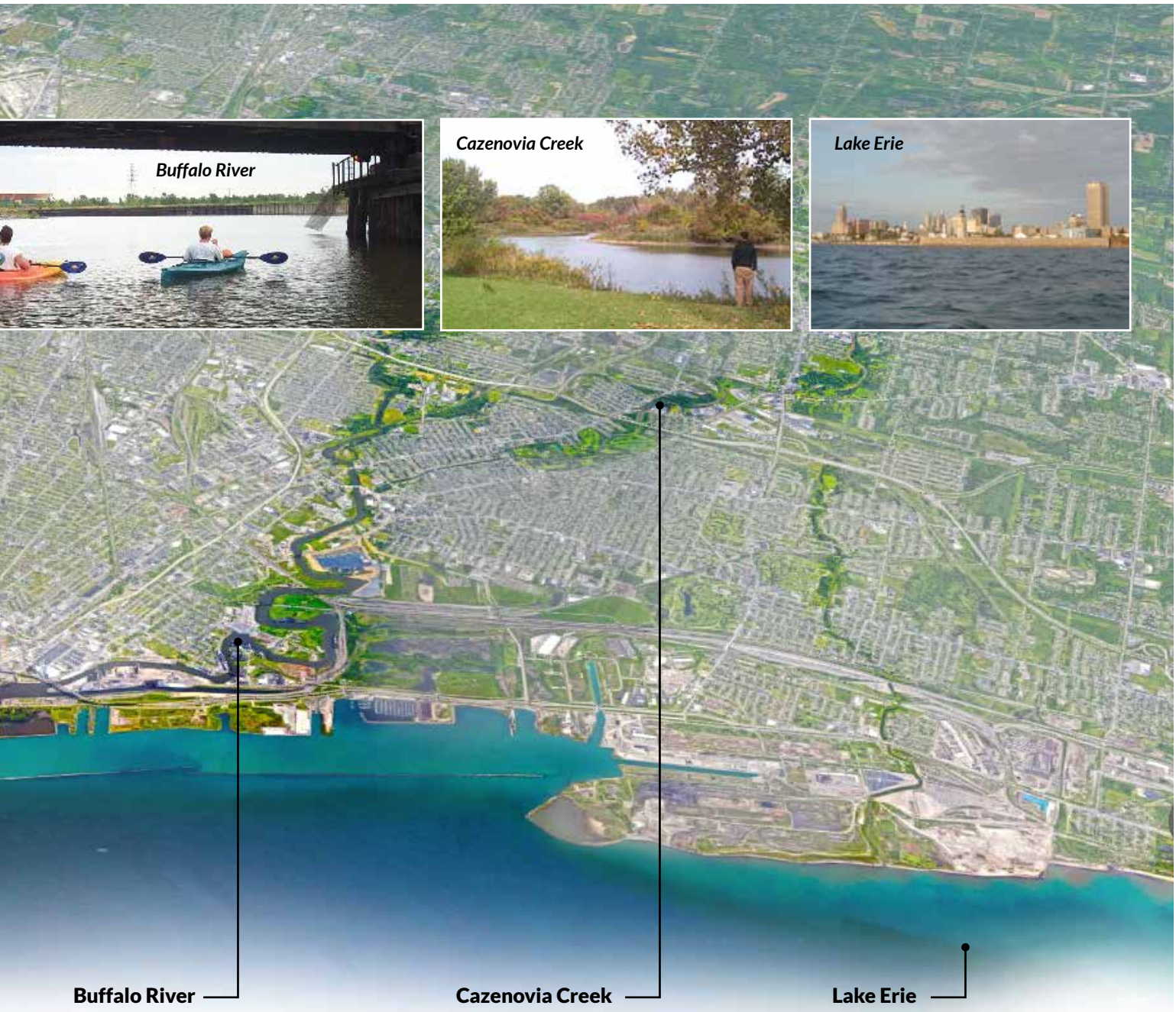
Scajaquada Creek

Scajaquada Creek, a tributary of the Niagara River, begins in the town of Lancaster and flows west through Cheektowaga where it enters an underground channel before resurfacing at Forest Lawn Cemetery in Buffalo. From there, the creek travels through the cemetery and is a key feature of the Olmsted-designed Delaware Park, ultimately flowing into Black Rock Canal.

Black Rock Canal

The Black Rock Canal is formed by a break wall that reroutes the Niagara River waters between Unity Island and the city's shoreline. This channel was constructed so ships could travel from Buffalo to Tonawanda more safely by avoiding the rapid current of the Niagara River. Today, the Black Rock Canal is a prime destination for boating, fishing and for taking in waterfront scenery.

Buffalo's waterways



Buffalo River

The Buffalo River starts just east of the city where Cayuga Creek and Buffalo Creek meet, and winds through South Buffalo before draining into Lake Erie at the city's Inner Harbor. Historically, the Buffalo River is where the city's industry took root. It still serves that purpose, by carrying large freighters to grain elevators for instance, but today the river is increasingly being used for recreation and tourism.

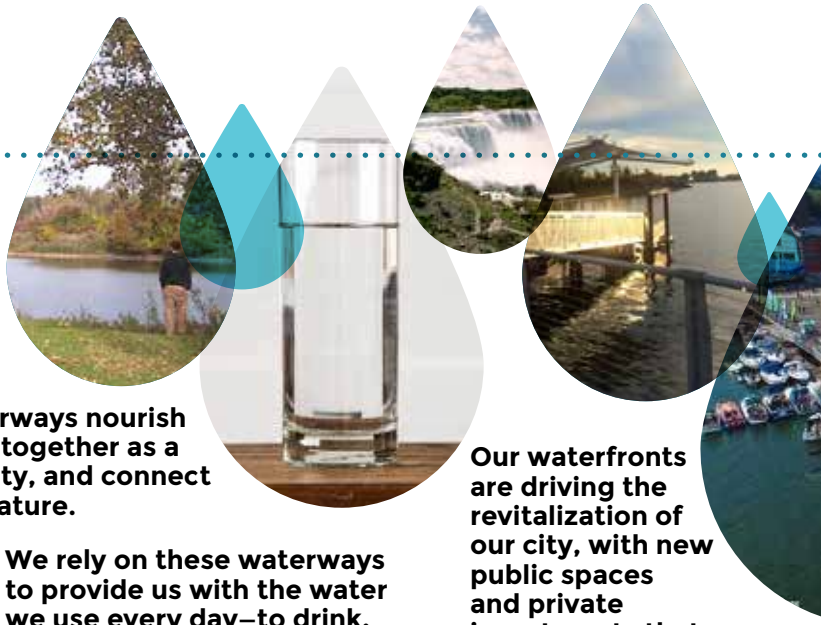
Cazenovia Creek

A tributary of the Buffalo River, Cazenovia Creek forms in southern Erie County, traveling through various towns before entering the City of Buffalo. It flows through South Buffalo neighborhoods and forms the prime water feature of Cazenovia Park, part of the city's Olmsted Park system.

Lake Erie

Lake Erie, the smallest Great Lake in terms of overall volume, links Buffalo with major shipping channels and has a substantial impact on our climate. The Great Lakes to the west, and tributary streams south of the city, feed into Lake Erie which is the source of all of Buffalo's water supply.

Water gives life to Buffalo.



Our waterways nourish us, tie us together as a community, and connect us with nature.

We rely on these waterways to provide us with the water we use every day—to drink, cook, clean, grow plants—in our homes and workplaces.

Our waterfronts are driving the revitalization of our city, with new public spaces and private investments that attract economic activity and droves of visitors.

Buffalo formed and prospered because it was connected to major waterways, like Lake Erie, the Niagara River, and the Erie Canal. And today, our city's waterways are still the backbone of our communities, and a big benefit to our quality of life.

Water supply

Our waterways supply all the water we use every day, from drinking water to watering plants, washing dishes, taking showers, and doing laundry. The city's waterways are a key ingredient for many important and growing industries, like construction, health care, agriculture and food service. Our water is also essential for important public services, like firefighting and street sweeping.

Habitat and scenery

Our waterfronts and waterways provide critical habitat for wildlife, and stunning scenery for visitors. Places like the Tifft Nature Preserve provide an important habitat for migratory birds, and a great place for people to view these species, other wildlife, and to take in the city's waterfront.

Fishing

Many people use the waterways to fish, for recreation, or for food. Broderick Park is one fishing spot that attracts many residents and visitors throughout the year and especially at community events, like the Family Fishing weekend that draws hundreds of visitors each June.

We need to make sure our water is clean and healthy.

Many people fish along the city's waterways for recreation, but also for sustenance, using water as a source of food.

Waterways and shorelines are critical habitat for wildlife that draw more visitors, like birdwatchers.

Community members use the waterways for many types of recreation, from swimming, boating, paddling, and other sports.

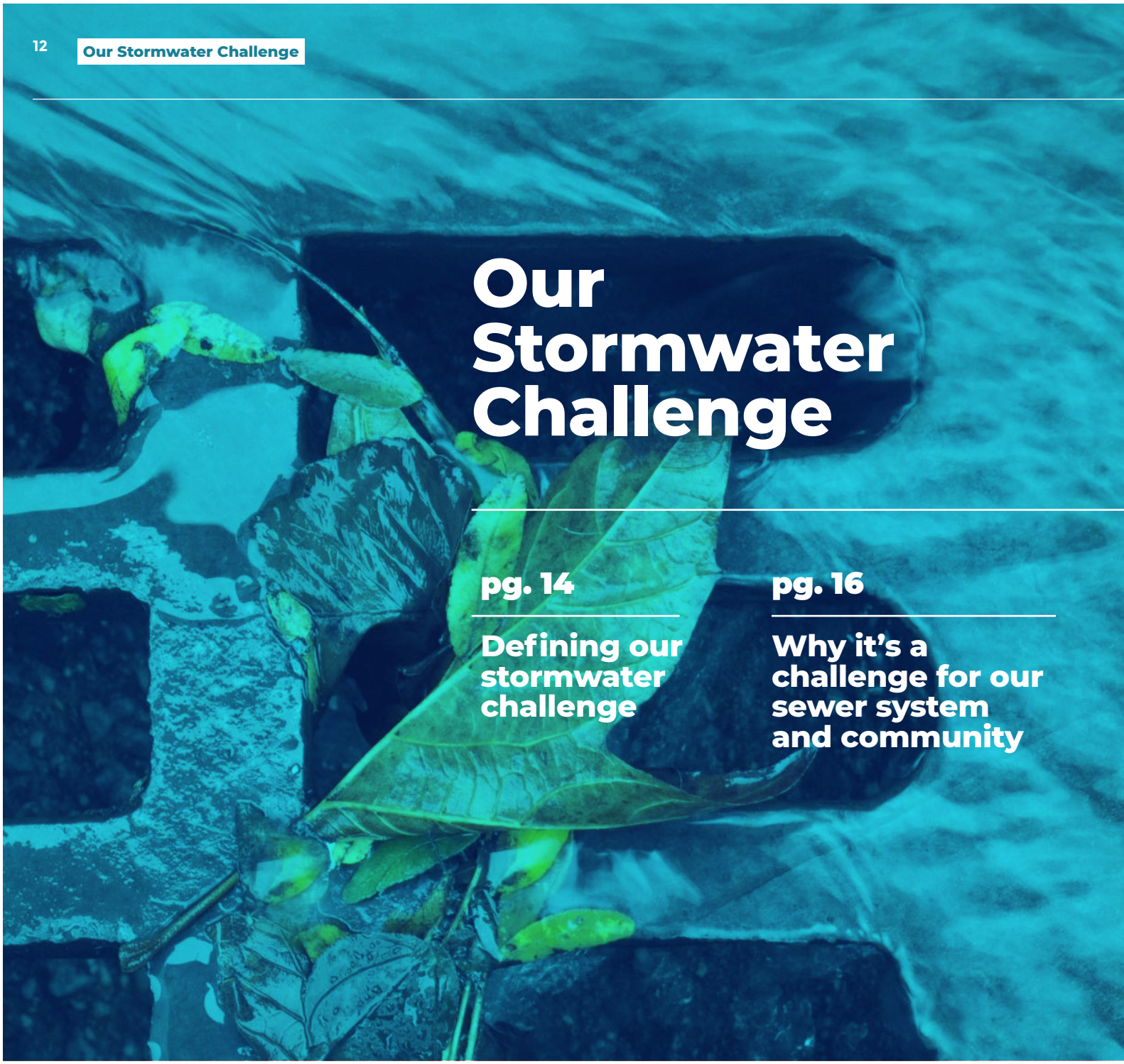
Boating and paddling

Sailboats, motorboats, canoes, kayaks, paddleboards, and even water bicycles are common sights in the Buffalo Harbor on sunny days. Paddlers and boaters can take in the natural scenery on the open waterways, or along nature preserves, but also tourism destinations and waterfront attractions like Canalside and the Naval and Military Park.

Economic development

The waterfront is the historical, cultural and economic center of Buffalo. Building on this history, recent waterfront investments are helping to steer the economic revitalization of the city and the entire Buffalo Niagara region. The waterfront is also home to regional tourist attractions, like HarborCenter, and many major employers. Water is a necessary component to the operations of many industries, including energy and manufacturing.

Buffalo's 21st century future will be fueled by our access to fresh water. It is imperative that we protect and restore this tremendous resource for the benefit of future generations.



Our Stormwater Challenge

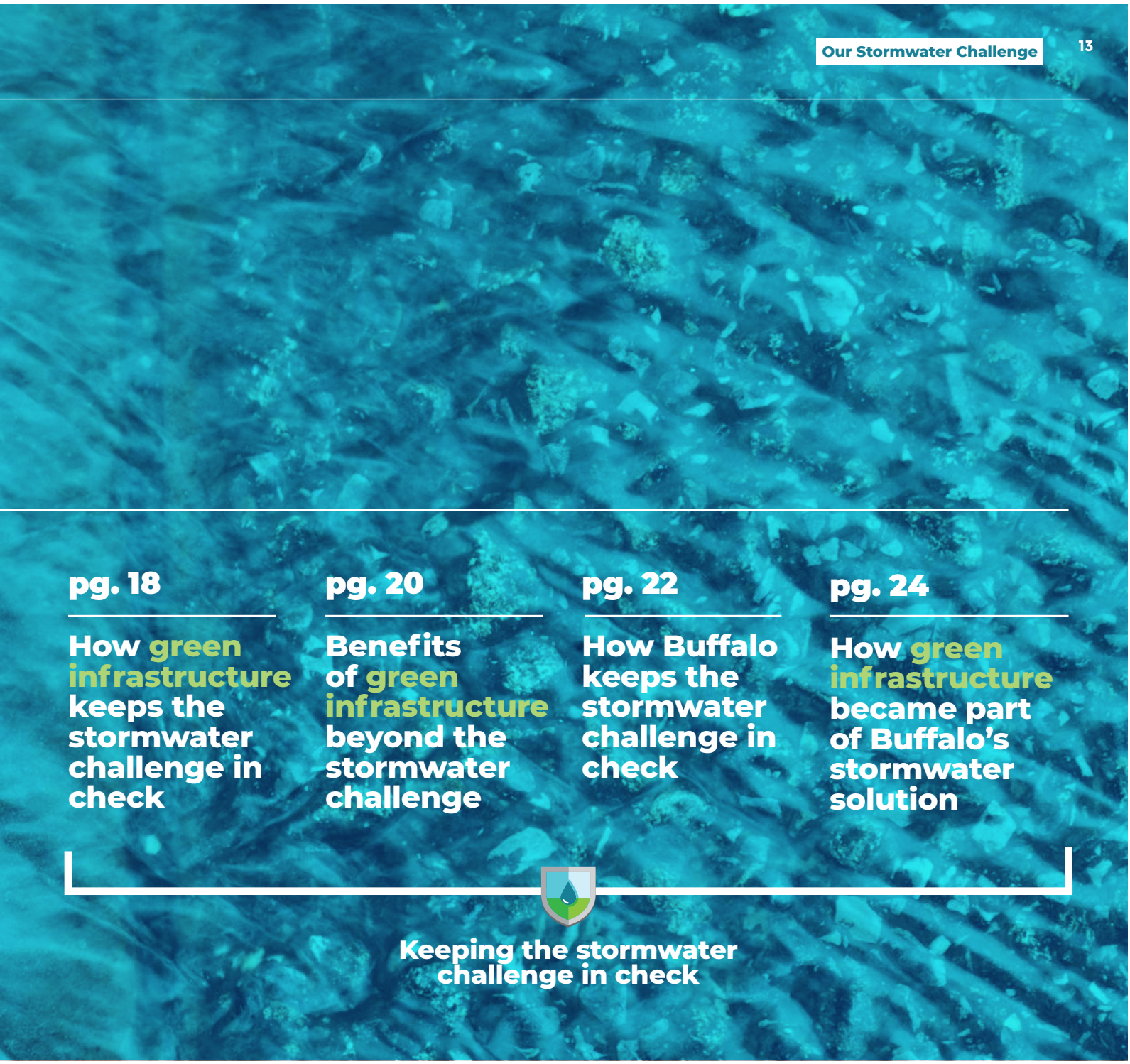
pg. 14

Defining our stormwater challenge

pg. 16

Why it's a challenge for our sewer system and community

To fully benefit from all the opportunities offered by our waterways, we need to make sure they are clean and healthy. Today, the biggest challenge facing local waterways comes from **stormwater—the water that flows over the ground when it rains or snow melts.**



pg. 18

How green infrastructure keeps the stormwater challenge in check

pg. 20

Benefits of green infrastructure beyond the stormwater challenge

pg. 22

How Buffalo keeps the stormwater challenge in check

pg. 24

How green infrastructure became part of Buffalo's stormwater solution

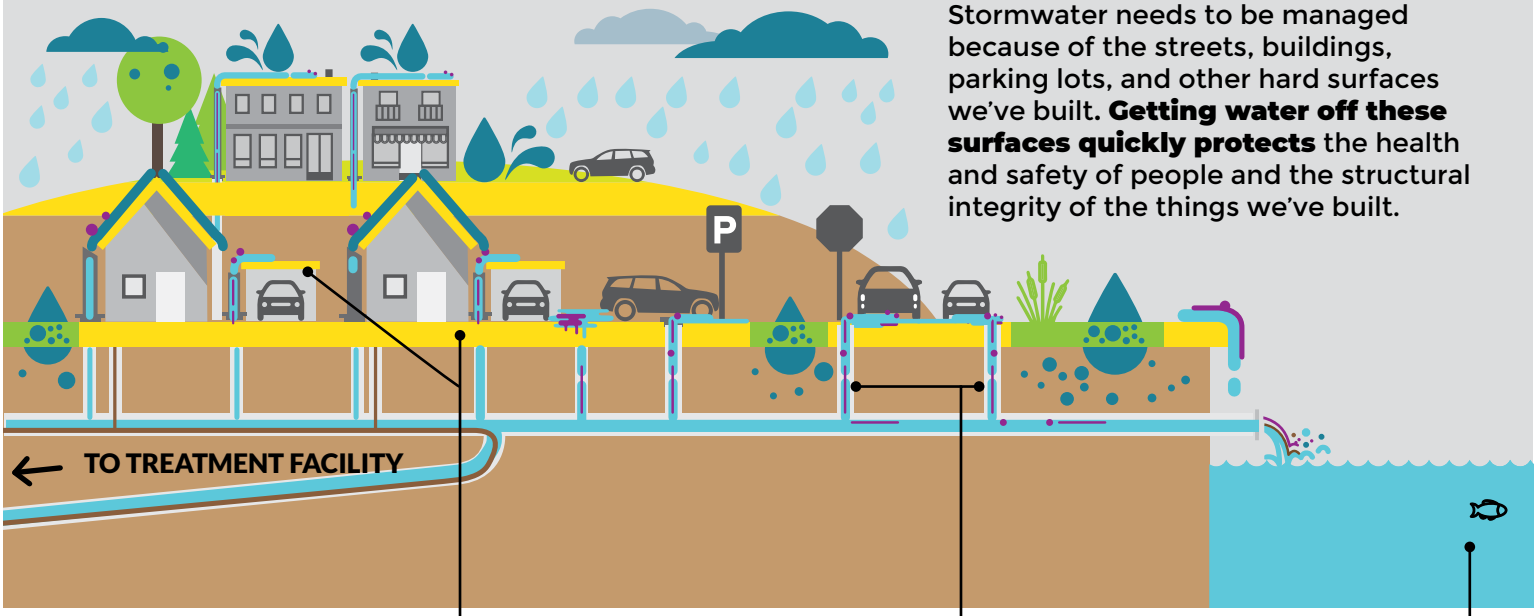
Keeping the stormwater challenge in check

Defining our stormwater challenge

Stormwater itself is a resource. It helps us grow food, feeds our plants and greenspaces, and replenishes rivers, streams, creeks and lakes. But because we need to move it off the surfaces of our streets, sidewalks, homes, and parking lots, it causes a challenge to our sewer system and waterways.

When stormwater falls in an urban environment

Stormwater needs to be managed because of the streets, buildings, parking lots, and other hard surfaces we've built. **Getting water off these surfaces quickly protects** the health and safety of people and the structural integrity of the things we've built.



Sidewalks, roads, driveways, and roofs **don't absorb stormwater** because they are **impervious surfaces**.

As stormwater flows across these **impervious surfaces,** it picks up dirt and **pollutants**, creating **runoff**.

This **polluted runoff** combines with **wastewater** from homes and businesses, often **overflowing into waterways**.

The challenge of impervious surfaces.

Much of our city is covered by impervious surfaces—**hard materials like asphalt, concrete, and rooftops designed to be impenetrable to water**. When it rains or snow melts, water puddles up and flows across these surfaces until it finds places to be absorbed or deposited.

The challenge of runoff.

Stormwater that travels down streets, driveways, and across the urban environment is called runoff. As it moves across impervious surfaces, it picks up all sorts of pollutants like trash, animal waste, pesticides from our lawns, oil and grease from our cars, and everything else we spill or drop on the ground.

When stormwater runoff meets our sewer system and waterways.

Stormwater runoff and the pollutants it picks up as it travels along impervious surfaces need a place to go. Some of that water finds its way into the ground or into local creeks, rivers, or tributaries. But most of the water enters our sewer system through the sewer inlets on our streets, sewer grates in parking lots, and downspouts on the sides of homes and businesses.

When stormwater falls in a natural environment

Natural landscapes, soil and wetlands **can absorb stormwater** because they are **porous.**

Green infrastructure is designed to mimic how the natural environment manages stormwater.

Why stormwater is a challenge for our sewer system and community

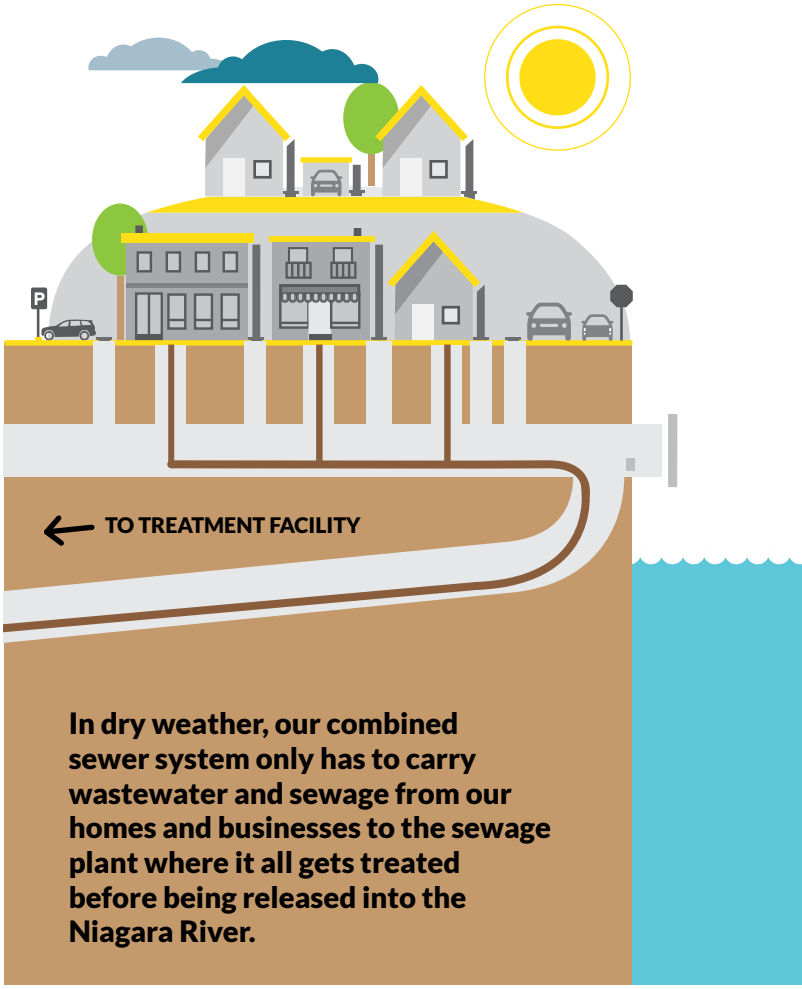
The stormwater challenge is essentially a wet-weather challenge. When it rains or snow melts, stormwater that falls on impervious surfaces, like roads and rooftops, runs off into the combined sewer system and mixes with wastewater from homes and businesses. When this happens, our system, by design, releases any excess waste and stormwater directly into waterways in order to prevent basement backups. These occurrences are called sewer overflow events and the more precipitation we receive, the more untreated stormwater overflows into the Niagara River, and the bigger the stormwater challenge becomes.

This is a significant problem for the City of Buffalo which receives, on average, 40 inches of rainfall and 94 inches of snow every year.[2] And the problem seems to be growing as the frequency and intensity of extreme precipitation events has increased across the northeastern U.S.[3]

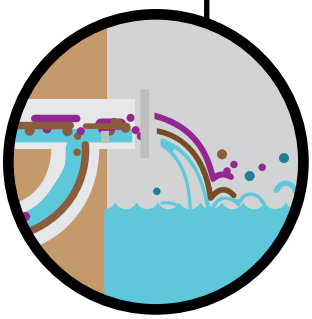
Green infrastructure practices keep the stormwater challenge in check by reducing and managing the impervious surfaces of the city that produce stormwater runoff, particularly on streets and buildings. While traditional underground infrastructure is still needed, especially in extreme precipitation events, green infrastructure is a powerful, cost-effective way to prevent sewer overflows from happening and to keep our stormwater challenge in check.

How Buffalo's **combined sewer system** works in...

...dry weather.



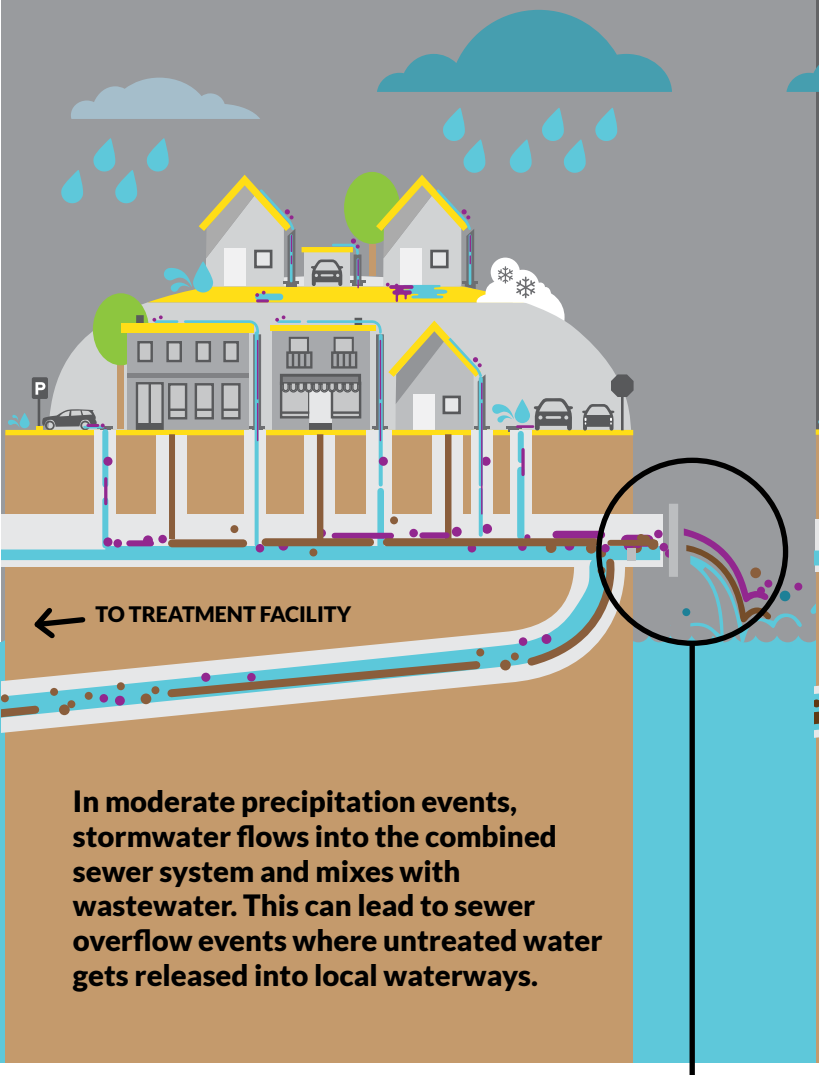
In dry weather, our combined sewer system is able to treat all our wastewater before it is released into local waterways.



A total of 1.75 billion gallons of wastewater and untreated stormwater are estimated to enter our waterways during the 69 overflow events that happen during a typical year.

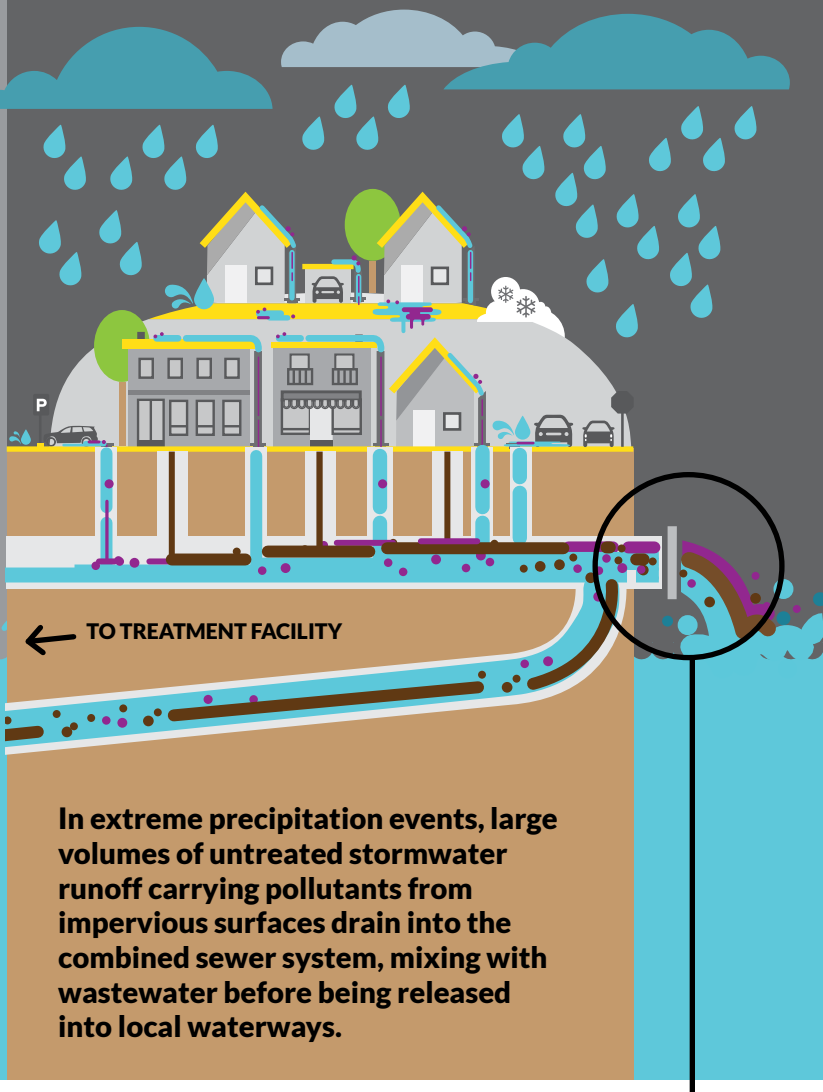
For details on methodology and assumptions, see the Appendix.

...**moderate** precipitation events of **1 inch or less** of rain or snowmelt.



In moderate precipitation events, stormwater flows into the combined sewer system and mixes with wastewater. This can lead to sewer overflow events where untreated water gets released into local waterways.

...**extreme** precipitation events with **more than 1 inch** of rain or snowmelt.



In extreme precipitation events, large volumes of untreated stormwater runoff carrying pollutants from impervious surfaces drain into the combined sewer system, mixing with wastewater before being released into local waterways.

Green infrastructure is a great solution for moderate precipitation events. Most, if not all, of these events could be taken care of by techniques that absorb, collect, or divert water when it rains or snow melts.

Moderate precipitation events in Buffalo account for...

...**88%** of sewer overflow events.

...and **44%** of the volume of untreated wastewater released into local waterways.

Green infrastructure can be a big part of the solution in extreme events. We also need **to invest in underground infrastructure** to prevent sewer overflows in extreme precipitation events.

Extreme precipitation events in Buffalo account for...

...only **12%** of sewer overflow events.

...but **56%** of the volume of untreated wastewater released into local waterways.

For details on methodology and assumptions, see the Appendix.

How green infrastructure keeps the stormwater challenge in check

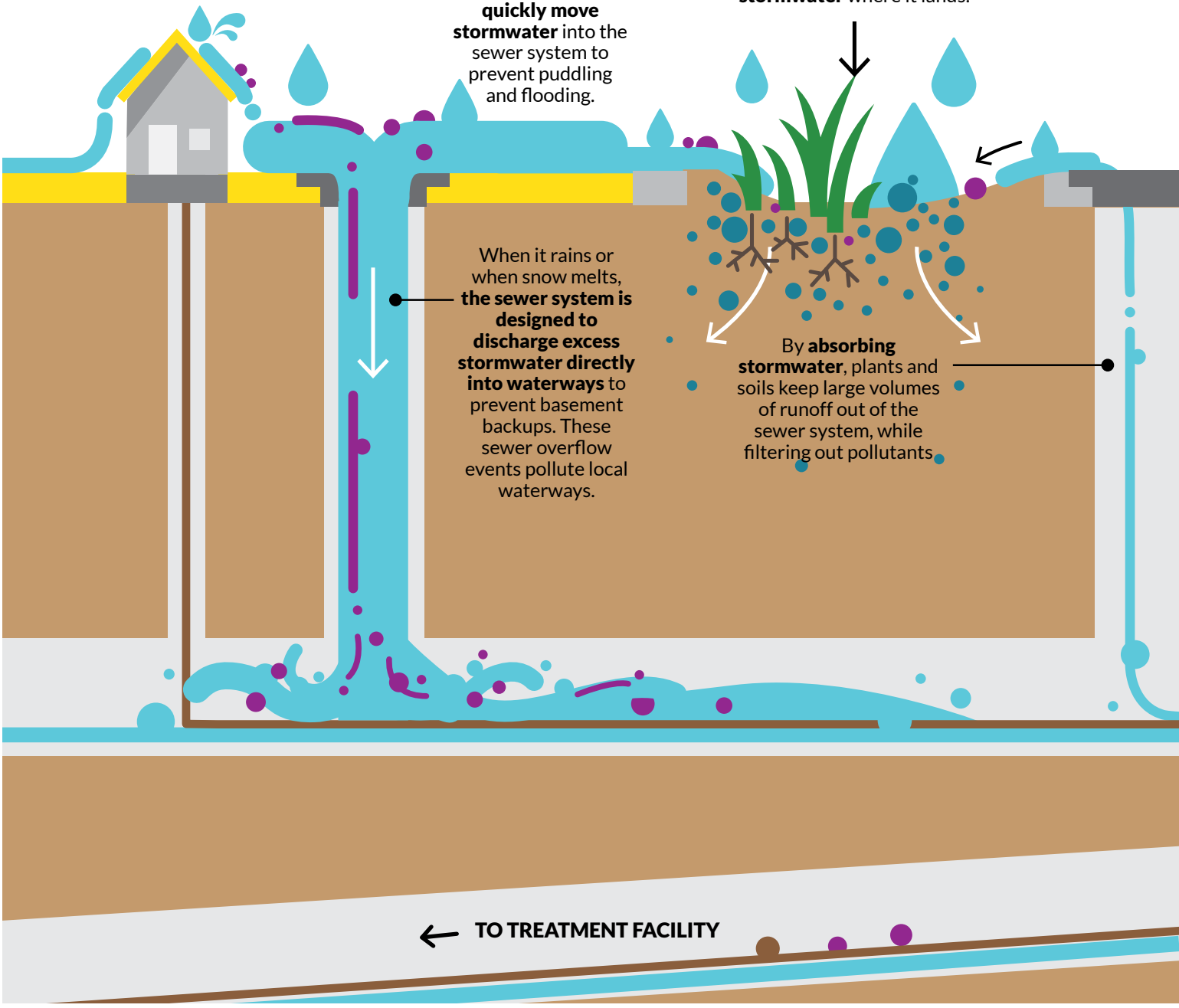
Green infrastructure manages water where it falls.

It slows down the flow of stormwater into our sewer system, or keeps it out of sewers altogether.

Green infrastructure absorbs stormwater

Green infrastructure often involves planting vegetation and other natural elements in urban environments to **absorb and treat stormwater** where it lands.

Impervious surfaces are designed to **quickly move stormwater** into the sewer system to prevent puddling and flooding.

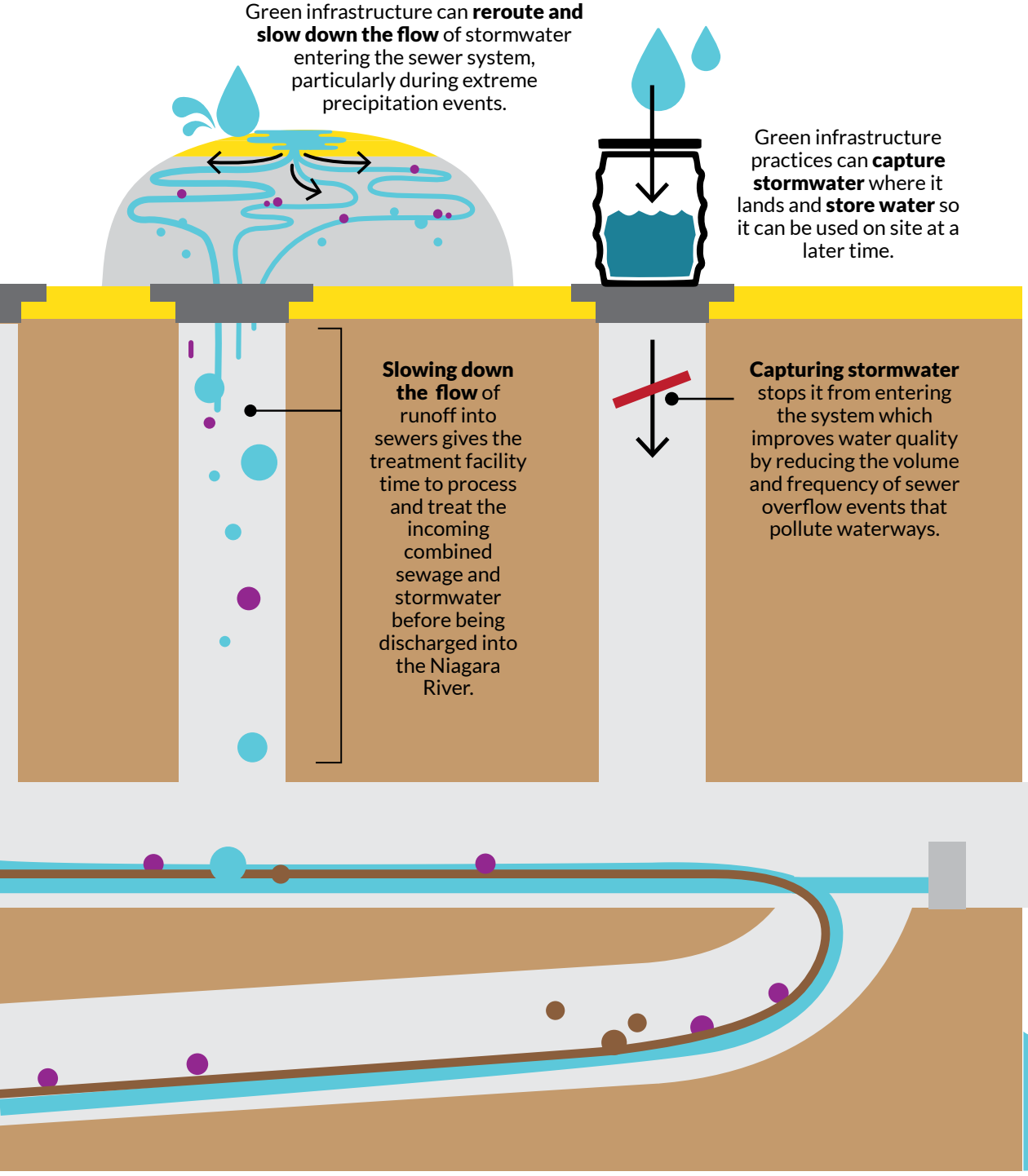


Green infrastructure diverts stormwater

Green infrastructure can **reroute and slow down the flow** of stormwater entering the sewer system, particularly during extreme precipitation events.

Green infrastructure captures and stores stormwater

Green infrastructure practices can **capture stormwater** where it lands and **store water** so it can be used on site at a later time.

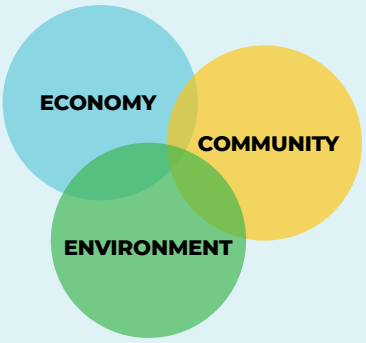


Slowing down the flow of runoff into sewers gives the treatment facility time to process and treat the incoming combined sewage and stormwater before being discharged into the Niagara River.

Capturing stormwater stops it from entering the system which improves water quality by reducing the volume and frequency of sewer overflow events that pollute waterways.

By **absorbing** and **capturing** rain and snowmelt where it lands, or temporarily **diverting** water before releasing it into the sewer system, green infrastructure can reduce sewer overflow events and keep our waterways clean and healthy.

Benefits of green infrastructure beyond the stormwater challenge



Because green infrastructure investments are above ground for all to see, they can offer unique benefits to our environment, economy, and community.

Offers public and private cost savings

Compared to gray infrastructure, the costs of installing and maintaining green infrastructure are often lower, which saves local governments, private developers, and taxpayers money. Some green infrastructure strategies allow property owners, especially households, to cut down on water usage and save money on energy bills.

Directs public investment into neighborhoods

Unlike conventional stormwater infrastructure, green infrastructure directs public investments above ground and in neighborhood spaces across the city. Neighborhood greening initiatives in underinvested communities are an important strategy to reverse historical legacies of disinvestment.

Re-greens urban areas

By replacing underused or vacant land with plants, trees, and gardens, green infrastructure incorporates natural elements into urban environments. These natural areas provide vegetation and soils that can help reduce air temperatures, purify the air, and provide habitat for wildlife.

Enhances community aesthetics

Green infrastructure features improve the local aesthetics of a community. When incorporated into neighborhood business districts or major transportation corridors, green infrastructure can help beautify and revitalize areas, making them more attractive to private investment.

Supports public health and recreation

By improving pathways, creating places to gather, and providing shade during warm weather, trees and other green spaces promote active, healthy lifestyles and recreation. As part of compact development strategies, green infrastructure supports walkable communities and helps cultivate a strong sense of place and well-being.

Improves public safety

Green infrastructure features can support public safety by enhancing traffic calming measures like bump outs and bike lanes that make streets safer for pedestrians and bicyclists. Some green infrastructure strategies also remove hazardous structures and green vacant lots, which can create a sense of place and improve neighborhood safety.

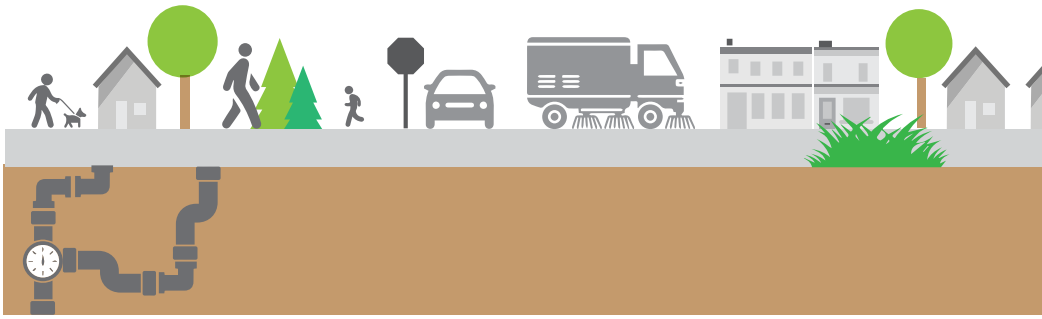
Cultivates public education and engagement opportunities

Green infrastructure is above ground, allowing people to see and touch installations in their communities and creating unique opportunities to develop public awareness around the importance of sustainable water management. The installation and management of green infrastructure projects thrive on community participation and partnership, with many opportunities to include residents, property owners, community groups, and neighborhood volunteers in the development process.

Creates green job opportunities

Implementing green infrastructure creates a wide variety of green job opportunities. Each project involves a range of design professionals, community engagement specialists, project managers, construction workers and maintenance teams. Through agency leadership, professional and workforce training programs, and first source and minority hiring programs, the green infrastructure job ladder can eliminate barriers for under-represented community members and actively support an equitable and inclusive green infrastructure workforce.

The ways Buffalo keeps the stormwater challenge in check



Buffalo keeps the stormwater challenge in check in many ways. Some are "smart" and gray, others are green. All are designed to promote healthy waterways.

Tackling the problem underground with pipes, pumps, and "smart" sensors.

Pipes, pumps, and gray, underground infrastructure are the foundation of how we collect wastewater from local homes and businesses. They also collect stormwater from the 18,000 storm drains maintained by Buffalo Sewer across the city. On days with minimal or no rain or snowmelt, this system filters out wastewater and pollutants from water before it gets deposited back into our waterways.

Contemporary gray infrastructure investments can fix compromised pipes or modernize older technology so that it performs at a higher level. Increasingly, Buffalo Sewer is looking at "Real Time Control" measures to maximize sewer performance and minimize how much untreated water goes directly into our water bodies. Using sensors, this "smart" technology can tell what parts of the system will be under the most stress during a rain or snowmelt event, and divert waste and stormwater, "in real time," to parts of the system that will be less stressed.

Getting pollutants off our streets so they never enter our sewer systems and waterways.

Preventing pollutants from entering our waterways is a lot cheaper and more effective than treating and cleaning contaminated water. In maintaining streets and parks, Buffalo uses various "best management practices" to keep the stormwater challenge in check. The Department of Public Works, Parks & Streets regularly sweeps and vacuums city streets to keep all sorts of pollutants (road salt, oil and grease, pet waste, etc.) out of the sewer system and away from our waterways. City departments also refrain from using pesticides in maintaining green space and parks. This makes our parks healthier places for residents and keeps these materials out of our streams and sewer system.

GREEN INFRASTRUCTURE AT WORK

Incorporating practices that protect, restore, and maintain our natural areas.

Protecting and maintaining our natural areas includes investments in our parks, trees, and shoreline areas. Buffalo boasts more than 150 parks, most of which are covered in grass or vegetation that can soak up rain and snowmelt. Throughout our streets, public spaces, and parks are well over 150,000 trees, estimated to keep more than 42 million gallons of stormwater out of the sewer each year. Shoreline restoration projects, like the Scajaquada Creek restoration project at Forest Lawn Cemetery, construct wetlands and buffers to filter and slow water from rain or snowmelt before it enters waterways.

Creating policies and regulations that require private development to minimize the amount of water that runs off their buildings and land.

The 2017 debut of the Buffalo Green Code replaced a fifty year-old, outdated planning framework, with a modern set of policies, regulations and design guidelines. The Green Code helps check the stormwater challenge by: requiring on-site stormwater management for all new development greater than 1/4 acre (including most parking lots); prioritizing compact development and open space that minimizes impervious surfaces; and encouraging landscaping, innovative paving materials, and water collecting technology like rain barrels, gardens, and cisterns.

RAINCHECK PROGRAM 1.0

Removing impervious surfaces through demolition.

As a strategy to remove blight and enhance the health and safety of our neighborhoods, Buffalo implemented a comprehensive **demolition program** that removed over 6,600 abandoned residential and commercial structures between 2001 and 2017. In many cases, demolitions replace impervious surfaces (buildings and driveways) with vacant lots that soak up water where it falls.

Making targeted changes to the built environment that mimic the natural water cycle.

Roadways, parking lots, and rooftops are the highest runoff sites in our city. Buffalo has implemented a range of projects and programs targeted at these areas, including a **residential rain barrel and downspout disconnection program**; integrating water absorbing elements, like **rain gardens**, into **streetscape projects**; and retrofitting neighborhood **parking areas** with special materials and designs that collect and soak up rain and snowmelt.

How green infrastructure became part of Buffalo's stormwater solution

Gray Approach 2004-2008

Gray Meets Green 2008-2014

Buffalo Sewer explores green infrastructure solutions with support from local partners and national peers. The work starts with a series of green infrastructure projects that engage and educate citizens on green approaches and the stormwater challenge.

2004

Buffalo Sewer submits ***draft Long-Term Control Plan (LTCP)*** *for state/federal agency review. Plan includes only gray infrastructure solutions.*

2007

August 2007, Mayor Byron W. Brown announces large scale multi-year plan to remove blighted structures.

2009

Buffalo Sewer begins "smart" sewer program evaluation focusing on capacity opportunities throughout sewer system.

2010

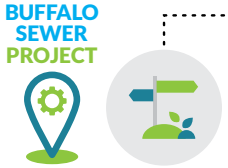
Downspout disconnection pilot project: *Buffalo Sewer launches project in Old First Ward (later Hamlin Park and Elmwood Village), partners with* ***Buffalo Niagara Waterkeeper*** *to conduct community outreach.*

Green infrastructure feasibility study: Buffalo Niagara Waterkeeper *received funding support from* ***Community Foundation for Greater Buffalo*** *and the* ***John R. Oishei Foundation****. Supported by Buffalo Sewer, the study calls for a mix of gray and green infrastructure solutions, the creation of a citywide green infrastructure program.*

2011

Buffalo Sewer's ***first green street project supported by NYS Environmental Facilities Corp. (EFC):*** *Work begins on*

Claremont Ave
Clarendon Pl
Elmwood Ave
Parkdale Ave
Windsor Ave



2012

Buffalo Sewer conducts ***community outreach meetings and focus groups*** *to inform development of LTCP. Community expresses interest in green infrastructure solutions.*

Buffalo Sewer submits ***updated draft LTCP*** *for state, federal agency review,* ***including green infrastructure*** *options.*

2004 2005 2006 2007 2008 2009 2010 2011 2012

Gray and Green make it official 2014

10 years after draft LTCP with no green options, Buffalo Sewer finalizes with "smart + green" options.

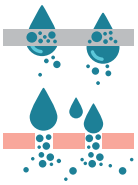
Green approaches scale up 2015-Present

With a finalized "smart + green" Long Term Control Plan, Buffalo Sewer and the City launch new projects around parking lots and vacant lots. Work is scaled up with a citywide downspout disconnection and rain barrel program and the completion of several major complete green street projects. New partnerships expand to make green infrastructure approaches grow.

2013

Buffalo Sewer and the City *partner with* ***PUSH Buffalo*** *on green vacant lots in the West Side.*

Buffalo Sewer and City *construct* ***Carlton St project*** *including porous asphalt. Work on* ***Ardmore Place*** *reveals brick under the asphalt, creating an opportunity to restore the historic street and make it a green at the same time.*



BUFFALO SEWER PROJECT

2014

Buffalo Sewer *finalizes LTCP, includes the first generation of green infrastructure projects, with focus on* ***green streets, green demolitions and vacant lots****.*

LTCP is approved by NYSDEC and EPA.

Buffalo Sewer and the City *construct Fillmore Ave project and introduce green parking lots to the East Side.*

2015

Rain Check: ***Buffalo Sewer*** *partners with* ***Community Foundation for Greater Buffalo*** *to secure a national Partners for Places grant, also coordinates with* ***Buffalo Niagara Waterkeeper*** *and* ***PUSH Buffalo*** *on community outreach and program implementation.*

Post demolition green infrastructure pilot study: ***Buffalo Sewer*** *receives funding through* ***NYS EFC*** *and awards a contract to* ***Buffalo Neighborhood Stabilization Corporation*** *to provide on-site training and technical assistance for the study.*

RENEW Fellows: ***Buffalo Sewer*** *and City partner with* ***UB RENEW Institute*** *to establish fellowship program, and receives technical assistance for green infrastructure program.*

Ohio St *green street completed.*

SCALING UP

2016

Buffalo Common Council *adopts* ***Buffalo Green Code****, updated city zoning ordinance that includes on-site stormwater management requirements for all new development.*

Kenmore Ave *green street completed.*

SCALING UP

2017

Buffalo Sewer and the City *install* ***green parking lots at JFK and Pratt Willert Community Centers****.*
Buffalo Sewer *partners with* ***Community Action Organization*** *on youth green infrastructure education program.*

Niagara St *Gateway Project Phase 1 completed.*

Genesee St *green street completed.*

SCALING UP

2018

Buffalo Sewer and the City *partner with* ***Ralph C. Wilson Foundation and Community Foundation for Greater Buffalo*** *to launch Rain Check 2.0, second generation of green infrastructure projects with focus on expanded engagement and partnerships.*

RAINCHECK

SCALING UP

2013 2014 2015 2016 2017 2018 2034

Buffalo Sewer's Long Term Control Plan, with "smart + green" options, sets the stage for green infrastructure investments through 2034.

Rain Check 1.0 strategies in Buffalo

pg. 28

The first generation of public green infrastructure investments

RAINCHECK

Rain Check 1.0 marked the first generation of green infrastructure in Buffalo. The program tackled the stormwater challenge through four distinct strategies–**green streets**, **green parking lots**, **demolitions and vacant lot restoration**, and **rain barrels and downspout disconnections**. Each project completed in Rain Check 1.0 tells a unique story of how collaborative efforts to reduce stormwater runoff with green infrastructure bring broader benefits to the city, like beautifying neighborhoods, improving safety, cutting public costs, creating jobs, and engaging the community. Through this work, Buffalo Sewer built partnerships and learned practical lessons that can help maximize the future impacts of the next phase of green infrastructure in Buffalo.

pg. 30

Green Streets

pg. 44

Green Parking Lots

pg. 56

Demolitions and Vacant Lot Restoration

pg. 68

Rain Barrels and Downspout Disconnections

For each Rain Check strategy, you'll find:

Keeping the stormwater challenge in check

Where the approach works in Buffalo

How do we benefit from the approach

Case Study Examples

RAINCHECK

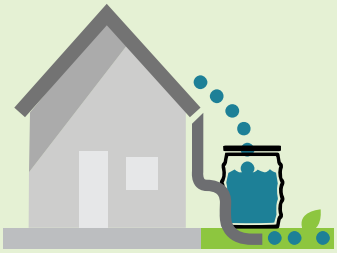
The First Generation of Public Green Infrastructure Investments

The first generation of Rain Check projects focused on four key strategies...

Green Streets

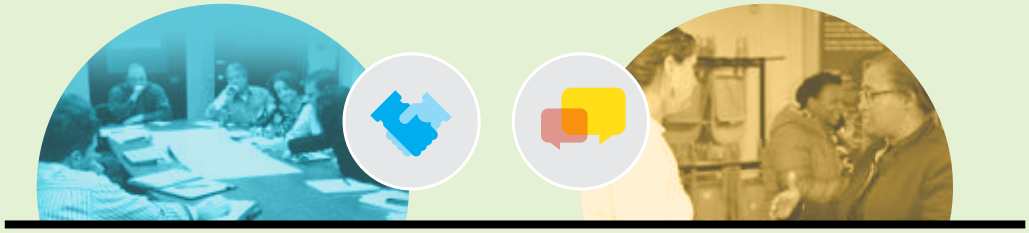
Green Parking Lots

Demolitions and Vacant Lot Restoration



Rain Barrels and Downspout Disconnections

...shaped through collaboration with governmental and community partners...



...and designed to tackle the stormwater challenge and offer added benefits to Buffalo.

Collectively, these four strategies enabled Buffalo Sewer to make an impact on the stormwater challenge, build partnerships necessary to make green infrastructure projects happen, and gain perspective on how to grow and fine-tune green infrastructure in Buffalo for the future.

Green Streets

Green streets bring **water-friendly landscapes into larger streetscape projects**. They introduce surfaces that absorb water and integrate special features that collect rain and snowmelt before they enter the sewer system. They also play a key role in transforming our commercial corridors and neighborhood streets to benefit residents and businesses.

Green Parking Lots

Green parking lots provide neighborhood parking solutions with **designs specifically aimed at collecting and absorbing water** when it rains or snow melts. They can involve plantings and enhanced lot designs that help beautify neighborhoods while making lots safer and less prone to puddling.

Demolitions and Vacant Lot Restoration

Demolitions remove buildings and pavement from sites to protect public health and safety. Buffalo Sewer also explored new ways to **maximize the amount of water that vacant lots capture** when it rains or snow melts and worked with community partners to introduce rain gardens and other green infrastructure to vacant lots that help contribute to community character.

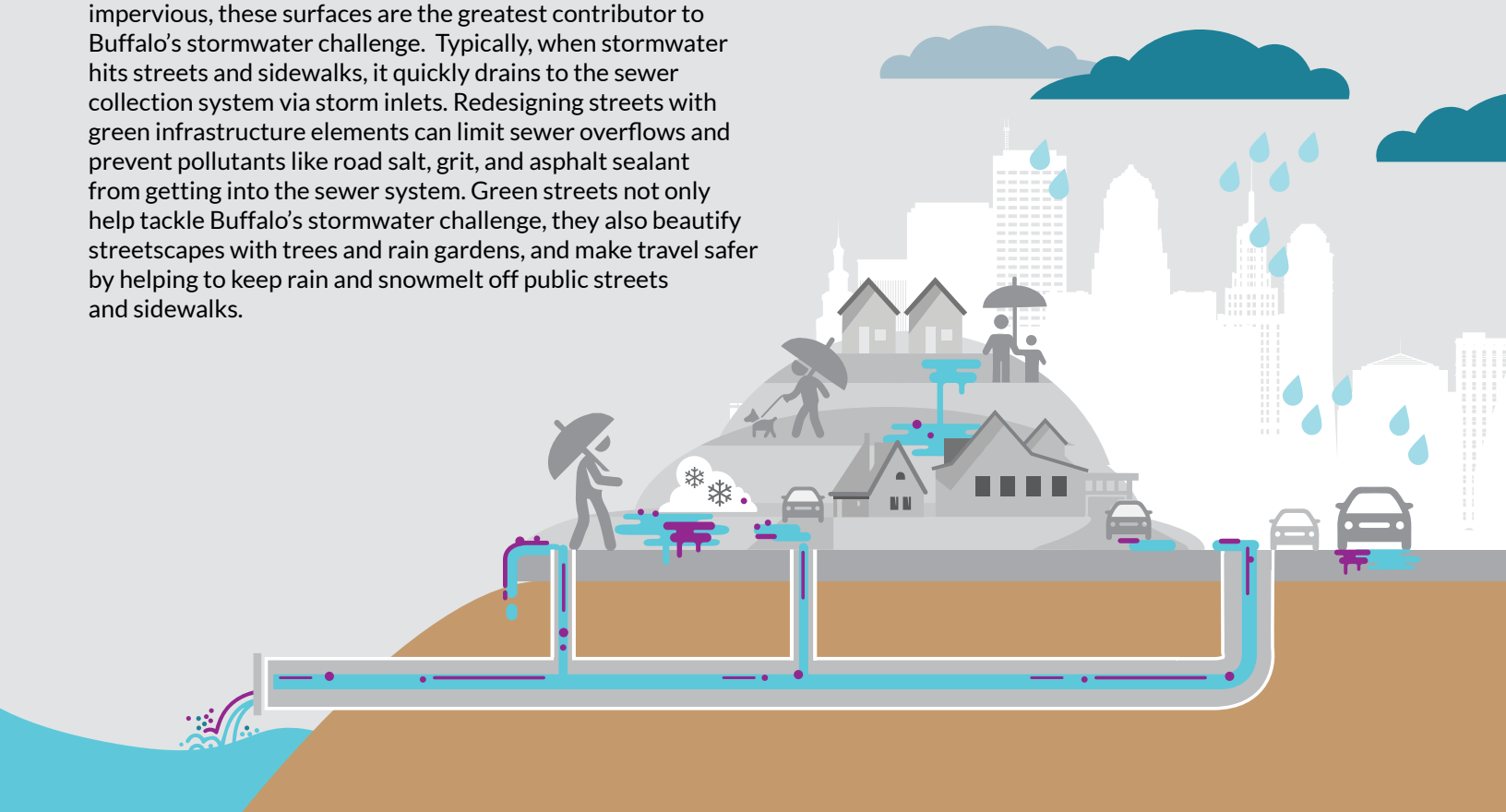
Rain Barrels and Downspout Disconnections

Rain barrels and downspout disconnections **allow residents and businesses to keep roof rain and snowmelt out of the sewer system**. They not only inform residents of the stormwater challenge facing our community, but also provide an easy, low-cost way for them to participate in green infrastructure solutions. They can also save money on water bills and keep stormwater away from foundations or basements.

Green streets involve features that manage stormwater and beautify neighborhoods.

Stormwater runoff from roads, sidewalks and other impervious surfaces can lead to sewer overflow events.

Roadways, driveway aprons, snow storage areas, and sidewalks represent a relatively small amount of our city's land area — around 17 percent.[4] But since almost all of this land is impervious, these surfaces are the greatest contributor to Buffalo's stormwater challenge. Typically, when stormwater hits streets and sidewalks, it quickly drains to the sewer collection system via storm inlets. Redesigning streets with green infrastructure elements can limit sewer overflows and prevent pollutants like road salt, grit, and asphalt sealant from getting into the sewer system. Green streets not only help tackle Buffalo's stormwater challenge, they also beautify streetscapes with trees and rain gardens, and make travel safer by helping to keep rain and snowmelt off public streets and sidewalks.



Keeping the stormwater challenge in check

Green Infrastructure Approaches

De-Paving

Reducing the amount of paved surfaces on streets or sidewalk areas offer more green space to absorb water, keeping it out of the sewer system.

Porous Pavement

Porous pavement gives rain and snowmelt a place to go rather than the storm inlets on the sides of curbs. Water absorbs through the pavement and into the underlying soil.

Brick/ Cobblestone Restoration

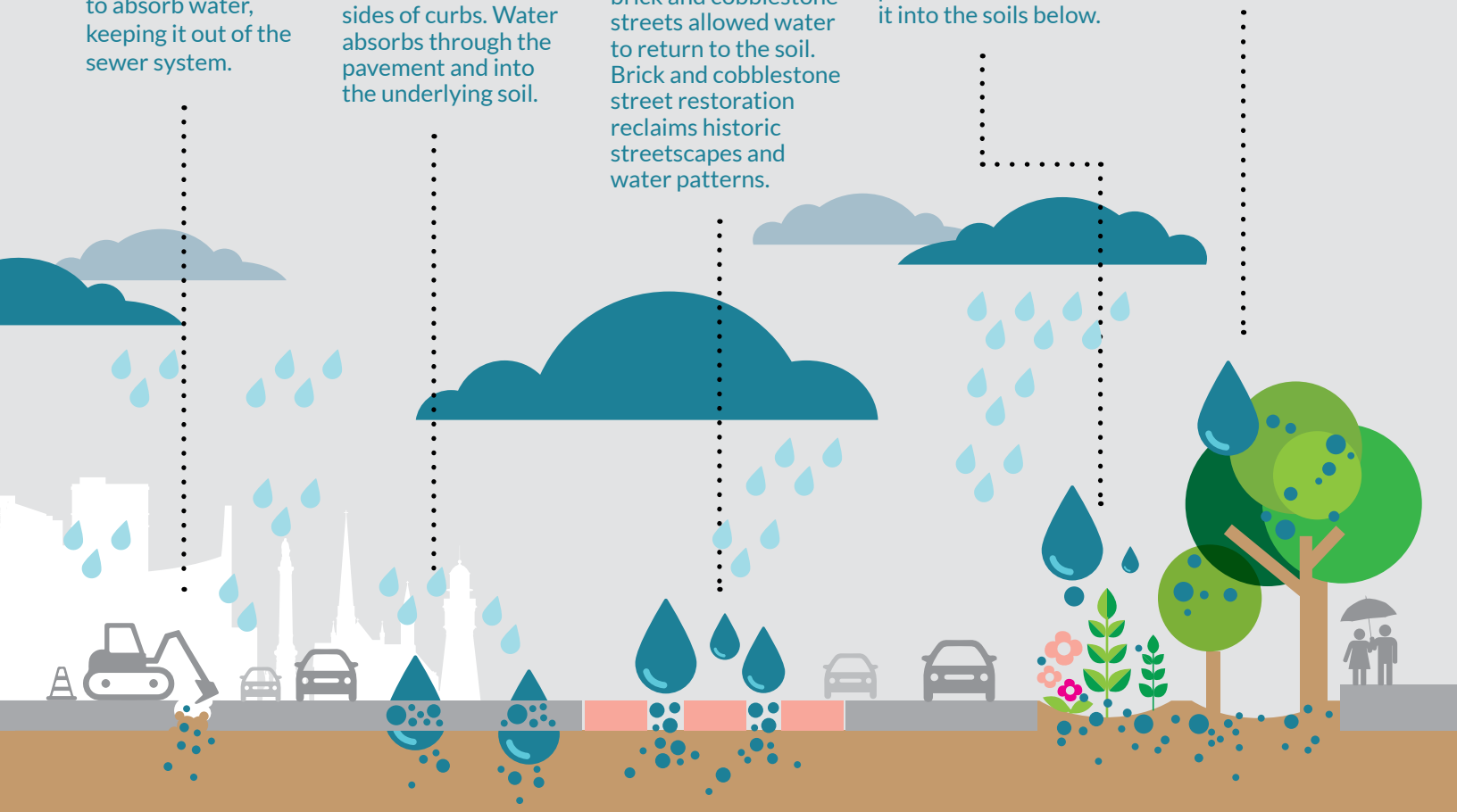
Before the widespread use of asphalt, Buffalo's brick and cobblestone streets allowed water to return to the soil. Brick and cobblestone street restoration reclaims historic streetscapes and water patterns.

Rain Gardens

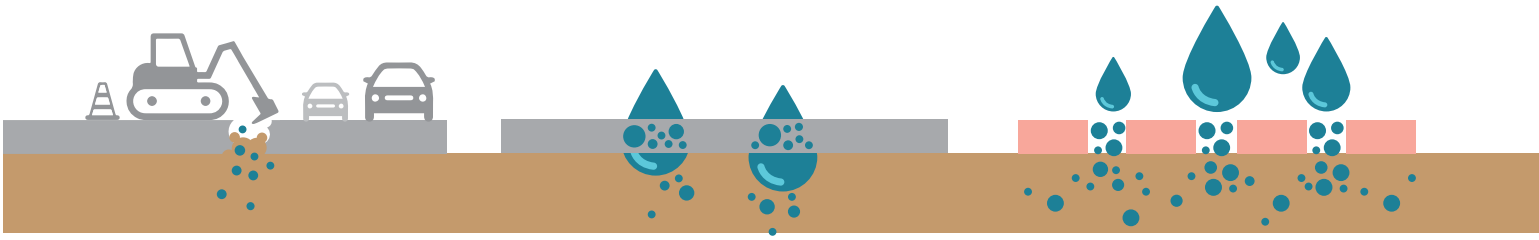
These plant beds collect stormwater runoff from street and sidewalk pavement and absorb it into the soils below.

Street Trees

Trees capture and store rain in their leaves and roots and release it into the atmosphere.



Where **green street** approaches work in Buffalo



De-Paving

De-paving is a good fit in street reconstruction projects aimed at slowing traffic and reducing the number of travel lanes through road diets. Areas where paved surfaces are removed can also offer opportunities to add other green infrastructure, like street trees or rain gardens. Examples of recent road diets include the work on Ohio Street, Pearl Street, and William Street.

Pearl Street between Edward Street and West Tupper Street, where the paved surface between curbs was reduced from approximately 50 feet to 30 feet.

Porous Pavement

Where roadway width must be preserved to accommodate vehicle travel, bicycle travel lanes and parking, porous paving may be employed to control stormwater on site. To date, porous asphalt has been used on streets, bike lanes/paths, and in parking lanes. Examples of porous pavement projects include Kenmore Avenue, Clarendon Place, Carlton Street, Claremont Avenue, and William Street.

Carlton Street in the Fruit Belt neighborhood adjacent to the Buffalo Niagara Medical Campus.

Brick/Cobblestone Restoration

Buffalo is estimated to have more than two dozen cobblestone streets and nearly 100 brick streets, though many of these have been covered by asphalt over time.[5] When these streets are scheduled for a typical "mill and overlay" repaving treatment, there may be an opportunity to restore these streets as porous systems that limit stormwater runoff into sewers.

Ardmore Place on the city's West Side was able to be restored as a historic brick street in response to residents' requests for restoration and traffic calming.

Rain Gardens

Rain gardens are often a good fit where changes are made to sidewalks or the area between sidewalks and the street. As is the case with almost all green infrastructure, rain gardens should be placed where they can intercept the most stormwater runoff while avoiding utility lines, building vaults, and foundations. Since rain gardens require regular maintenance, planning for their continual upkeep is also an important placement consideration.

Rain gardens installed along Genesee Street helped transform the major corridor into a welcoming gateway from the city's East Side to downtown Buffalo.

Street Trees

There are more than 47,000 suitable locations to plant street trees in the City of Buffalo, according to the 2003 City of Buffalo Urban Forest Master Plan.[6] Trees proven to offer the greatest benefits to stormwater include the London planetree, and pin oak.[7] The City of Buffalo's Division of Parks and Recreation has established street tree planting standards for evaluating proposed planting sites and guiding decisions on exactly where and what to plant.

More than 270 trees were planted along Ohio Street, contributing to the corridor's changing character and helping to meet the stormwater challenge.

How do we benefit from constructing **green streets** across Buffalo?

101.5 acres
managed for stormwater

15.9 acres
of impervious surfaces reduced

Keeping the stormwater challenge in check

Green street projects initiated between 2013-2017 manage runoff for **101.5 acres** of the city, an area the size of 44 city blocks.

Green street projects use a variety of approaches, including replacing nearly **16 acres** of asphalt and concrete with plantings and other materials that absorb water.

These investments have the potential to keep **1,908,045 gallons** of water out of our sewer system when it rains or snow melts. That's enough water to fill 180 NHL ice rinks.

1,908,045

gallons of runoff prevented from entering the sewer system in a typical rainfall event.

Calculations by Buffalo Sewer. For details on methodology and assumptions, see Appendix.

Benefits beyond the stormwater challenge

Reinforces our Complete Streets policy
Integrating green infrastructure into larger streetscape enhancement projects helps Buffalo implement its Complete Streets ordinance, which requires that when a roadway is constructed or repaired, equal consideration is given to travelers of all kinds — including bicyclists, pedestrians, public transportation users, children, people pushing baby strollers and people with disabilities.

Revitalizes neighborhoods and promotes safety
Some elements that make for a good complete street can be addressed with investments that also control stormwater runoff. For example, rain gardens and trees can contribute to beautification efforts and make streets more inviting to small businesses and foot traffic. Road diets and brick street restorations can better manage automobile traffic, while making it safer and easier for people to cross the street.

Offers cost savings
By integrating green infrastructure into complete street projects, overall cost savings can be achieved as it allows projects to draw on multiple funding sources and shared project management resources for the design and construction of projects.

More than 9 miles of green streets across Buffalo

are helping us meet our stormwater challenge

Building upon the adoption of a Complete Streets ordinance in 2008, the City of Buffalo proposed a system of complete, green streets that connect key areas and developments including downtown, waterfronts, urban parkways, historic neighborhoods and commercial corridors through a variety of transportation options. These projects draw on a variety of green street approaches and help to address stormwater and quality of life concerns on residential streets and large commercial corridors.

1. Kenmore Avenue
2. Parkdale Avenue
3. Claremont Avenue
4. Elmwood Avenue
5. Windsor Avenue
6. Clarendon Place
7. Ardmore Place
8. Niagara Street (Phase 3&4)
9. Northland Avenue
10. Carlton Street
11. Niagara Street (Phase 1&2)
12. Pearl Street
13. Genesee Street
14. William Street
15. Ohio Street

● Completed ● In Progress

CASE STUDY

Niagara Street

Creating a green gateway along the Niagara River

Niagara Street is one of the city's major commercial corridors, a highly utilized public transit route, a growing target for private investment, a rising employment hub, and a gateway to downtown. The street runs parallel to the Niagara River, but is disconnected from the water in terms of access and views. The Niagara Street corridor is home to diverse communities, all of which contribute to the heritage and culture of the city. The street is also known as "Avenida San Juan," serving as the city's Hispanic Heritage Corridor between Porter Avenue and Georgia Street. As a signature corridor of Buffalo, Niagara Street is being transformed from a high-speed thoroughfare for automobiles into a scenic, waterfront boulevard that is safe and welcoming for pedestrians and bicyclists.

Community Partnerships

The Niagara Street project involved many partners, including Buffalo Sewer, the City of Buffalo Department of Public Works, Parks & Streets, and design and community engagement consultants. Extensive community engagement was a key focus of the project, grounding the street redesign in community values and educating stakeholders on potential green infrastructure elements. The process engaged more than 600 residents, business owners, and stakeholders, representing diverse voices and perspectives from along the corridor. Highlights included a door-to-door community survey made available in English, Spanish, Somali, Nepali, Burmese, and Karen; several interactive, hands-on, public workshops; and targeted stakeholder meetings with business owners, community groups, and block clubs from nearby neighborhoods.

Keeping the stormwater challenge in check with green infrastructure on Niagara Street

2.1 acres of impervious surfaces removed

46 bump outs

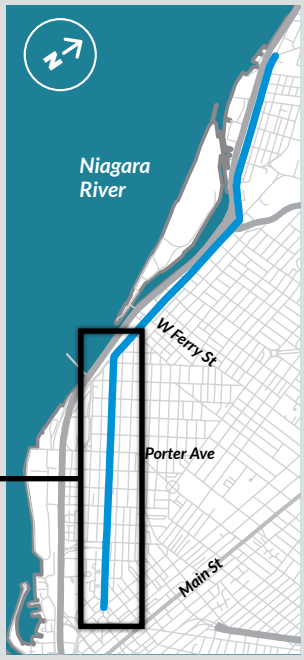
255 rain gardens planted

574 trees planted

These investments on Niagara Street manage stormwater for 30.9 acres of the city.

612,934

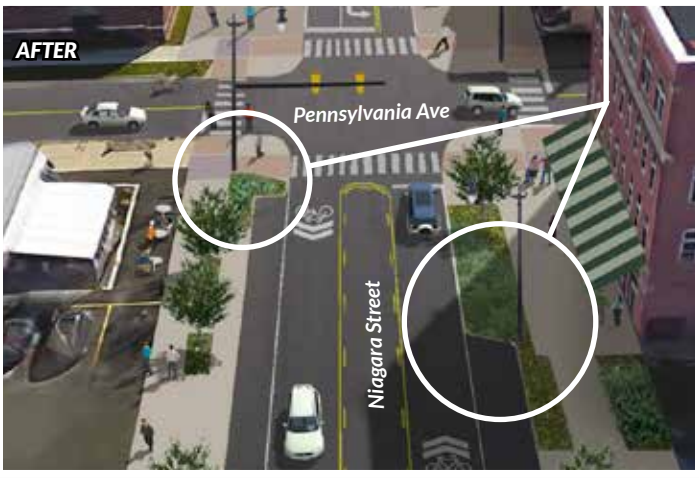
gallons of runoff prevented from entering the sewer system in a typical rainfall event.



Green Infrastructure on Niagara Street

The Niagara Street reconstruction project is a multi-phased redesign of the street from Niagara Square in downtown up to Ontario Street in Riverside/Black Rock. The project stands out as the longest green street in the city. Through a combination of green infrastructure elements including bump outs, rain gardens, and impervious surface reduction, the project reduces the stormwater volumes flowing to Buffalo's combined sewer system where the overflow discharges directly to the Niagara River. The initial phases of the project focused on the lower portion of the street, from Niagara Square to Porter Avenue.

Reducing impervious pavement and installing trees and green spaces allows for water to be captured before it enters the street and sewer system. Curb bump outs and bike lanes make the street safer for pedestrians and bicyclists.



CASE STUDY

Ardmore Place

Uncovering a historic brick street on the city's West Side

Ardmore Place is a quaint residential street on the city's West Side, stretching just one block between Baynes Street and Richmond Avenue. The narrow tree-lined street features large multi-story homes, most of which were built in the early 20th century and have historic charm. At the west end of the street is Lafayette International High School, a large stone, brick, and terra-cotta building in the French Renaissance Revival style and one of the oldest public schools in the city. Ardmore is also home to one of the city's numerous brick and cobblestone streets. Workers laid the bricks on Ardmore more than a century ago, but they were covered with layers of asphalt and blacktop for decades. During a typical street resurfacing project in 2013, neighbors noticed the bricks beneath the pavement and advocated for their restoration. The original brick street offers benefits that asphalt pavement does not—it gives the street a charming, historic appearance that contributes to a distinct community character; it slows vehicles making the street safer for pedestrians; plus, it lets rain and snowmelt seep into the ground rather than running off into the sewer system.

Community Partnerships

The Ardmore Place Block Club drove the effort by getting neighborhood residents to band together to petition the City's Department of Public Works, Parks & Streets to restore the brick street, rather than repave it with asphalt—and the City listened, partnering with Buffalo Sewer to carry out the restoration project. The effort to restore the brick surface was a unifying force for the community, as residents banded together to appeal to local government officials for the restoration.

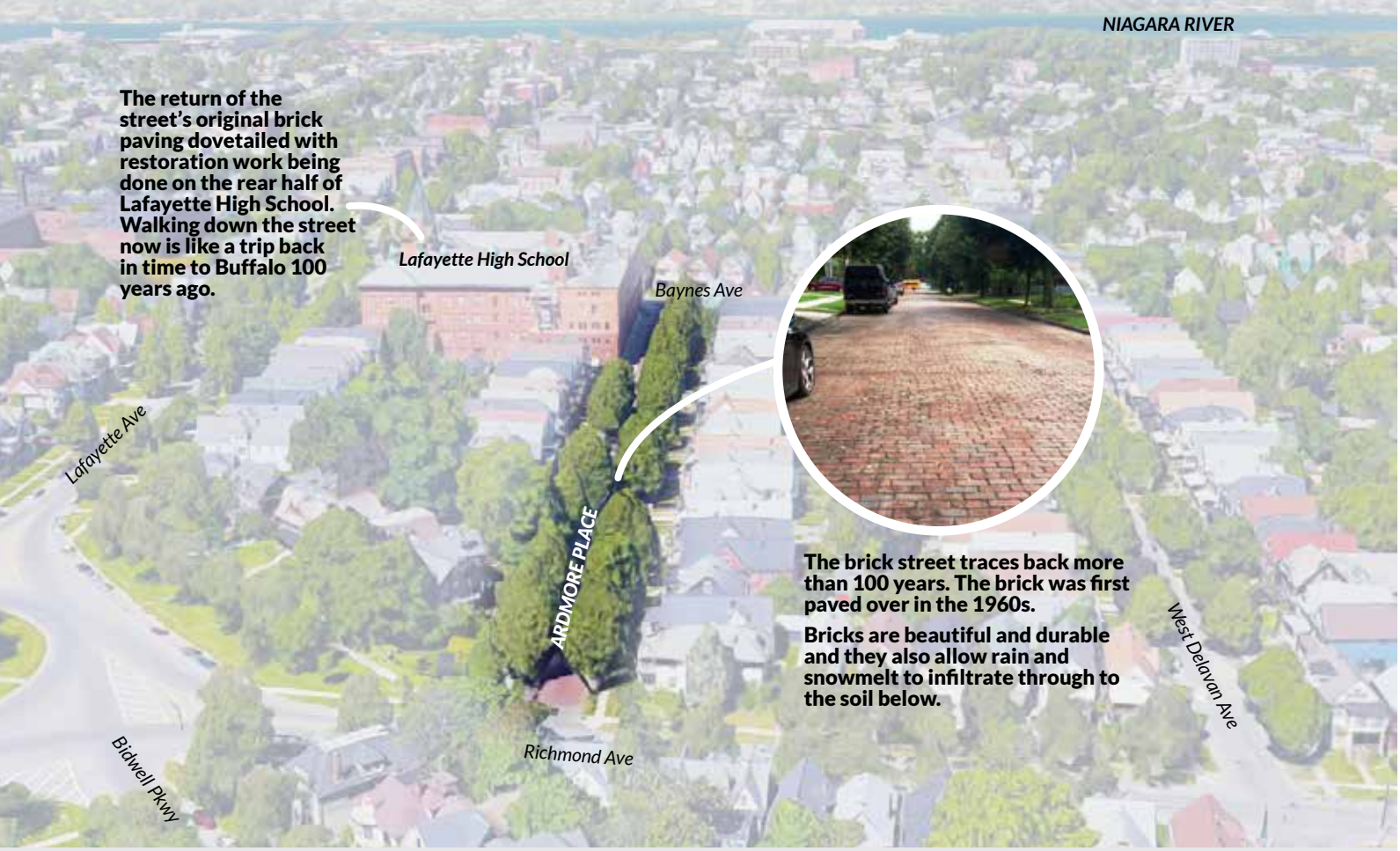
Keeping the stormwater challenge in check with green infrastructure on Ardmore Place

0.7 acres of impervious surfaces removed

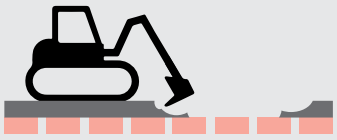
These investments on Ardmore Place manage stormwater for 1.4 acres of the City.

11,973

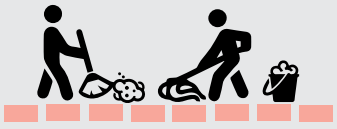
gallons of runoff prevented from entering the sewer system in a typical rainfall event.



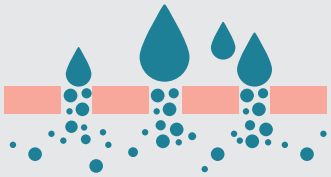
Green Infrastructure on Ardmore Place



In preparation for a street resurfacing project in 2013, City of Buffalo crews began removing asphalt from Ardmore Place and uncovered an intact brick street underneath. Buffalo Sewer partnered with the City to transform the project from a mere repaving job to a brick street restoration.



The effort to restore the brick surface brought together neighbors to advocate for the restoration. Residents joined together to chip away at the asphalt and hose down the weathered bricks.



Uncovering the bricks from this 0.2 mile-long street removes nearly 12,000 gallons of stormwater from entering sewers in a typical rainfall event.

CASE STUDY

Ohio Street

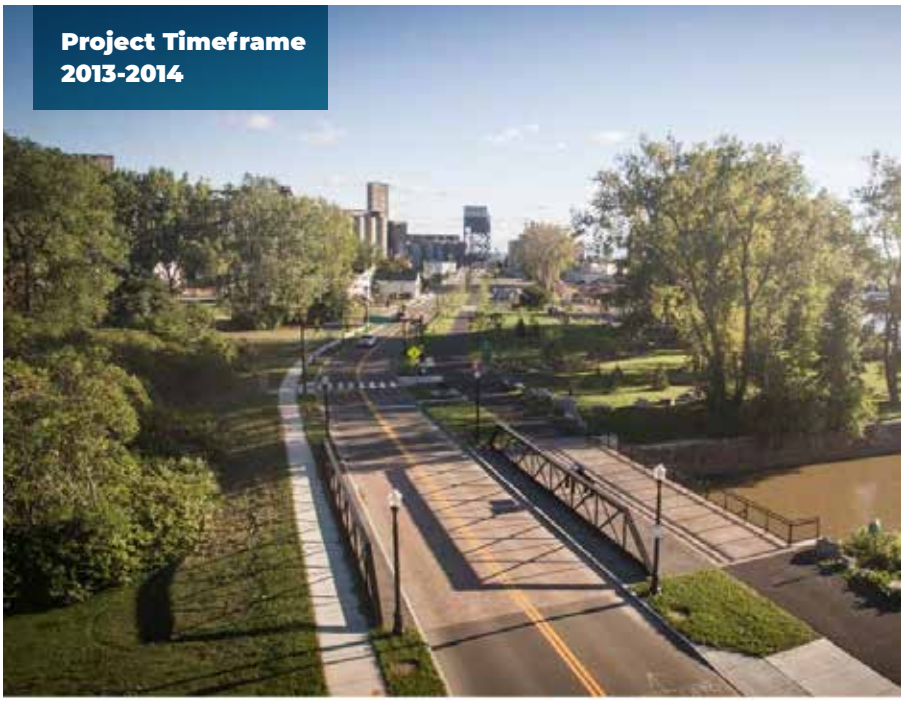
Transforming an industrial corridor into a tree-lined waterfront parkway

Located southeast of the central business district on the edge of the industrial waterfront areas, Ohio Street was a key site in the city's industrial development. Industries developed along the Buffalo River, transforming the city into a manufacturing center during the 19th century. Today, Ohio Street is one of the major connectors between the city's inner and outer harbors, playing an important role in the revitalization of Buffalo's waterfront. The Ohio Street corridor links major activity centers including Canalside, the Cobblestone District in the Inner Harbor, Gallagher Beach, Wilkeson Point, and Buffalo Harbor Park in the Outer Harbor. The area is also home to the historic Old First Ward neighborhood, first settled in the 19th century by Irish immigrants who worked in the industries that lined the Buffalo River. Many current residents are of Irish descent and every year the neighborhood hosts the "Old Neighborhood" St. Patrick's Day Parade. The recent conversion of Ohio Street into a waterfront parkway helps link local neighborhoods and residents to the transformation happening along the waterfront.

Community Partnerships

The Ohio Street project included a wide range of partners and community collaborations led by the City of Buffalo and Erie Canal Harbor Development Corporation. Buffalo Sewer, City of Buffalo Department of Public Works, Parks & Streets, and NYS Department of Environmental Conservation were all involved in the design of green infrastructure for the project. Buffalo Sewer and project partners also collaborated with neighborhood organizations, including Old First Ward Community Center and Valley Community Association, Buffalo Niagara Waterkeeper, elected officials, and property and business owners as part of the planning and design process.

Project Timeframe
2013-2014



Keeping the stormwater challenge in check with green infrastructure on Ohio Street

3.2 acres of impervious surfaces removed

260 trees planted

These investments on Ohio Street manage stormwater for 12.7 acres of the City.

70,824

gallons of runoff prevented from entering the sewer system in a typical rainfall event.

Green Infrastructure on Ohio Street

The streetscape project transformed this underutilized, four-lane commercial roadway built for automobiles, into a complete street that makes travel safe and comfortable for pedestrians, bicyclists and transit riders. A central feature of the project was the reduction and re-allocation of travel lanes to provide space for a multi-use pathway and green infrastructure. A 12-foot-wide shared-use path and new parking lanes were installed with porous asphalt to reduce pressure on the sewer system during heavy rain or snowmelt events. Over 260 trees were also planted along the corridor to capture and store rain and snowmelt.

Road diet measures on Ohio Street reduced over 3.2 acres of impervious surface and allowed for a shared-use path to be built for pedestrians and bicyclists.

CASE STUDY

William Street

Celebrating local African American heritage in neighborhood spaces

Located just east of downtown Buffalo, the Willert Park neighborhood has historically been home to important African American businesses and cultural institutions. William Street is a prime corridor for the neighborhood that directly links it to downtown and the Michigan Avenue African American Heritage Corridor.

At the intersection of William Street and Michigan Avenue is Jesse Clipper Square, a pocket park featuring a memorial for African American veterans. A pink granite stone memorializes the sacrifice of Jesse Clipper, the first African American soldier from Buffalo to die in World War I. The memorial also pays tribute to other African Americans who served in World War II, the Korean War, and the Vietnam War. Today, Jesse Clipper Square is being expanded and enhanced with a new layout based on the original 1938 design from John Edmonston Brent (1889-1962), Buffalo's first African American architect who spent the majority of his career working in the city and is well-known for designing Buffalo's Michigan Avenue YMCA, a building that became a cultural center for the African American community in Buffalo.

Community Partnerships

Neighborhood residents and community groups were involved and engaged throughout the William Street project. Buffalo Sewer and its project team members, including engineers and landscape architects, participated with neighborhood residents in walking tours to identify where green infrastructure makes sense in the context of neighborhood conditions. The public also gave feedback in preliminary and final design updates. Public education on the uses and benefits of green infrastructure was a key component of this work.

Keeping the stormwater challenge in check with green infrastructure on William Street

1.3 acres of impervious surfaces removed

64 trees planted

0.66 acres of porous pavement added

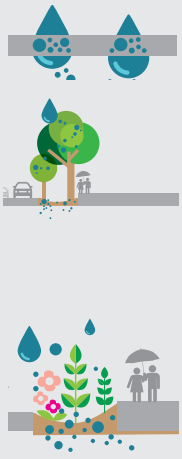
These investments on William Street manage the stormwater across 25.2 acres of the City.

284,357
gallons of runoff prevented from entering the sewer system in a typical rainfall event.

Expanding the roadway median from 15 feet to 38 feet removed 1.3 acres of impervious surfaces and allowed for Jesse Clipper Square to be expanded.

Green infrastructure on William Street

The ongoing William Street reconstruction project added several green infrastructure elements along William Street from Michigan to Jefferson Avenue. Porous pavement was installed in the parking lane on the north side of the street, and the median was widened with new trees and plantings featuring rain gardens to manage stormwater runoff from the street. Jesse Clipper Square at the corner of William and Michigan has been expanded and enhanced with a new layout based on the original 1938 design by John Brent, thanks to recent research that has uncovered significant contributions to architectural design and landscape architecture made by Brent in the city. Collectively, these green infrastructure elements promote infiltration of rain and snowmelt into the surrounding soils, provide temporary stormwater storage and improve water quality.



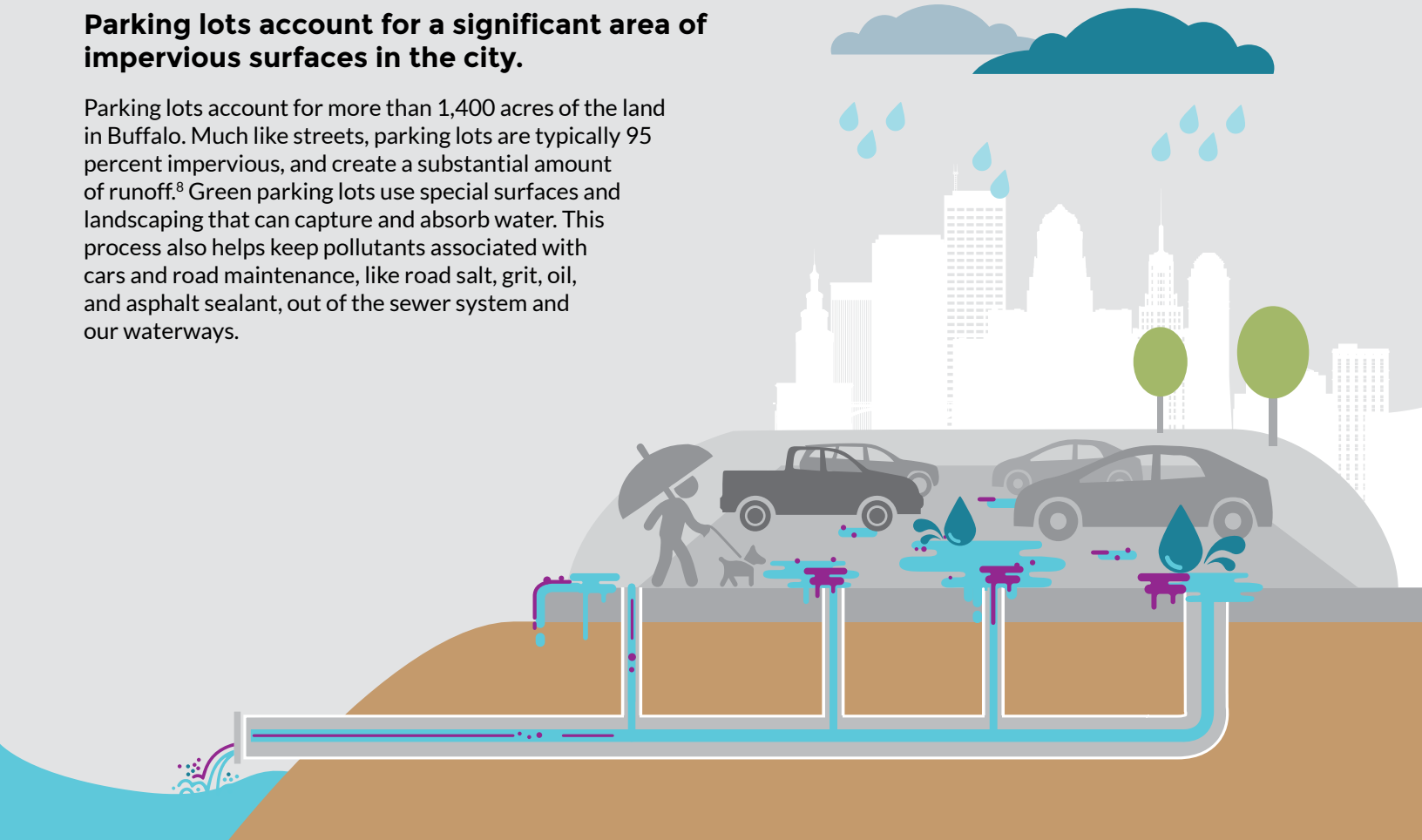
Drainage Area on William Street

The design of green infrastructure for this section of William Street was informed by the topography of the surrounding area. The residential streets that abut the north edge of William slope downward towards the street. Stormwater runs south along these streets and empties into sewer drains along the north edge of William. To reduce these stormwater flows into the sewer system, porous pavement was installed along the north parking lane of William.

Green parking lots use special materials and designs that collect and soak up rain and snowmelt.

Parking lots account for a significant area of impervious surfaces in the city.

Parking lots account for more than 1,400 acres of the land in Buffalo. Much like streets, parking lots are typically 95 percent impervious, and create a substantial amount of runoff.[8] Green parking lots use special surfaces and landscaping that can capture and absorb water. This process also helps keep pollutants associated with cars and road maintenance, like road salt, grit, oil, and asphalt sealant, out of the sewer system and our waterways.



Keeping the stormwater challenge in check

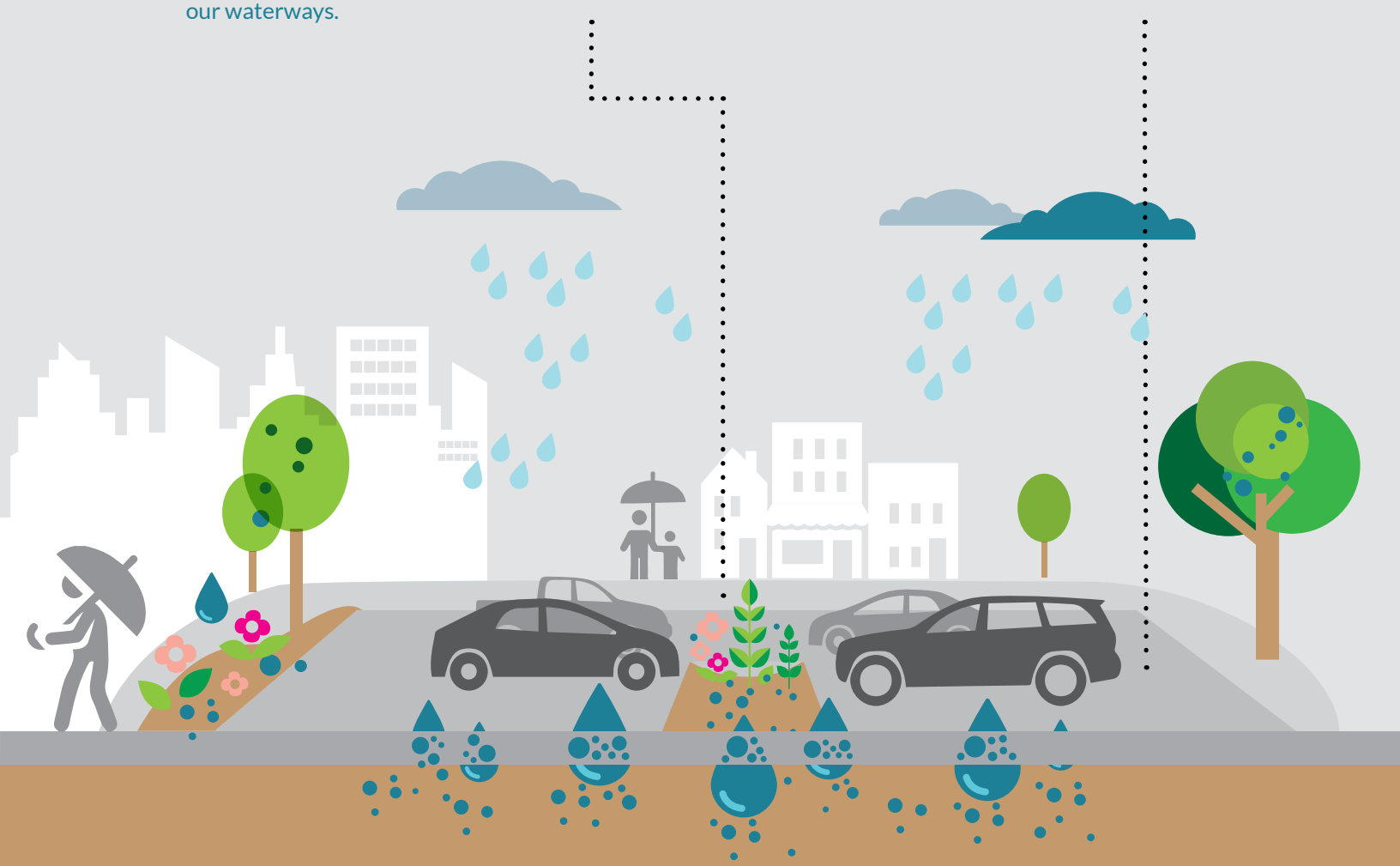
Green Infrastructure Approaches

Rain Gardens

These plant beds collect stormwater runoff from parking lots, streets and sidewalks, allowing rain and snowmelt to absorb into the ground rather than running off the lot and eventually reaching our waterways.

Porous Pavement

Porous pavement uses special types of street surfacing material, like porous asphalt, that allows rain and snowmelt to pass through the surface and flow into the ground.



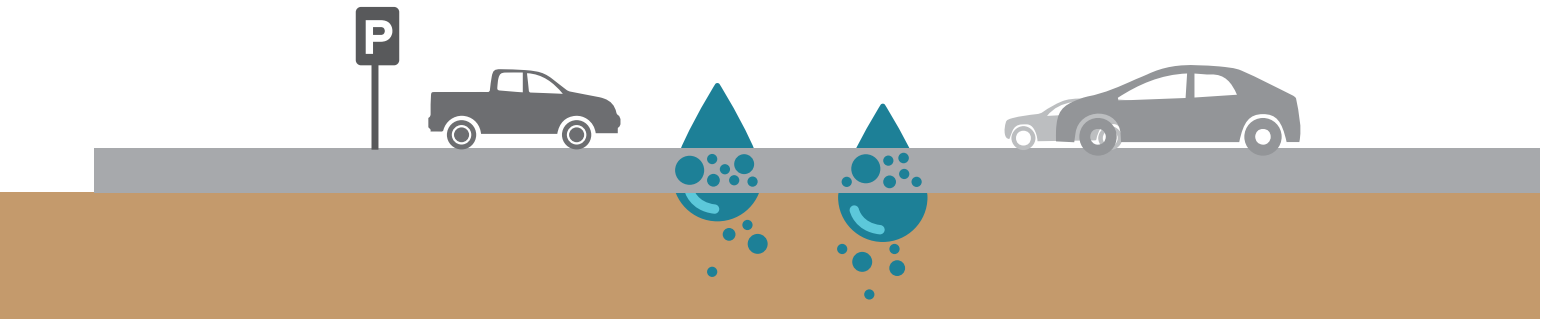
Where green parking lot approaches work in Buffalo

Rain Gardens

Rain gardens in parking lots can help screen cars, beautify properties, and meet Green Code landscaping requirements. They also provide attractive amenities or educational areas for building users. Siting requires careful analysis of site conditions to identify locations that will intercept stormwater runoff, while also avoiding building foundations and utilities. Selection of plants and soils for rain gardens may also consider native landscaping, aesthetic design, and maintenance requirements.

Green infrastructure design and construction activities at JFK Community Center on Hickory Street offered unique, hands-on opportunities to engage and educate youth on the benefits of green infrastructure in their communities.

Rain gardens in the parking lots at the Pratt Willert (top) and JFK Community Centers (bottom) provide attractive landscaping and stormwater management for the parking areas of the neighborhood recreation facilities.



Porous Pavement

Porous pavement is a good fit on large, uneven and sloping parking lots that direct high volumes of stormwater into sewers. Porous surfaces work best on lots with permeable underlying soils and deep bedrock that can absorb more stormwater. To avoid added excavation costs, clean soils are also key. As porous pavement is more susceptible to wear and tear from heavy vehicles, it can last longer on lots with less traffic, especially from commercial trucks.

During a rain or snowmelt event, porous pavement in the expanded parking area at North Buffalo Ice Rink absorbs water beneath the ground (on the left side of the image), while water puddles on the ground in the older asphalt parking area (on the right).

Two porous parking lots were created on City-owned vacant parcels as part of a Fillmore Avenue streetscape project.

How do we benefit from green parking lots across Buffalo?

6.8 acres
managed for stormwater

2.7 acres
of impervious surfaces reduced

Keeping the stormwater challenge in check

Across six green parking lot projects, green infrastructure investments manage stormwater runoff for 6.8 acres of the city—an area nearly the size of 3 city blocks.

These investments manage much of the surface area of the parking lots themselves, as well as some impervious area from adjacent buildings and nearby sidewalks and streets.

Additionally, through plantings, rain gardens, and porous pavement, these projects have replaced 2.7 acres of asphalt and concrete with materials that absorb water.

When it rains or snow melts, these parking lots keep 257,083 gallons of water out of sewers. That's enough water to do 6,400 loads of laundry.

257,083

gallons of runoff prevented from entering the sewer system in a typical rainfall event.

Calculations by Buffalo Sewer. For details on methodology and assumptions, see Appendix.

Benefits beyond the stormwater challenge

Supports parking solutions
Neighborhood commercial districts and recreation attractions often require parking solutions that are sensible and contribute to the overall character of their surroundings. Bringing green infrastructure resources to restore, expand or create new parking areas can enhance resident and visitor access to neighborhood businesses and destinations.

Creates "cooler" and nicer looking lots
Despite the necessity of parking, lots can detract from the vibrant, walkable nature of commercial corridors and contribute to the "urban heat island effect," which raises the air temperature and elevates smog in the summer. Green parking lots can better integrate parking facilities into a community's character, and provide for a more pleasant atmosphere. Plantings, trees, and shrubs, placed around parking lot edges can serve as screens for pedestrians passing by, and can help breakup continuous strips of asphalt viewed from the street.

Offers smarter parking options
Vegetation can help breakup a large parking lot by dividing it into sections, which can help manage lot traffic. Even elements like porous asphalt benefit the community as it can help limit puddling and melt snow and ice faster than traditional asphalt.

2.35 acres of green parking lots across Buffalo

are helping us meet our stormwater challenge

Buffalo Sewer partnered with the City of Buffalo on six green parking lot projects. While relatively small in number and size, green parking lots represent significant investments to important community spaces across Buffalo, including a historic waterfront park on the West Side, a popular recreational ice skating rink in North Buffalo, a key commercial corridor near Martin Luther King Jr. Park, and two community centers in the Willert Park neighborhood.

6 Green Parking Lot Projects

1. North Buffalo Ice Rink
2. Broderick Park
3. 1401 Fillmore Avenue
4. 1384 Fillmore Avenue
5. Pratt Willert Community Center
6. JFK Community Center

CASE STUDY

Broderick Park

Renovating a waterfront park to embrace Underground Railroad heritage

Located at the foot of West Ferry Street on the scenic Niagara River, Broderick Park is a key site in the history of slavery and freedom on the Underground Railroad and a popular recreational space for the racially and ethnically diverse population on the city's West Side. The park is steeped in history, most notably as a major terminus of the Underground Railroad between the United States and Canada. The park pays tribute to the people who crossed the water from that point to freedom in Canada and is listed as a designated Network to Freedom site by the U.S. National Parks Service, a national network of historic places and educational or interpretive programs associated with the Underground Railroad. Recent renovations to the park include new entrance features, a small performance amphitheater, a waterfront promenade, new shelters, and revised parking facilities--all with the intent to uplift the space as a public memorial to the incredible local history of the Underground Railroad.

Community Partnerships

The City of Buffalo worked closely with community stakeholders on the project. Organizations such as the Buffalo Quarters Historical Society, Niagara River Anglers Association, Buffalo United Front, Rich Products, and the Broderick Park Advisory Committee were important partners on the project. Hundreds of citizens were engaged through a series of community meetings hosted by Mayor Brown and the City of Buffalo Division of Parks and Recreation, sharing ideas, suggestions, and comments about what enhancements they wanted to see in the park.

Project Timeframe
2013-2014

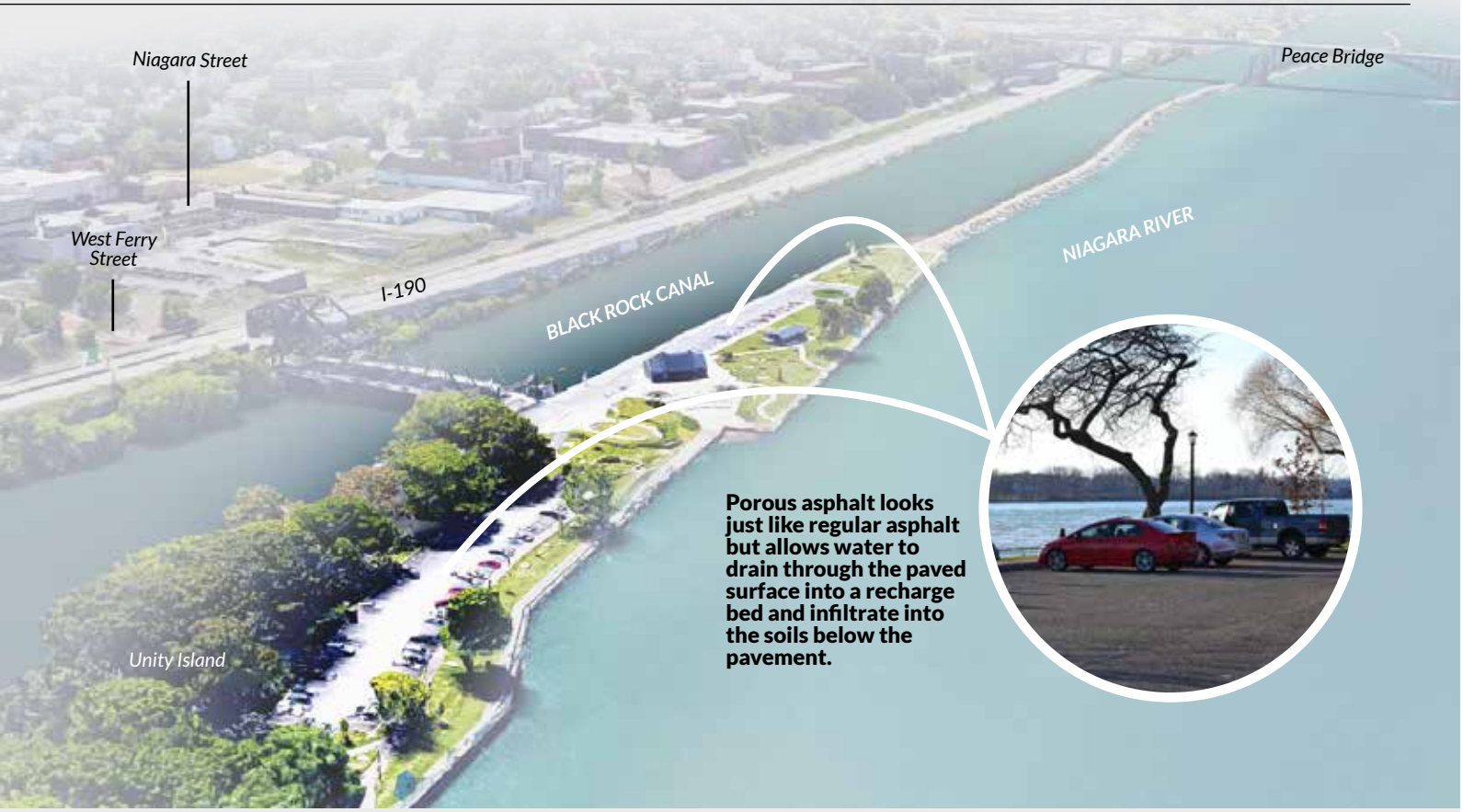
Keeping the stormwater challenge in check with green infrastructure in Broderick Park

1.0 acre of impervious surfaces removed

These investments in Broderick Park manage stormwater for 4.3 acres of the city.

124,326

gallons of runoff prevented from entering the sewer system in a typical rainfall event.

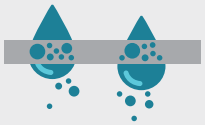


Green infrastructure in Broderick Park

The City of Buffalo recently invested over $1 million in a range of renovations to the park, including updated parking facilities with green infrastructure elements. By using porous asphalt in the parking areas, the pavement surface promotes infiltration and keeps over 124,000 gallons of stormwater from entering sewers in a typical rainfall event, improving local water quality.

Water moves along an impervious surface ⟷ **Water drains through a porous surface**

Replacing impervious surfaces with porous asphalt can provide cost-effective pavements that promote infiltration and improves water quality.



BRODERICK PARK MASTER PLAN

CASE STUDY

North Buffalo Ice Rink

Modernizing a community recreation center in North Buffalo

Located on Tacoma Avenue, the North Buffalo Ice Rink (formerly known as Lafayette Ice Rink) is an important community asset that is frequently used by neighborhood residents, local schools, and athletic organizations for hockey and skating. The ice rink is a major recreational resource for Buffalo's youth hockey. It is also very popular for other forms of skating, including open skates.

The North Buffalo Ice Rink originally opened in 1990 as the third public ice rink in the city. In a continuing effort to ensure the vitality of this community asset, the City has invested $3.4 million in the facility since 2006. As part of that ongoing investment, the City made substantial functional upgrades to the interior, as well as an expansion of the facility's parking lot. The City partnered with Buffalo Sewer to utilize porous pavement in the parking expansion.

Community Partnerships

The North Buffalo Ice Rink is owned by the City of Buffalo and operated by the Bison Hockey Organization, an association made up of about 400 families.

Keeping the stormwater challenge in check with green infrastructure at North Buffalo Ice Rink

0.7 acres of porous pavement added

These investments at North Buffalo Ice Rink manage stormwater for 0.7 acres of the City.

112,208

gallons of runoff prevented from entering the sewer system in a typical rainfall event.

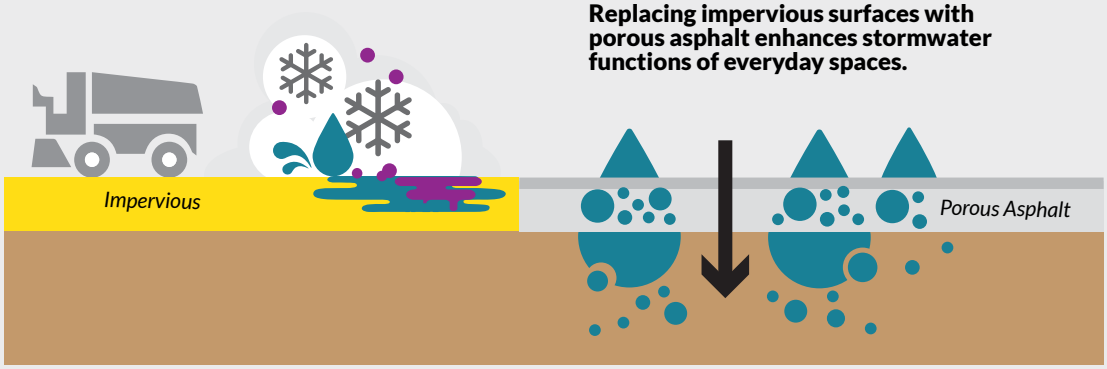
Water puddles on the older asphalt parking lot, shown on the right. The new, expanded parking area on the left uses porous asphalt, enabling it to absorb stormwater beneath the ground.

Green infrastructure at North Buffalo Ice Rink

The facility's porous parking area enables rain and snowmelt to seep directly into the ground rather than spreading across the parking lot and draining into the sewer system. With the capacity to absorb over 112,000 gallons of runoff in a typical rainfall event, these improvements ensure that the North Buffalo Ice Rink remains a high-quality facility for active recreation while limiting its environmental impact.

Even on sunny, dry days, the ice rink's Zamboni generates as much as 24,000 lbs of compacted snow which is deposited in the ice rink's parking lot, eventually melting and entering the sewer system.[9]

Replacing impervious surfaces with porous asphalt enhances stormwater functions of everyday spaces.



CASE STUDY

JFK and Pratt Willert Community Centers

Regenerating neighborhood community spaces on the city's East Side

The JFK and Pratt Willert Community Centers are important community assets in the Willert Park neighborhood on the city's East Side. These neighborhood centers provide community meeting spaces, recreational facilities, services and programs to build healthy communities. The Community Action Organization (CAO), a local antipoverty agency, operates both centers and provides several health and education programs for community members. The City's Division of Parks and Recreation also offers a variety of youth athletic programs and other community services at these community centers, and works with local residents to ensure these facilities are providing services that improve quality of life for local residents.

Community Partnerships

Local residents and community groups were consulted throughout the planning and design of the project. The project team participated with neighborhood residents in walking tours to identify where green infrastructure makes sense in the context of neighborhood conditions. This process identified the JFK and Pratt Willert Community Centers as prime locations for green parking lots. The public also gave feedback in preliminary and final design updates. Buffalo Sewer commissioned the development of a youth STEM education program called Water Worx to connect youth participating in Community Action Organization (CAO) programs at both community centers with the projects.

Keeping the stormwater challenge in check with green infrastructure at JFK and Pratt Willert

3 rain gardens planted

These investments at JFK and Pratt Willert manage stormwater for 0.9 acres of the city.

14,063

gallons of runoff prevented from entering the sewer system in a typical rainfall event.

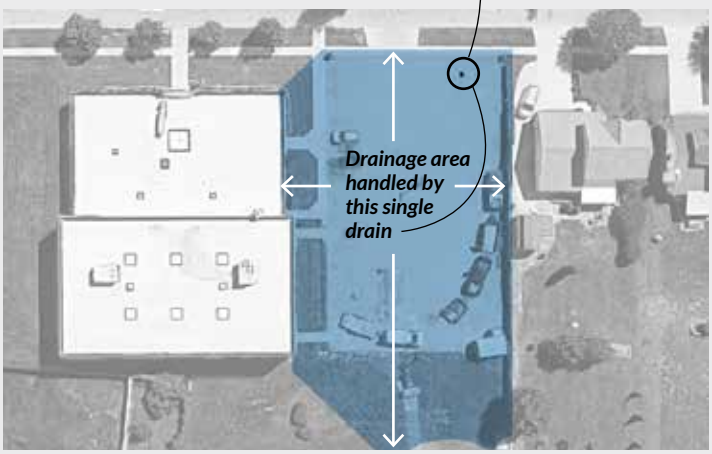
Green infrastructure at JFK and Pratt Willert Community Centers

Buffalo Sewer and City agencies recently invested in infrastructure improvements to reduce stormwater runoff from parking facilities at both of the community centers. The removal of impervious surfaces and installation of rain gardens in the parking areas at the centers redirect rain and snowmelt into the surrounding soils. These rain gardens can collectively keep over 14,000 gallons of stormwater from entering the sewer system during the typical rainfall event, while beautifying vital neighborhood spaces and educating residents on the benefits of green infrastructure.

How Pratt Willert's parking lot was turned into a green parking lot

BEFORE

Stormwater runoff for the parking lot used to flow into a single drain at the southeast edge of the parking lot and discharged directly into the combined sewer in Pratt Street.



AFTER

Stormwater runoff flows into a rain garden constructed in the corner of the existing parking lot.

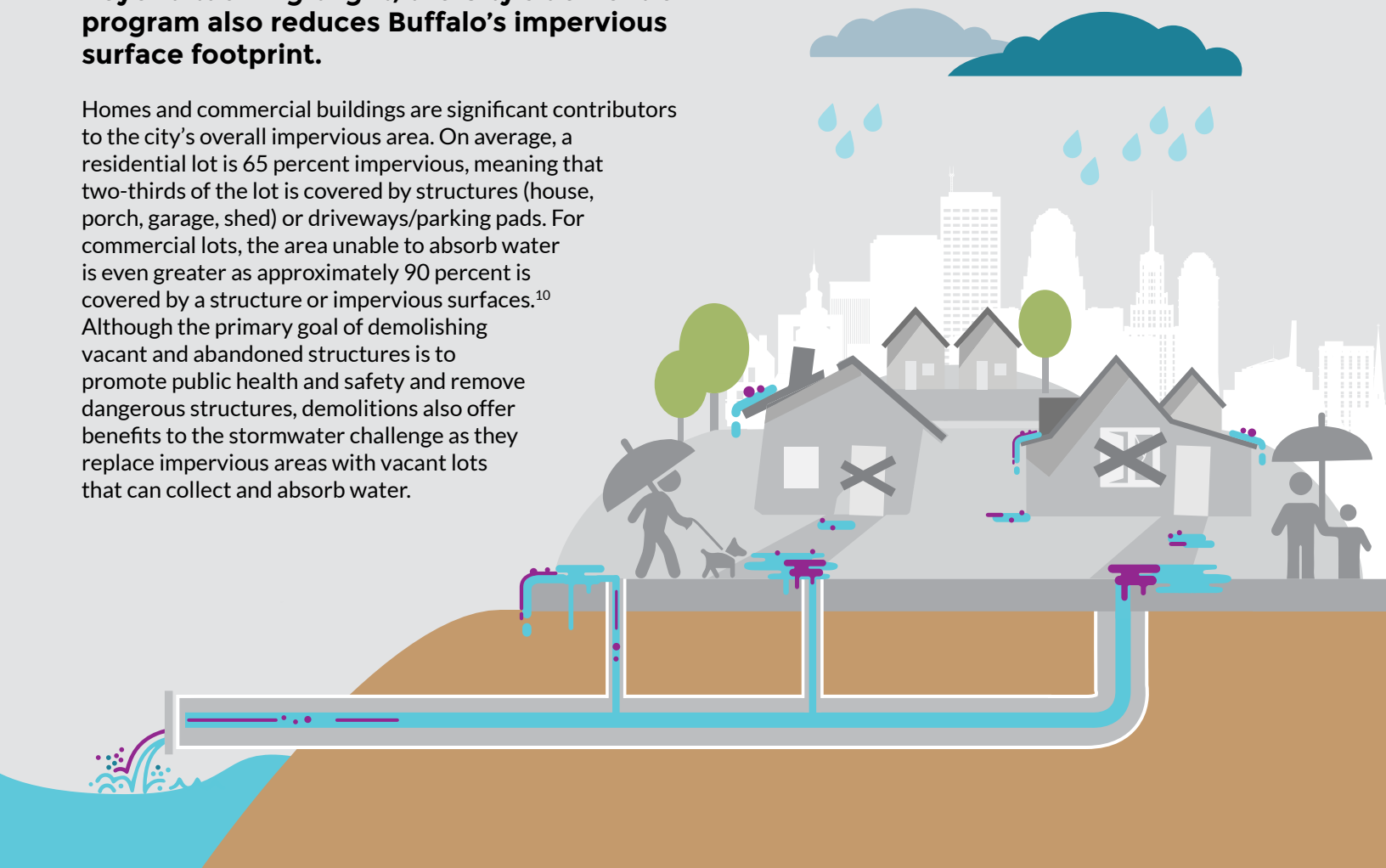
Work began with the removal of a section of existing asphalt pavement and installation of a storage basin under the rain garden to hold stormwater before slowly releasing it into soil.

Soil and plants were added to help absorb and filter rain and snowmelt from the parking lot.

Demolition of blighted structures creates vacant lots that can capture stormwater.

Beyond tackling blight, the City's demolition program also reduces Buffalo's impervious surface footprint.

Homes and commercial buildings are significant contributors to the city's overall impervious area. On average, a residential lot is 65 percent impervious, meaning that two-thirds of the lot is covered by structures (house, porch, garage, shed) or driveways/parking pads. For commercial lots, the area unable to absorb water is even greater as approximately 90 percent is covered by a structure or impervious surfaces.[10] Although the primary goal of demolishing vacant and abandoned structures is to promote public health and safety and remove dangerous structures, demolitions also offer benefits to the stormwater challenge as they replace impervious areas with vacant lots that can collect and absorb water.



Keeping the stormwater challenge in check

Green Infrastructure Approaches

Traditional demolitions

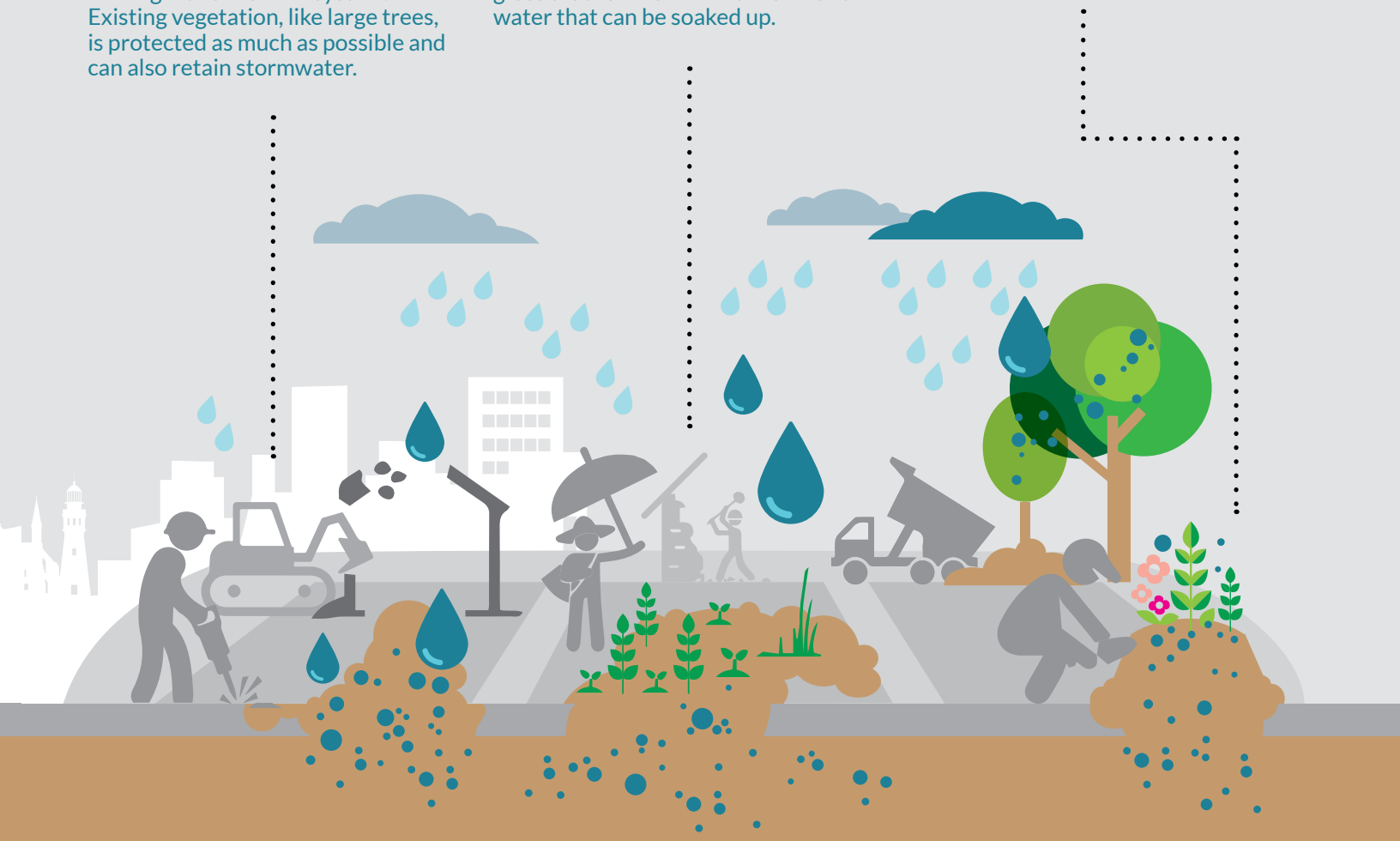
Demolition removes impervious surfaces, like roofs and driveways, from lots. This allows stormwater to soak into the ground where a building once stood rather than flowing into the sewer system. Existing vegetation, like large trees, is protected as much as possible and can also retain stormwater.

Green post-demolition treatment

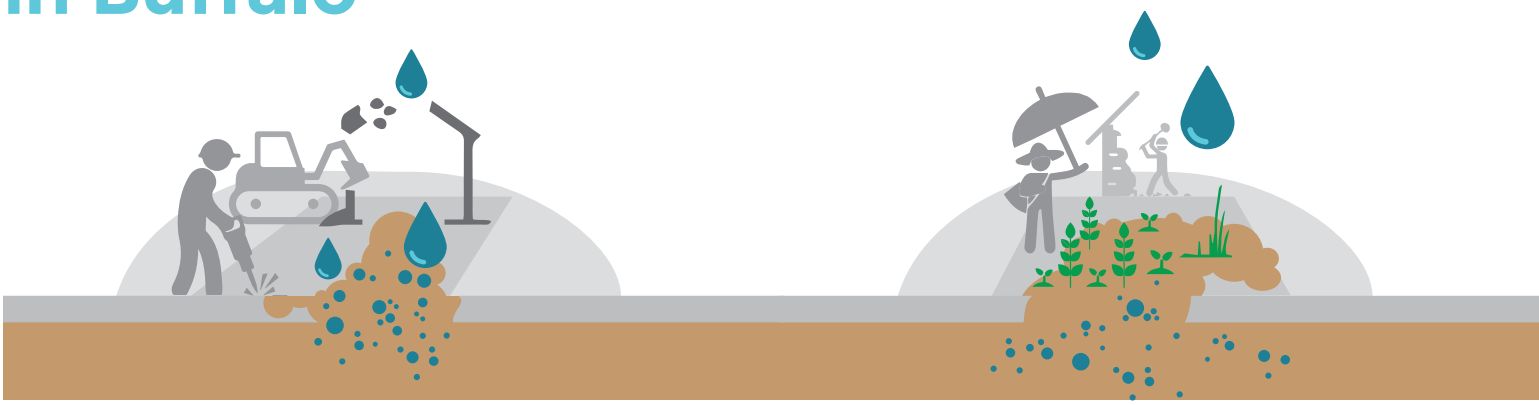
Once all structures and paved surfaces are demolished and removed from the site, 4 to 6 inches of spongy soil and seed mix can be added to encourage development of a low growing turf grass that can maximize the amount of water that can be soaked up.

Filling vacant lots with green infrastructure

Where vacant lots are permanently protected (or owned) by community members, enhanced landscape features like pollinator or community gardens can be installed.



Where demolitions and vacant lot restoration approaches work in Buffalo



Traditional demolitions

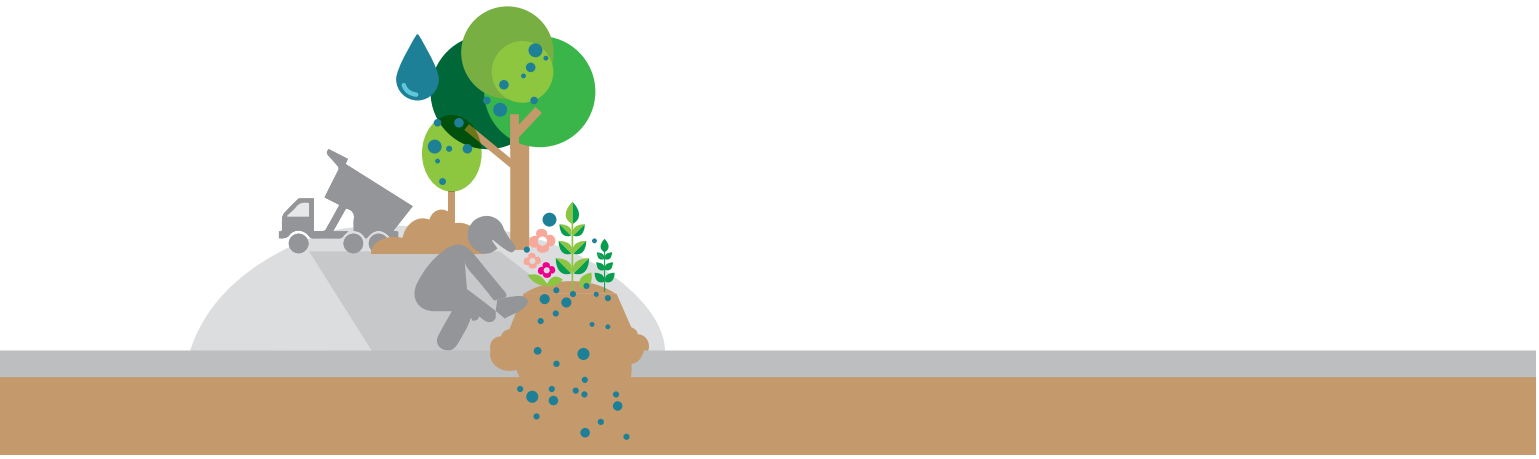
The City of Buffalo's demolition program helps stabilize and improve neighborhoods by removing unsafe, blighted and abandoned structures. Between 2001 and 2017, the City's demolition program removed over 5,900 residential structures and over 700 commercial buildings. This aggressive, multi-year approach targeted the most dangerous and deteriorated properties, many of which were vacant for more than 18 months and suffered considerable deterioration. In many cases, environmental conditions and looting of the plumbing and architectural features makes cost-effective renovation impracticable.

Demolition of vacant and dangerous structures helps improve public health, safety, and welfare. By removing impervious surfaces, demolition can also provide stormwater benefits.

Green post-demolition treatment

Green post-demolition treatment can be applied to any residential or commercial demolition once all structures and paved surfaces are demolished and removed from the site. The treatment improves surface site conditions and reduces maintenance requirements, while also improving the stormwater function of vacant lots. As a result, the treatment can enhance the potential of sites to be redeveloped into green spaces or other uses. The treatment also improves the curb appeal of vacant lots for prospective purchasers, including adjacent owners under the City's homesteading program.

A vacant lot on the city's East Side is being prepared for a green post-demolition treatment. The treatment enhances stormwater capture through seeding, grading and leveling the lot.



Filling vacant lots with green infrastructure

Introducing rain gardens, as well as other green infrastructure techniques like cisterns and bioswales, to vacant lots can add to community character and help educate neighborhood residents about the stormwater challenge. These installations are particularly suitable for vacant lots owned or managed by community members or neighborhood groups with the ability and commitment to maintain investments over time. By harvesting water that can be used to care for plants and vegetation, green infrastructure on vacant lots can also complement the use of these lots for urban agriculture or community gardens.

A vacant lot on the city's West Side is transformed into an urban farm with numerous green infrastructure that all harvest rain water for use by gardeners. Features include a green roof picnic shelter, downspout disconnections on adjacent properties, and a cistern to collect water.

A vacant lot on Chenango Street on the city's West Side is transformed with a rain garden and a permeable walking surface.

How do we benefit from **demolitions and vacant lot restoration** across Buffalo?

931 acres
managed for stormwater

628 acres
of impervious surfaces reduced

Keeping the stormwater challenge in check

City of Buffalo demolitions completed between 2001 and 2017 removed **628 acres** of impervious surface (buildings, driveways, parking areas). Altogether, the vacant lots created by these demolitions manage stormwater runoff for 931 acres of the city—about the size of 405 city blocks.

During a typical rainfall event, these lots are capable of keeping **14,650,161 gallons of water** out of our sewer system. That's enough water to fill 22 Olympic-sized swimming pools.

14,650,161

gallons of runoff prevented from entering the sewer system in a typical rainfall event.

Calculations by Buffalo Sewer. For details on methodology and assumptions, see Appendix.

Benefits beyond the stormwater challenge

Removes blight
Vacancy and abandonment is most prevalent in Buffalo's most vulnerable neighborhoods, including those with high concentrations of people in poverty. By targeting blight, demolition can increase property values in neighborhoods that have experienced sustained disinvestment.

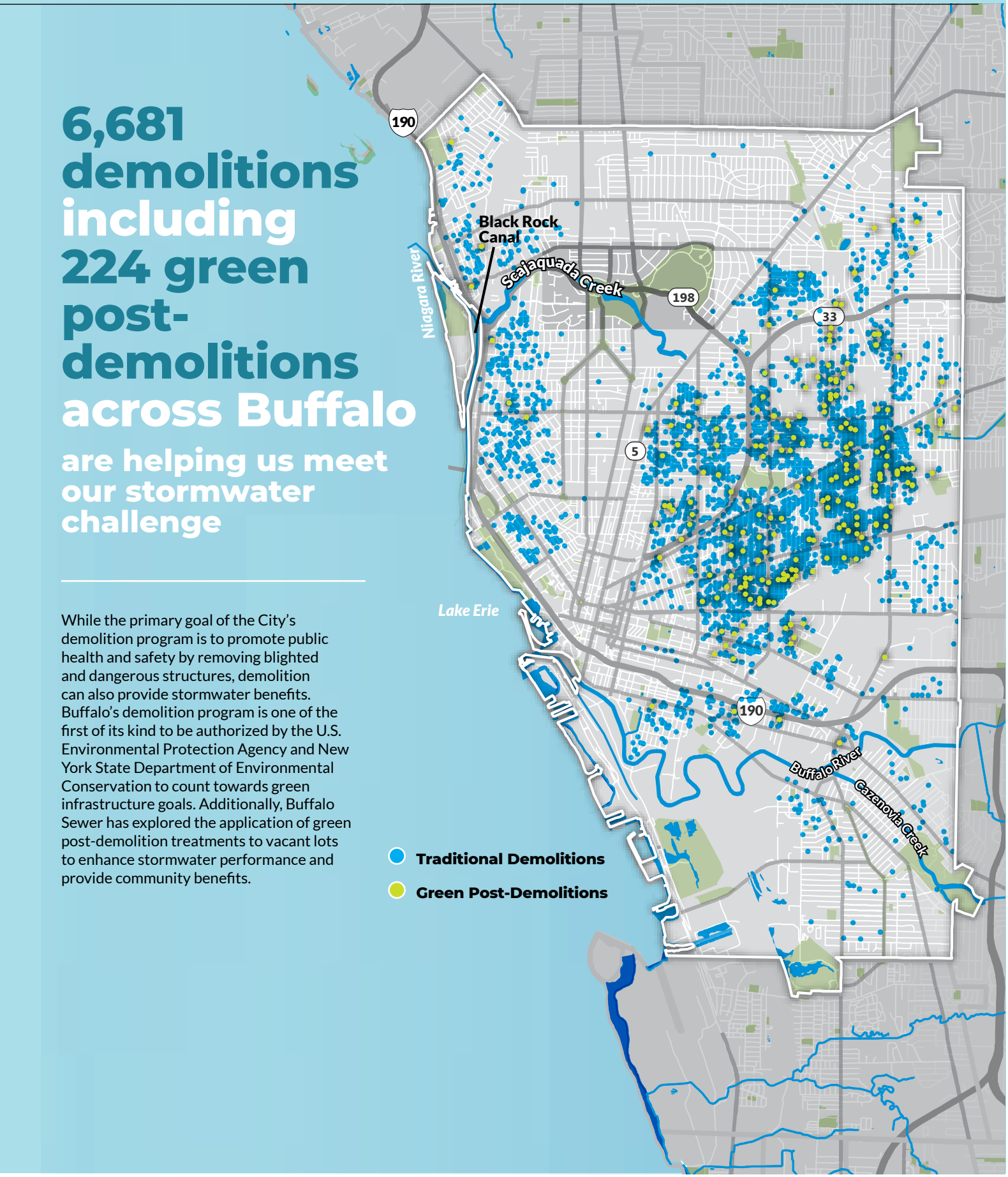
Stabilizes neighborhoods
Neighborhood blight threatens the health, safety, and economic well-being of Buffalo and its neighborhoods. It contributes to falling property values, disinvestment, and the overall destabilization of neighborhoods. Though demolition is not a cure to neighborhood blight, it can be an instrumental tool to help stabilize neighborhoods by removing problem properties that attract illegal activities, rodents, and arson.

Creates opportunities for infill development
Demolishing vacant properties opens possibilities for infill development on these sites, whether as community gardens, neighborhood green spaces, or for new residential and commercial uses. When vacant lots are seeded with low growing turf grass or enhanced with rain gardens and other green infrastructure installations, their appeal often increases to prospective purchasers, while also beautifying neighborhoods and enabling stormwater to be harvested for outdoor uses.

6,681 demolitions including 224 green post-demolitions across Buffalo

are helping us meet our stormwater challenge

While the primary goal of the City's demolition program is to promote public health and safety by removing blighted and dangerous structures, demolition can also provide stormwater benefits. Buffalo's demolition program is one of the first of its kind to be authorized by the U.S. Environmental Protection Agency and New York State Department of Environmental Conservation to count towards green infrastructure goals. Additionally, Buffalo Sewer has explored the application of green post-demolition treatments to vacant lots to enhance stormwater performance and provide community benefits.



CASE STUDY

Traditional Demolitions

Removing blight to promote public health and safety

The primary goal of the City's demolition program is to enhance public health, safety, and welfare through the removal of unsafe, blighted and dangerous structures. When a blighted structure is demolished, contractors are required to remove just about everything on the site, including foundation walls and any pavement. In addition, all utility connections, including water and sewer service, are disconnected. Existing large trees are protected through demolition as much as possible and left on site.

Although the purpose of the program is blight removal and neighborhood stabilization, it also creates stormwater benefits through impervious surface reduction.

Community Partnerships

Buffalo's blight removal strategy involves many City departments and relies on neighborhood-level insights from the community. The Department of Permit and Inspection Services leads the process and assesses which properties pose the greatest threat to health and safety. It also relies on the fire and police departments to identify problem properties; the Mayor's Office of Strategic Planning to align blight removal with neighborhood priorities; the Department of Assessment and Taxation for site acquisition; and the Division of Citizen Services to bring together all sorts of data on blight indicators through the Mayor's 311 Call and Resolution Center. Neighborhood organizations, block clubs, and other community groups all help to identify which properties threaten quality of life on residential streets.

Project Timeframe
2001-2017

Keeping the stormwater challenge in check with blight removal

5,949 blighted and unsafe residential buildings demolished

732 blighted and unsafe commercial buildings demolished

514.3 acres of impervious surfaces removed

Vacant lots created through the City's blight removal program manage stormwater for 911.0 acres of the City.

14,356,650
gallons of runoff prevented from entering the sewer system In a typical rainfall event.

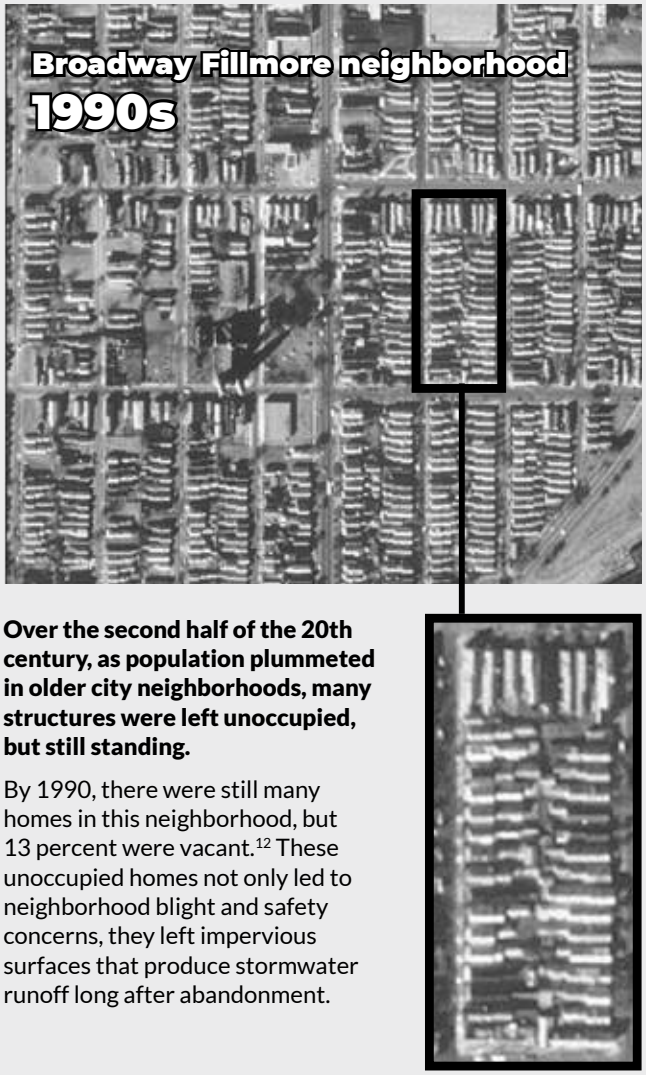
By removing the impervious surfaces on a property, rain and snowmelt can absorb into the ground instead of entering our sewer system.

Buildings, roofs, driveways and concrete entryways on a property prevent water from being absorbed into the ground where it lands.

When impervious surfaces are removed, water is absorbed into the ground where it falls.

An aerial view of blight removal in Buffalo neighborhoods

In the 1950s, industry was booming and downtown neighborhoods were thriving. Back then, the neighborhood shown below, located just west of the Central Terminal, was densely populated, with around 47 people per acre. So naturally there were a lot of homes—about 14 per acre. These homes added a lot of impervious surfaces, but 99 percent were occupied by residents.[11]



Over the second half of the 20th century, as population plummeted in older city neighborhoods, many structures were left unoccupied, but still standing.

By 1990, there were still many homes in this neighborhood, but 13 percent were vacant.[12] These unoccupied homes not only led to neighborhood blight and safety concerns, they left impervious surfaces that produce stormwater runoff long after abandonment.

Since 2001, the city's blight removal program removed over 5,900 abandoned homes and over 700 commercial buildings, targeting structures that pose the greatest threat to health and safety.

These demolitions also converted large areas of unused impervious surfaces to vacant lots that absorb stormwater. Neighborhoods like this are not as densely populated as they once were, but now they have far fewer blighted structures, and more open spaces to keep stormwater in check.

Source: Density of population and homes, and residential vacancy rates from U.S. Census Bureau (1950 and 1990). Aerial imagery from U.S. Geological Survey (1995); and U.S. Department of Agriculture (2017). See Endnotes for more information.[13]

CASE STUDY

Green Post-Demolition Initiative

Greening vacant lots after demolition to maximize stormwater capture

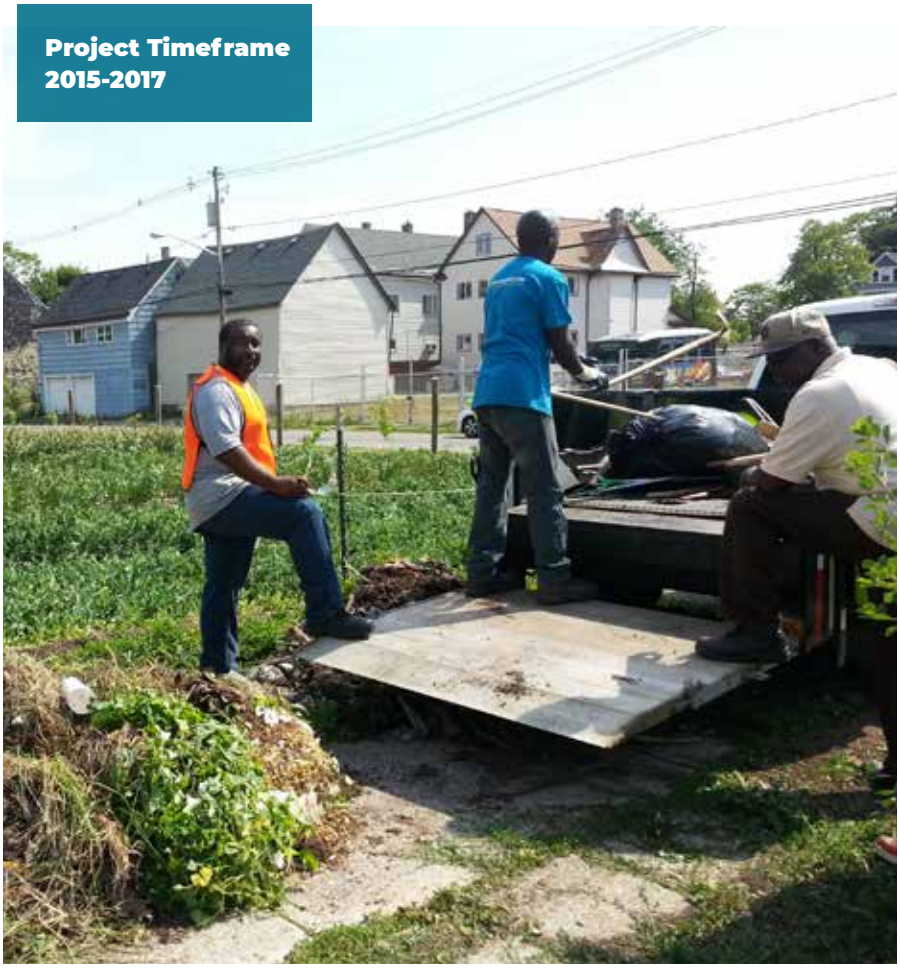
Buffalo's large-scale, multi-year demolition program targets the most dangerous properties in neighborhoods across Buffalo for removal of all structures, including properties damaged by fire emergencies and those that have suffered from long-term vacancy and abandonment. Demolition of blighted structures improves public safety and contributes to neighborhood revitalization. There is also potential for demolition to contribute to stormwater management. Through consultation and collaboration with local and national partners, Buffalo Sewer studied how landscape treatments on City-funded demolition sites can maximize the capacity of these spaces to capture and absorb water.

Community Partnerships

BUFFALO SEWER PROJECT

The green post-demolition study was made possible through a Buffalo Sewer partnerships with the Mayor's Office of Strategic Planning, Department of Permit and Inspection Services, and the Department of Public Works, Parks & Streets, with funding support from the NYS Environmental Facilities Corporation and consultant support from Arcadis and Buffalo Neighborhood Stabilization Corporation (BNSC). The initiative put 53 people to work to carry out the green post-demolition treatment, including on-site training, and most of these workers (64 percent) were from the city, while over half were people of color.

Project Timeframe
2015-2017



Keeping the stormwater challenge in check with green post-demolitions

224 post-demolition sites with green treatments

13.3 acres of impervious surfaces removed

These investments on green post-demolitions manage stormwater for 20.4 acres of the City.

293,511

gallons of runoff prevented from entering the sewer system in a typical rainfall event.

Step-by-Step Process of a Green Post-Demolition

Green infrastructure with Green Post-Demolitions

While traditional demolitions provide stormwater benefits through impervious surface reduction, Buffalo Sewer has also explored the application of landscaping treatments to vacant lots created by demolition to enhance stormwater performance.

The green post-demolition treatment on select City-funded demolition sites was well-received by both partner City agencies and community members. The green post-demolition treatment to newly vacant lots in neighborhoods across Buffalo offers a number of benefits, including: reducing impressions of abandonment; reducing the need for site amendments for community gardening projects; and improving curb appeal for prospective buyers. Overall, green post-demolition treatments can enhance the ability of vacant lots to meet stormwater management goals and provide community benefits.

After the demolition work is complete, workers remove any remaining debris from the site.

The site is filled with a “stormwater” mix of compost and topsoil.

The lot is graded to minimize stormwater runoff from the site.

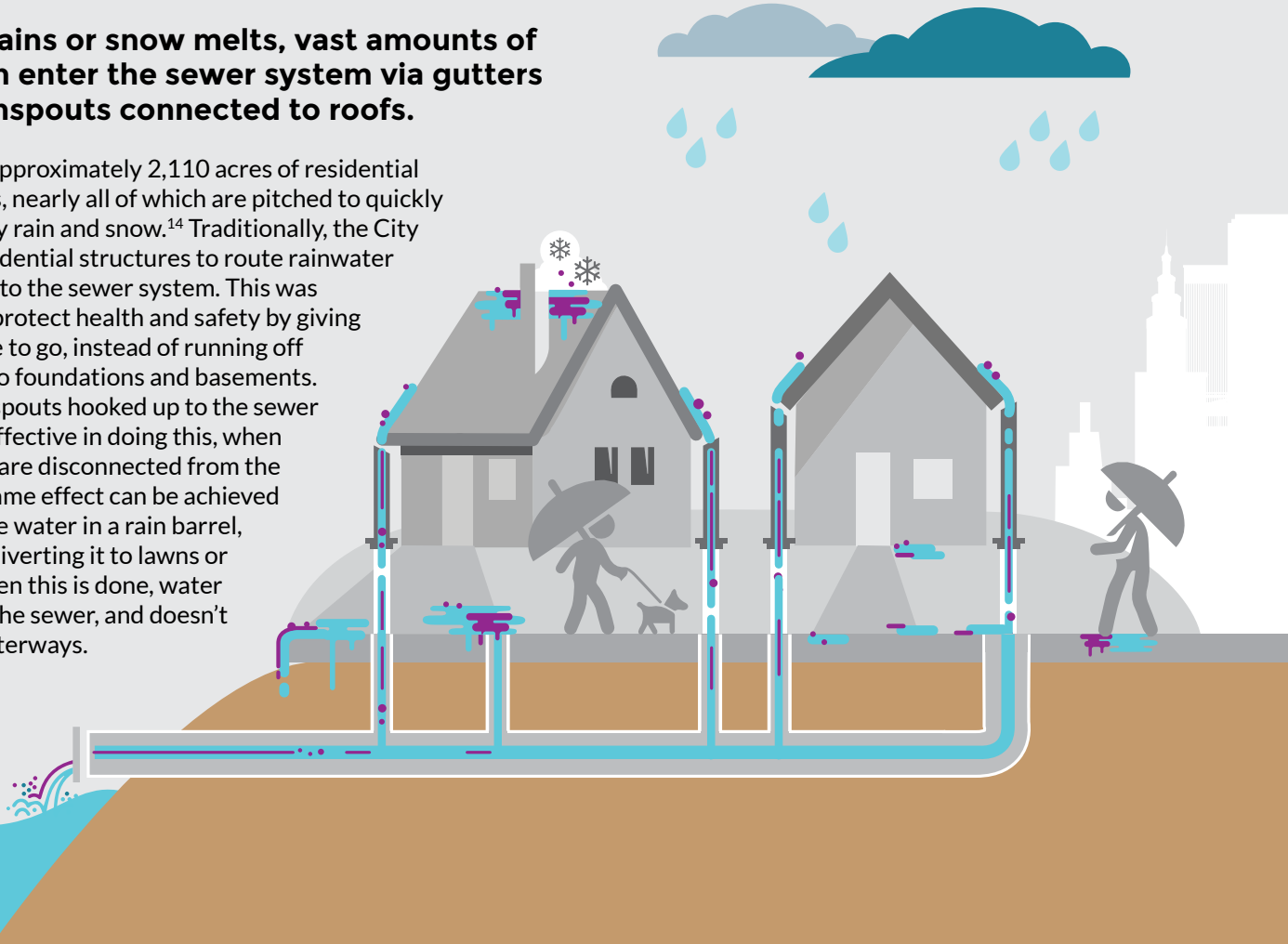
The lot is seeded with a “low growing turf” seed mixture for minimal maintenance.

Ready for the stormwater challenge!

Rain barrels and downspout disconnections engage residents and businesses to keep roof rain and snowmelt out of the sewer system.

When it rains or snow melts, vast amounts of water can enter the sewer system via gutters and downspouts connected to roofs.

Buffalo has approximately 2,110 acres of residential roof surfaces, nearly all of which are pitched to quickly release heavy rain and snow.[14] Traditionally, the City required residential structures to route rainwater from roofs into the sewer system. This was designed to protect health and safety by giving water a place to go, instead of running off roofs and into foundations and basements. While downspouts hooked up to the sewer system are effective in doing this, when downspouts are disconnected from the sewer, this same effect can be achieved by storing the water in a rain barrel, or properly diverting it to lawns or gardens. When this is done, water stays out of the sewer, and doesn't harm our waterways.



Keeping the stormwater challenge in check

Green Infrastructure Approaches

Downspout Disconnections

Downspout disconnections redirect water that would otherwise flow into the sewer system into alternative water collection systems, like lawns, flower beds, or specially designed infiltration systems and rain gardens.

Rain Barrels

Rain barrels capture and store stormwater runoff to be used for outdoor household needs. Though not safe for drinking, this water can be used for other activities that would normally require using the tap, like watering plants or washing cars.

Where rain barrels and downspout disconnections work in Buffalo

Downspout Disconnections

Some residents don't want to deal with a rain barrel, or a rain barrel's placement may interfere with their driveway. In these instances, a downspout disconnection may work better. This may be especially true in older parts of the city where driveways were originally designed for horse and carriage and are narrower, and closer to home foundations.

An example of a downspout disconnection at a private residence in Buffalo. When a downspout is disconnected from the standpipe, it is redirected so that stormwater drains to a yard or landscape.

At this home in the Elmwood Village, a downspout has been disconnected and directed into a front lawn rain garden that provides a unique landscape that contributes to the home's curb appeal.

Rain Barrels

Rain barrels work for most Buffalo houses, but are a best fit when the resident is committed to regularly using the rain barrel as a water resource for gardening or other non-drinking water needs. Rain barrels may also be more preferable for homes on slightly wider lots so they are not as likely to interfere with driveways or neighboring homes.

Mayor Byron W. Brown and local stakeholders from government, non-profit and philanthropic sectors gather to celebrate the launch of the City's Rain Check downspout disconnect and rain barrel installation program in 2015.

A rain barrel installed at a home in Masten Park provides a free water source for gardening and watering plants.

How do we benefit from using rain barrels across Buffalo?

7.4 acres
of rooftops managed for stormwater

Keeping the stormwater challenge in check

Though controlling roof runoff with rain barrels doesn't remove any impervious areas, the 1,018 rain barrels installed in 2015 and 2016 approximately manage roof area equivalent to **7.4 acres**—an area bigger than 3 city blocks.

During a typical rainfall event, these investments have the capacity to keep **172,920 gallons of water** out of our sewer system. That's enough water to take over 10,000 showers.

172,920

gallons of runoff prevented from entering the sewer system in a typical rainfall event.

Calculations by Buffalo Sewer. For details on methodology and assumptions, see Appendix.

Benefits beyond the stormwater challenge

Promotes awareness
Rain barrels and other roof runoff interventions can empower residents and businesses to take an active role in solving a critical community-wide challenge. They help educate Buffalonians about the stormwater challenge, the importance of using water wisely, and ways we can all contribute to healthy waterways.

Saves money on water bills
For individual home or business owners, using roof water more wisely can save money on water bills and ease reliance on the city's water supply. According to the Environmental Protection Agency, garden and lawn irrigation accounts for 30 percent of residential water use during the summer.[15] Instead of drawing water from the tap, rain barrels allow residents to use captured rainwater to irrigate lawns, gardens, and plants or to wash their cars.

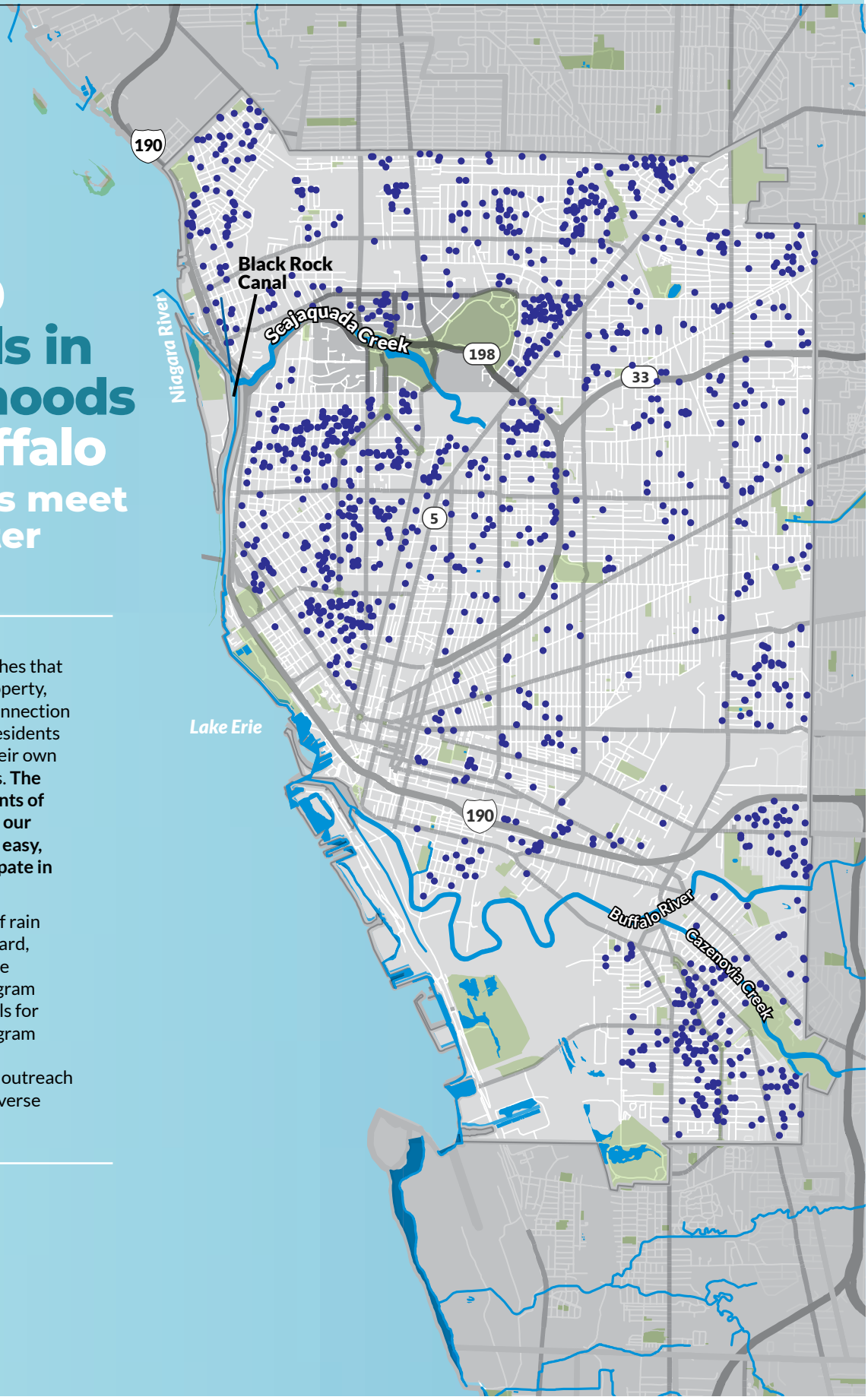
Protects homes
In some cases where residential sewer pipes are compromised, rain barrels and downspout disconnections can help keep water away from foundations or basements.

Over 1,300 rain barrels in neighborhoods across Buffalo

are helping us meet our stormwater challenge

Unlike other Rain Check approaches that have focused on publicly held property, Buffalo Sewer's downspout disconnection and rain barrel program invites residents to host green infrastructure in their own backyards and private residences. **The program not only informs residents of the stormwater challenge facing our community, but also provides an easy, low-cost way for them to participate in green infrastructure solutions**.

Launched in 2015 after a series of rain barrel projects in the Old First Ward, Hamlin Park, and Elmwood Village neighborhoods, the citywide program distributes and installs rain barrels for residents free of charge. The program enables Buffalo Sewer staff to do community-based education and outreach around green infrastructure in diverse neighborhoods across Buffalo.

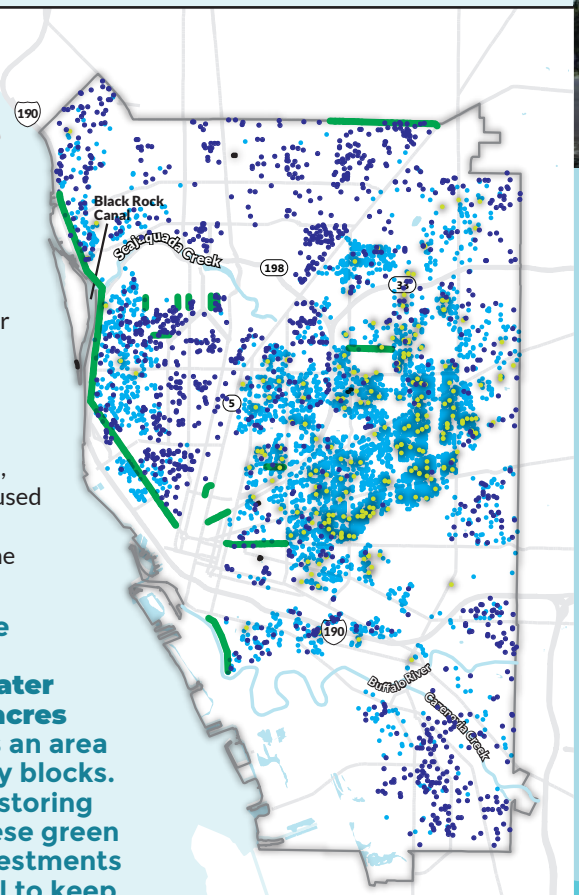


RAINCHECK in neighborhoods across Buffalo

Buffalo's first generation of green infrastructure investments concentrated on tackling the parts of our built environment that create the most runoff from stormwater – streets, parking lots, and roofs. With the exception of the rain barrel and downspout disconnection program, this work has been focused on infrastructure or properties owned by the City of Buffalo.

Collectively, these investments can manage stormwater runoff for 1,047 acres of the city. That's an area the size of 455 city blocks. By capturing and storing water on-site, these green infrastructure investments have the potential to keep nearly 1 billion gallons of water from entering the underground sewer system during a typical year.

At the end of the day, these investments are helping to solve the stormwater challenge by reducing the frequency and impact of sewer overflows into our local waterways.



Keeping the stormwater challenge in check with green infrastructure investments

1,047 acres
managed for stormwater

649 acres
of impervious surfaces reduced

952,449,460

gallons of runoff prevented from entering the sewer system in a typical year.

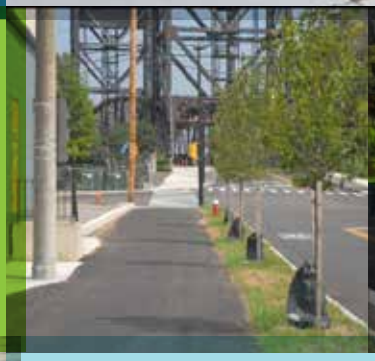
Calculations by Buffalo Sewer. For details on methodology and assumptions, see Appendix.

9 miles of green streets

(that's longer than Main Street from Canalside to UB South Campus)

9 miles

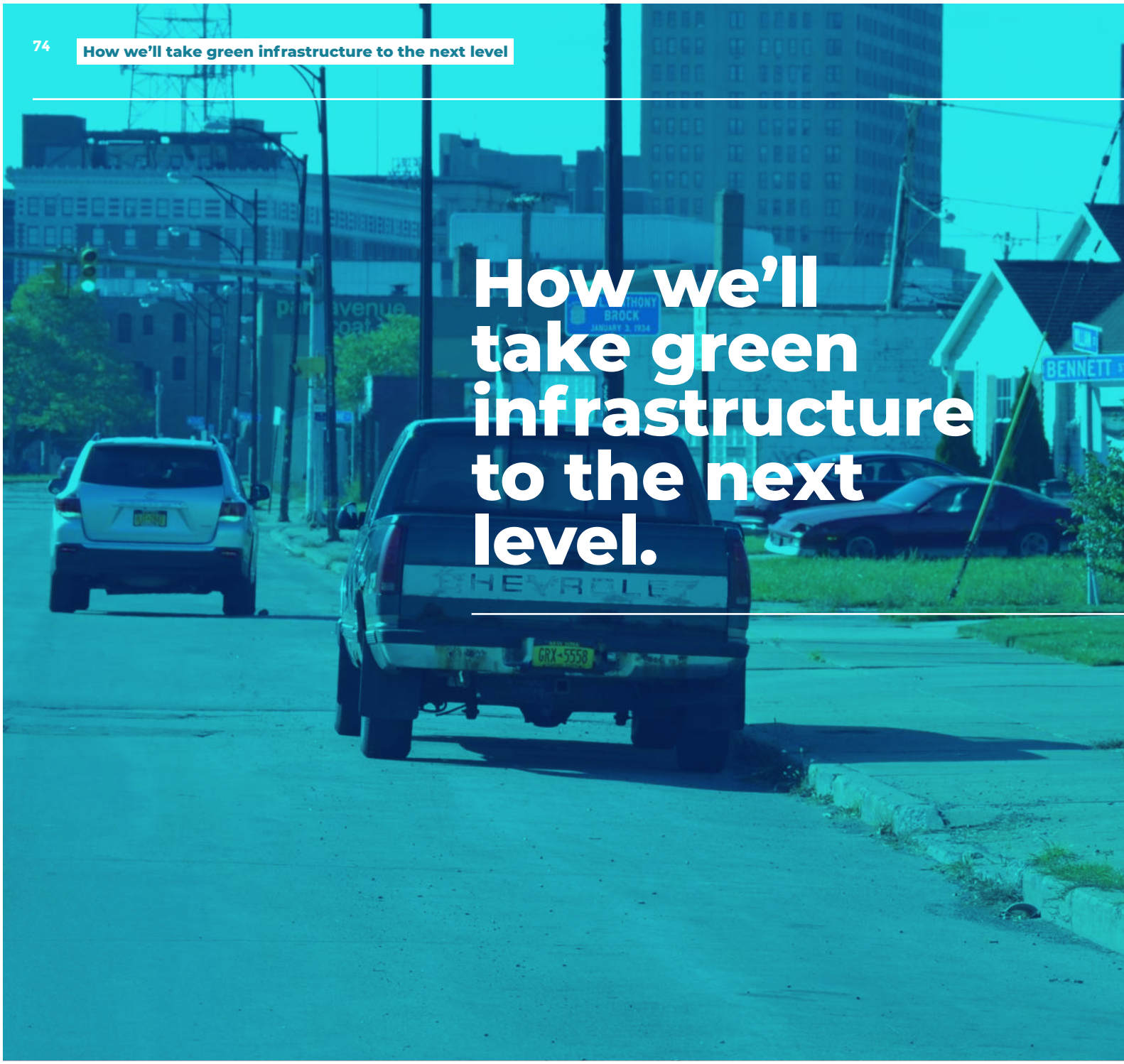
1,310 rain barrels
with a capacity of storing
132 gallons
of stormwater at one time.



5,949 residential demolitions

732 commercial demolitions

224 green post-demolitions



How we'll take green infrastructure to the next level.

RAINCHECK 2.0

Buffalo is ready for the next chapter of green infrastructure. Through the first several years of the Rain Check program, we have learned a great deal about what works, where we can do better, and how we can maximize the impact of our investments. As we look to scale up and expand the types of projects we take on, Buffalo Sewer will continue to make community engagement and education a priority and find new partnerships to tackle collaborative projects across the city. Together, we will create solutions to the stormwater challenge and contribute to building a better Buffalo for all.

pg. 78

Continue to raise the bar in how we engage communities

pg. 80

Expand partnerships to grow opportunities and impact

pg. 82

Take Green Infrastructure projects to the next level

Continue to raise the bar in how we engage communities.

Expand the communication and education toolbox for scaling up green infrastructure and community engagement.

Through the initial phase of Rain Check, Buffalo Sewer has seen first hand how effective communication tools can broaden the table for participation in shaping green infrastructure investments. As the program scales up, it will be critical to develop a robust set of engagement tools that allow Buffalo Sewer and its partners to engage diverse communities on the web and in-person. This includes an expanded website with easy-to-understand educational materials, as well as interactive content that can be used at the meetings of block clubs, community organizations, and public meetings.

Create opportunities for the community to "see and touch" green infrastructure.

People commonly say a picture is worth a thousand words. But sometimes, a picture just isn't enough. Offering opportunities for residents, business owners, and community stakeholders to see what a project looks like can help people understand how it will appear at early stages of growth/installation and at maturity during both the growing season and in winter. Drawing on its existing portfolio of projects, Buffalo Sewer will develop ways to connect residents with green infrastructure projects, through signage at high profile project sites, an online map that can support self-facilitated guided tours, and by exploring ways to let residents "try on" a project concept by creating temporary installations through the concept of "tactical urbanism."

Tailor engagement approaches to meet the needs of diverse communities.

Buffalo is made up of many different neighborhoods shaped by diverse cultures and histories. Engagement approaches must respect this diversity and find ways to make complex concepts relatable to people who may have varying prior knowledge of green infrastructure and why it is important. In engaging diverse communities, Buffalo Sewer will work to present materials in several different formats to allow for different types of learners and tailor materials to reflect the specific population, languages, buildings, institutions, landscapes and climate of the project location.

Engage individual property owners to gain support and willingness to pitch in with maintenance.

Property owners play an important role in making green infrastructure a success, as they can act as stewards to maintain installations on or adjacent to their property. Based on the initial round of green infrastructure projects, Buffalo Sewer has found that some property owners embrace, or at least are OK with, taking on maintenance, while others are resistant or are less likely to be committed to maintaining green infrastructure over the long-term. As Buffalo Sewer broadens its range of projects and the areas of the city it is installing green infrastructure, it will need to continue to find smarter and predictable ways of bringing individual property owners into the process early, and secure their support and commitment over the long run.

Leverage green infrastructure as a visioning tool that can help shape the future of communities.

Green infrastructure can be a tool to shape the physical environment residents and stakeholders envision for their community. Plant selection and landscape can help punctuate and reinforce the identity of an area. Differing approaches help create a sense of activity in a mixed use, neighborhood commercial district, slow down and quiet traffic in a residential space, or create a sense of formality in a central business district. This is particularly valuable in areas that are transitioning from high vacancy levels or one use to a new development vision. Some of Rain Check's most successful projects, like the William Street and Niagara Street green street projects, positioned green infrastructure as a tool in a broader visioning process. As Buffalo Sewer moves to expand its portfolio of projects, it will seek to continue to do this in creative ways.

Build "Champions" for green infrastructure in neighborhoods across the city.

Neighborhood-level stakeholders play an important role in connecting community members to public engagement processes, while opening doors to a range of audiences — property owners, tenants, customers, community institutions and their members, neighborhood or block clubs and business organizations, real estate professionals, and/or regional, issue-focused organizations. Engagement of stakeholder organizations can change dramatically over time as membership and leadership changes. Engaging multiple representatives and/or members directly helps to ensure designs are responsive to a wide range of stakeholders and are resilient to turnover.

Expand partnerships to grow opportunities and impact.

Ramp-up engagement with developers, businesses, institutions, and large property owners to meet green infrastructure goals through private sector projects.

Development regulations require that projects account for stormwater management in new developments. However, there currently is not a targeted financial incentive program for developers to install and commit to maintaining green infrastructure on private properties. More than two-thirds of the city's land area is privately owned, so this offers a unique opportunity that builds on models developed elsewhere, like the Onondaga County's Green Improvement Fund (GIF), which provides grant funding for green infrastructure and related investments in the Syracuse area.[16] Buffalo Sewer will perform outreach and engagement with the development community, churches, and large property owners to study how a program like this could work in Buffalo.

Work more closely with government partners outside of City Hall – Buffalo Public Schools, Erie County, SUNY, and more.

Beyond private development, other public sector and nonprofit entities – Buffalo Public Schools, Erie County, local colleges and universities, hospitals, etc. – are significant property owners in Buffalo and have facilities that include large areas of impervious surfaces (like parking lots). Building partnerships with governmental agencies and anchor institutions outside of City of Buffalo government can open opportunities for further expansion of Buffalo's green infrastructure. To that end, Buffalo Sewer will lead a stakeholder engagement process in 2018 that will explore barriers and opportunities of integrating green infrastructure on public facilities outside of the City of Buffalo's ownership.

Build multi-sector project teams representative of Buffalo and its neighborhoods.

As green infrastructure projects evolve to include landscape installations and/or multiple maintenance partners, Buffalo Sewer will continue to work with design and engineering teams that offer diverse capacities and approaches. This includes ensuring teams have landscape architects and experienced public engagement specialists to balance community needs and environmental performance goals. Teams may also incorporate expertise from ecologists, horticulturists, computer mapping (GIS) experts, and more.

Equally important, Buffalo Sewer is committed to working with project teams that reflect the diversity of our community in terms of race and gender. Buffalo Sewer already incorporates goals for women- and minority-owned business participation. As we take on the next phase of green infrastructure projects, Buffalo Sewer will continue to make inclusivity and diversity a priority in the types of firms and agencies it engages.

Grow the workforce development pipeline for green infrastructure.

Because green infrastructure draws on a wide range of skillsets for the planning, design, engineering, construction, and maintenance of projects, it requires a range of jobs involving varying levels of skill, experience, education, and credentials. As we look to scale up green infrastructure in Buffalo, there is a tremendous workforce development opportunity with the potential to spread opportunity across the city, including to low-income and unemployed residents. This can happen through training or re-training residents in the design, construction, and maintenance of green infrastructure. It can also involve partnering with the Buffalo Public Schools and local colleges and universities to integrate green infrastructure into curriculum and internship opportunities.

Take Green Infrastructure projects to the next level.

Focus investments in geographic priority areas where projects can have the greatest impact on meeting the stormwater challenge.

Based on modeling and analysis of the frequency, intensity and location of sewer overflows into our waterbodies, Buffalo Sewer has identified six "Combined Sewer Overflow Priority areas" where it seeks to concentrate green infrastructure installations in the coming years. This will allow Buffalo Sewer to make the greatest impact on the stormwater challenge and protect the health of our waterways.

Analyze and evaluate the full range of opportunities for green infrastructure projects in priority areas.

Now that Buffalo Sewer knows where green infrastructure can have the greatest impact, it needs a comprehensive understanding of the types of projects that work with the unique characteristics of these places. Working with a consultant team, Buffalo Sewer will conduct detailed mapping, stakeholder engagement, site visits, and best practice analysis of the types of projects that fit well in these target areas. This detailed analysis will identify where new forms of green infrastructure will have the greatest impact, what it could look like, and what it would take to implement targeted opportunities.

Explore potential for leveraging targeted tree plantings to meet green infrastructure goals.

Each medium-sized tree has the potential to intercept over a thousand gallons of stormwater each year, serving as low-cost options for advancing green infrastructure goals. Though street trees have been integrated as green infrastructure elements in various green streets projects, Buffalo Sewer will explore scaling up and expanding tree plantings, on both public and private lands, as a comprehensive, targeted approach to meeting green infrastructure goals.

Operationalize equity and opportunity into Buffalo Sewer decision-making to maximize benefits to diverse communities.

Equity refers to just and fair inclusion—a condition in which everyone has an opportunity to participate and prosper. Our stormwater challenge affects all of our communities, but it is also important to recognize that some communities—such as lower-income people, communities of color, and immigrants and refugees—face historic or contemporary barriers to economic and social opportunities and a healthy environment. Green infrastructure solutions to our stormwater challenge offer opportunities to create a more equitable water future in Buffalo by changing how diverse communities connect to and benefit from our city's water resources and environment, and how they are engaged through decision-making processes around public infrastructure investments. As we design, fund, construct, and maintain green infrastructure projects, priority and attention should be given to people, places, processes, and projects that: (1) ensure all people in our community have access to clean, safe, and affordable water services, (2) maximize community and economic benefits of infrastructure investments, and (3) foster community resilience in the face of a changing climate.

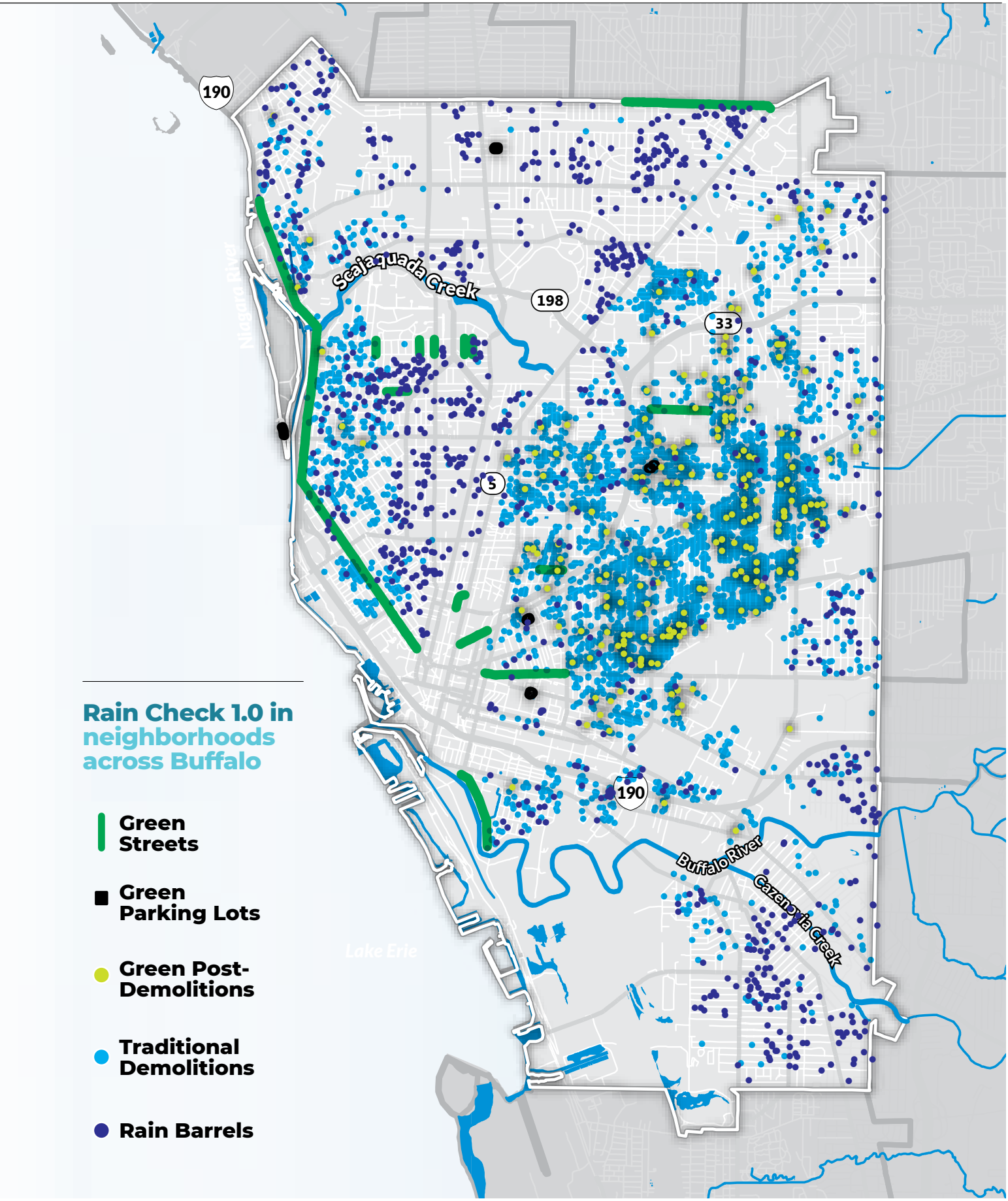
Advancing equitable outcomes across Buffalo neighborhoods has been an important priority of green infrastructure projects to date. As Buffalo Sewer enters this next phase of green infrastructure planning and implementation, it will explore ways to maximize the impact our work has on disadvantaged neighborhoods. This will include integrating equity analysis in its planning for the next generation of Rain Check projects, as well as exploration of developing assessment tools that can evaluate the impact that projects may have on advancing opportunities for people of color and other marginalized groups.

Appendix

Rain Check 1.0 Projects

		ESTIMATED TOTAL AREA MANAGED (acres)	ESTIMATED IMPERVIOUS AREA REDUCED (acres)	IN A TYPICAL RAINFALL EVENT: ESTIMATED CHANGE IN RUNOFF (gallons) IN A TYPICAL (.9") RAINFALL EVENT	ANNUALLY: ESTIMATED CHANGE IN RUNOFF (gallons) DURING A TYPICAL YEAR
Green Streets	**TOTAL**	**101.5**	**18.4**	**1,908,045**	**60,777,929**
	Ardmore Place	1.4	0.7	11,973	646,684
	Carlton Street	5.9	0.9	199,550	5,607,301
	Claremont Avenue	1.3	1.3	136,894	1,235,507
	Clarendon Place	1.6	0.2	159,335	1,520,624
	Elmwood Avenue	1.6	1.6	3,838	197,681
	Genesee Street	2.5	0.0	59,762	2,347,463
	Kenmore Avenue	5.2	0.5	188,285	4,913,516
	Niagara Street	30.9	2.1	612,934	29,376,956
	Northland Avenue	8.8	0.5	144,464	8,364,143
	Ohio Street	12.7	3.2	70,824	3,060,256
	Parkdale Avenue	1.0	1.0	12,433	950,390
	Pearl Street	1.1	0.3	3,999	276,472
	William Street	25.2	1.3	284,357	23,949,82
	Windsor Avenue	2.4	1.8	19,397	2,280,936
Green Parking Lots	**TOTAL**	**6.8**	**2.7**	**257,083**	**6,471,632**
	1384 Fillmore Avenue	0.4	0.4	2,910	392,723
	1401 Fillmore Avenue	0.5	0.5	3,576	520,358
	Broderick Park	4.3	1.0	124,326	4,048,661
	JFK Community Center	0.5	0.0	8,079	456,187
	North Buffalo Ice Rink	0.7	0.7	112,208	654,539
	Pratt Willert Community Center	0.4	0.0	5,984	399,164
Demolitions and Vacant Lot Restoration	**TOTAL**	**931.4**	**627.6**	**14,650,161**	**885,199,899**
	Green Post-Demolitions	20.4	13.3	293,511	19,433,575
	Traditional Demolitions	911.0	514.3	14,356,650	865,766,324
Rain Barrels and Downspout Disconnections	**TOTAL**	**7.4**	**N/A**	**172,920**	**7,061,398**
TOTAL		**1,047.1 acres**	**648.7 acres**	**16,988,207 gallons**	**952,449,460 gallons**

Calculations by Buffalo Sewer. For details on methodology and assumptions, see page 92.


Rain Check 1.0 in neighborhoods across Buffalo
Green Streets
Green Parking Lots
Green Post-Demolitions
Traditional Demolitions
Rain Barrels
190
198
33
5
190
Scajaquada Creek
Niagara River
Lake Erie
Buffalo River
Cazenovia Creek

Raincheck Glossary

Bump Out

Also known as a curb extension; a technique used to calm traffic and reduce pedestrian crossing distances by extending the sidewalk into the parking lane to narrow the roadway and provide additional pedestrian space at key crossing locations such as corners and mid-block. Curb extensions can often be lengthened to create public spaces, landscaped areas, or transit waiting areas.

Combined Sewer Overflow (CSO)

Buffalo has a combined sewer system that collects stormwater runoff in the same set of pipes as domestic sewage and industrial wastewater, and transports the water to a treatment facility where it is treated and then discharged to a water body. During heavy rains or snowmelt, the volume of water can exceed the capacity of the sewer system or treatment plant, and the system is designed to overflow and discharge excess wastewater directly to nearby water bodies.

Demolitions and Vacant Lot Restoration

Demolitions remove buildings and pavement from sites to protect public safety. Buffalo Sewer helped test new ways to maximize the amount of water that vacant lots capture when it rains or snows and worked with community partners to introduce rain gardens and landscaping to vacant lots that help contribute to community character.

Downspout Disconnections

Downspout disconnections redirect water from roofs that would otherwise flow into the sewer system into alternative water collection systems, like lawns, flower beds, or specially designed infiltration systems and rain gardens.

Equity

Equity refers to just and fair inclusion—a condition in which everyone has an opportunity to participate and prosper. Our stormwater challenge affects all of our communities, but it is also important to recognize that some communities—such as lower-income people, communities of color, and immigrants and refugees—face historic or contemporary barriers to economic and social opportunities and a healthy environment. Green infrastructure solutions to our stormwater challenge offer opportunities to create a more equitable water future in Buffalo by changing how diverse communities connect to and benefit from our city's water resources and environment, and how they are engaged through decision-making processes around public infrastructure investments. As we design, fund, construct, and maintain green infrastructure projects, priority and attention should be given to people, places, processes, and projects that: (1) ensure all people in our community have access to clean, safe, and affordable water services, (2) maximize community and economic benefits of infrastructure investments, and (3) foster community resilience in the face of a changing climate.

Gray Infrastructure

Gray infrastructure includes the pipes, pumps, tanks, and structures such as sewerage mains, tunnels, and wastewater treatment facilities engineered by people to collect, convey, and treat wastewater and stormwater. These traditional stormwater management solutions are commonly referred to as "gray" because they are often made of concrete and steel.

Green Infrastructure

Green infrastructure aims at treating rain and snowmelt at the source. Green infrastructure allows water to be reintroduced into the water cycle where it falls and melts, reducing the volume of stormwater entering drains and providing the community with other benefits, such as greener, healthier environments and safer neighborhoods.

Green Parking Lots

Green parking lots use special surfaces and landscaping that can capture and absorb water. This process also helps keep pollutants associated with cars and road maintenance, like road salt, grit, car oil, and asphalt sealant, out of the sewer system and our waterways.

Green Post-Demolition Treatment

A special soil and seed mix applied to a vacant lot once all structures and paved surfaces are demolished and removed from the site. This specialized treatment encourages development of a low-growing turf grass that helps maximize the amount of water that can be absorbed by the site.

Green Streets

Green streets bring water-friendly landscapes into larger streetscape projects. They introduce surfaces that absorb water and integrate special features that collect rain and snowmelt before they enter the sewer system. They also play a key role in transforming our commercial corridors and neighborhood streets to benefit residents and businesses.

Impervious Surface

Surfaces like concrete, pavement, and rooftops are impervious, meaning water cannot travel through them.

Long Term Control Plan (LTCP)

A Long Term Control Plan is a phased approach to control combined sewer overflows that will ultimately result in compliance with the NYS water quality standards and Clean Water Act requirements.

Porous Pavement

Porous pavement gives rain and snowmelt a place to go rather than the storm inlets on the sides of curbs. Water absorbs through the pavement and into the underlying soil.

Rain Barrels

Rain barrels capture and store stormwater runoff to be used for outdoor household needs. Though not safe for drinking, this water can be used for other activities that would normally require using the tap, like watering plants or washing cars.

Rain Check 2.0

Rain Check 2.0 is the second generation of green infrastructure projects in the city of Buffalo. Through a partnership with the Ralph C. Wilson, Jr. Foundation, the City and Buffalo Sewer will continue completing green infrastructure projects across the city, but with a stronger emphasis on expanded engagement and partnerships.

Rain Garden

These plant beds collect stormwater runoff from street and sidewalk pavement and absorb it into the soils below.

Road Diet

This technique reduces the number of travel lanes on a street, in turn removing excess impermeable surfaces and making streets safer and more pedestrian friendly.

Runoff

Runoff is rainwater, snowmelt and other water that is not absorbed into the ground because it is blocked by impervious surfaces, which then flows down stormdrains and downspouts into the sewer system.

Smart Infrastructure

Smart infrastructure refers to the use of information and communications technologies to monitor, manage, and enhance key infrastructure assets, including sewerage infrastructure such as mains, tunnels, and wastewater treatment facilities. Data from real-time systems and sensors can provide decision-makers with up-to-date information to maximize the capacity of existing sewerage infrastructure and to improve the delivery and efficiency of wastewater services, offering cost savings and improving quality of life.

Stormwater

Stormwater describes water generated during heavy rain events; typically, stormwater is either absorbed by the earth where the ground is permeable, or becomes stormwater runoff when it flows into the sewer system because it cannot be absorbed due to impermeable surfaces such as pavement and concrete.

Treatment Facility

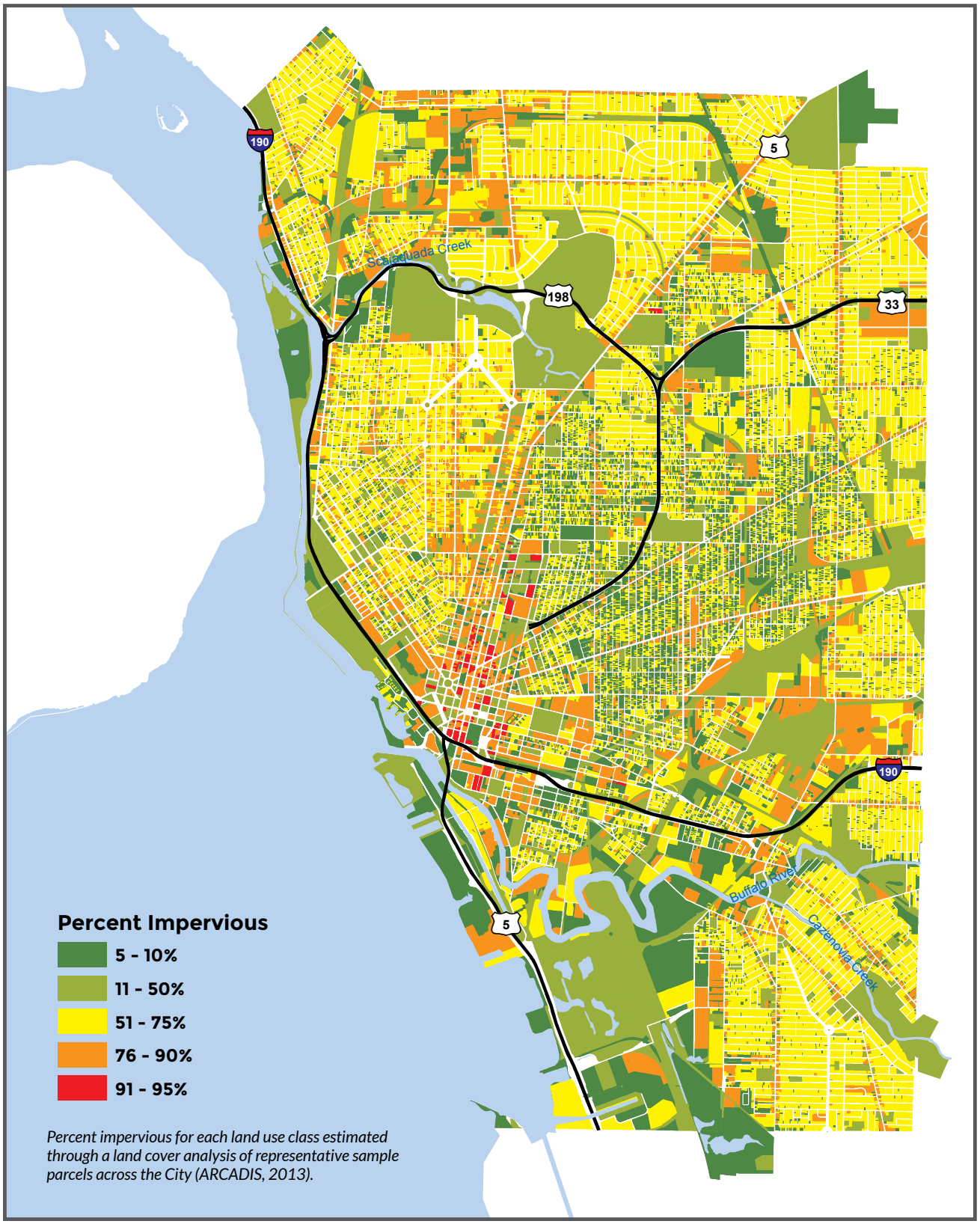
The facility where wastewater and stormwater traveling through the sewer system is conveyed and cleaned before it can be released to local waterways. At a wastewater treatment facility, the sanitary waste, litter, toilet paper, and other solids are removed from wastewater using screening and skimming techniques, as well as biological systems. During heavy rains or snowmelt, the volume of water can exceed the capacity of the sewer system or treatment facility, and the system is allowed to overflow and discharge excess wastewater directly to nearby water bodies.

Distribution of Impervious Surfaces in Buffalo by Land Use

Land Use Type	Total Acres	Acres of Impervious Surfaces[4]	Average % Impervious	% of All Impervious Surfaces in Buffalo
Buildings and Lots				
Detached residential	7,029	3,965	56% [1]	27.4%
Multi-family Residential	739	665	90% [2]	4.6%
Commercial	2,256	2,030	90% [1]	14.9%
Industrial	1,289	967	75% [2]	6.6%
Public services/Utilities	640	320	50%	1.8%
Community services/Entertainment	1,809	723	40% [3]	4.9%
Transportation				29.3%
Street rights-of-way	4,401	4,181	95% [2]	28.9%
Parking lots - Public	19	19	96% [2]	0.2%
Parking lots - Private	58	55	96% [2]	0.3%
Vacant Land				1.1%
Public	1,519	76	5% [2]	0.4%
Private	2,037	102	5% [2]	0.7%
Open Spaces				0.9%
Recreation	712	64	9% [3]	0.4%
Wild, forested, conservation lands	1,372	69	5%	0.5%
Unclassified/Unknown	2,106	1,053	50%	8.5%
City-wide	**25,984**	**14,490**	**56%**	**100.0%**

NOTES:
1. Estimated by ARCADIS using sample parcels across the City (2013).
2. From Buffalo Niagara Waterkeeper analyses.
3. From New York State Department of Environmental Conservation's Stormwater Management Design Manual.
4. Estimates of percent impervious surface by land use category found reported in the 2014 Long Term Control Plan were applied to a more recent 2016 parcel file to yield the impervious surface acres by land use category shown here. Acres of impervious surfaces by land use category do not sum to city-wide totals due to rounding.

Estimated Percent Impervious Surface by Parcel



Percent impervious for each land use class estimated through a land cover analysis of representative sample parcels across the City (ARCADIS, 2013).

Long Term Control Plan

Buffalo Sewer has developed a Long Term Control Plan (LTCP) comprised of system optimization, green infrastructure, plant improvements and new storage facilities to abate CSO discharges from its sewer system. The plan contains a balance of traditional gray infrastructure, "smart" solutions that use real time control sensors, and innovative "green" solutions. The LTCP was developed in consultation with a community stakeholder panel and benefited from formal and informal stakeholder input over the past decade.

The final LTCP was approved by the U.S. Environmental Protection Agency and the New York State Department of Environmental Conservation in 2014. The BSA's recommended LTCP plan has an expected capital cost of $380 million to implement over a 20 year period with full completion due in 2034.

GOALS OF THE PLAN

Dramatically reduces the number of combined sewer overflow events to local waterways

Upon completion of the long term control plan, only 12 of the 52 permitted CSO discharge points are expected to be used. (40 will remain in place but not activate). Of those 11 will activate six or fewer times per year. Only CSO 55 will be activated more often (9 times per year) but water quality modeling shows that those activations do not prevent the attainment of Niagara River water quality objectives.

73% reduction in the volume of CSO flow to local waterways

Over 97%

of all sanitary and stormwater flow is captured and cleaned at the treatment facility.

HOW WE'LL GET IT DONE OVER 20 YEARS

Smart sewer projects that maximize use of existing capacity

$50,450,000 (13%)

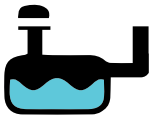
Green Infrastructure

Goal is to manage the runoff from between 1,315-1,620 acres of impervious surfaces.

$92,600,000 (24%)

Plant Capacity Improvements

$41,000,000 (11%)



New Collection System Storage

$196,280,000 (52%)

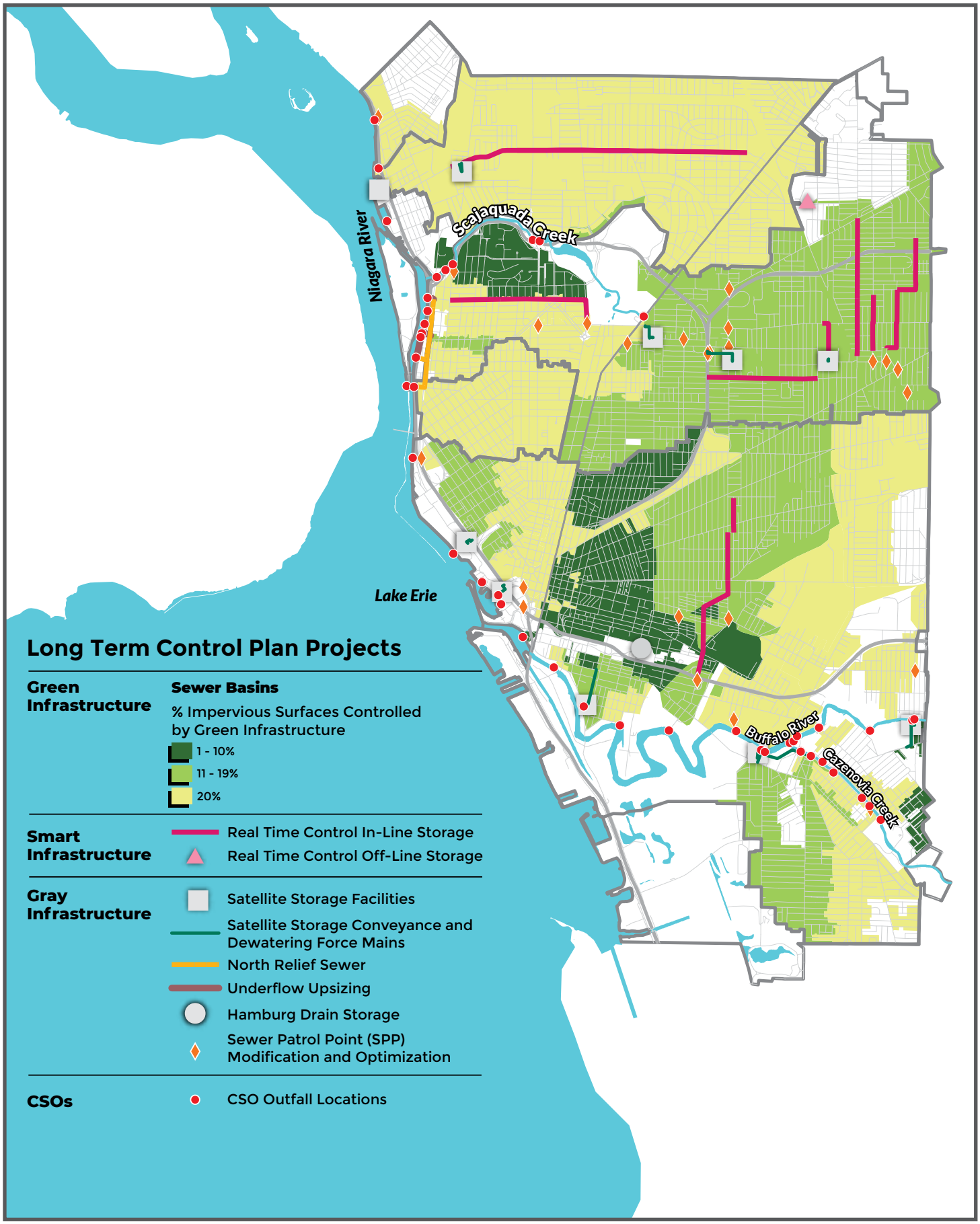
Cost Estimate

$380,330,000

Long Term Control Plan Project Highlights

Receiving Water Body / Projects	Project Cost	Storage Capacity (gallons)	Engineering Start Year
Black Rock Canal			
CSO 013	$4,500,000	300,000	2019
North Relief Sewer	$54,000,000	-	2019
CSO 008/010, 061, 004 Underflow Upsizing	$750,000	-	2021
Cazenovia Creek – C			
CSO 028/044/047	$18,300,000	2,300,000	2028
Buffalo River			
CSO 052	$5,850,000	600,000	2030
CSO 064	$3,000,000	100,000	2030
Scajaquada Creek			
Jefferson Avenue & Florida Street (SPP 170B)	$14,250,000	2,600,000	2025
SPP 336 a/b (SPP165A, SPP165B, SPP 336A, SPP336B)	$17,250,000	4,200,000	2024
SPP 337	$6,000,000	700,000	2023
Niagara River (Cornelius Creek)			
CSO 055	$27,750,000	7,500,000	2027

NOTES: Project costs are planning level estimates measured in year 2012 dollars. All costs are rounded. Right-of-way and land acquisition are not included in cost estimates.


Niagara River
Scajaquada Creek
Lake Erie
Buffalo River
Cazenovia Creek
Long Term Control Plan Projects
Green Infrastructure
Sewer Basins
% Impervious Surfaces Controlled by Green Infrastructure
1 - 10%
11 - 19%
20%
Smart Infrastructure
Real Time Control In-Line Storage
Real Time Control Off-Line Storage
Gray Infrastructure
Satellite Storage Facilities
Satellite Storage Conveyance and Dewatering Force Mains
North Relief Sewer
Underflow Upsizing
Hamburg Drain Storage
Sewer Patrol Point (SPP) Modification and Optimization
CSOs
CSO Outfall Locations

Endnotes

1. Regional Plan Association: America 2050, "Emerging Megaregions: The Great Lakes Megaregion," 2016. Retrieved March, 2018 from http://www.america2050.org/great_lakes.html

2. U.S. Climate Data, "Average weather Buffalo, NY." Retrieved April, 2018 from https://www.usclimatedata.com/climate/buffalo/new-york/united-states/usny0181

3. Kunkel, Kenneth E., Cooperative Institute for Climate and Satellites - NC, "Observed Change in Very Heavy Precipitation," 2013. Retrieved April, 2018 from https://nca2014.globalchange.gov/report/our-changing-climate/heavy-downpours-increasing Note: From 1958 to 2012 ,the amount of precipitation received in extreme events (defined as the heaviest 1% of all daily precipitation events) increased by 71% in the Northeast, more than any other region in the U.S.

4. Buffalo Sewer, GIS analysis of parcel data from the City of Buffalo Mayor's Office of Strategic Planning, 2012.

5. Buffalo's Department of Public Works, "Index of Paved Streets," 1994.

6. The City of Buffalo, Bureau of Forestry, "Urban Forest Master Plan," 2003.

7. NYC Municipal Forest Resource Analysis US Department of Agriculture Forest Service, Center for Urban Forest Research, Pacific Southwest Research Station, "New York City, New York Municipal Forest Resource Analysis," 2007.

8. Buffalo Sewer, GIS analysis of parcel data from the City of Buffalo Mayor's Office of Strategic Planning, 2012.

9. Estimates by UBRI based off of information provided by Frank J. Zamboni & Company, Inc. (2018), retrieved April, 2018 at https://zamboni.com/about/fun-facts/. 60 cubic feet of snow are produced each time the ice is resurfaced. Assuming the ice is resurfaced 20 times per day, and that 1 cubic foot of snow weighs 20 pounds, the Zamboni would move 24,000 pounds of snow in one day.

10. Buffalo Sewer, GIS analysis of parcel data from the City of Buffalo Mayor's Office of Strategic Planning, 2012, and aerial imagery, 2011. Several representative residential lots located within high demolition or distressed neighborhoods were analyzed to determine average imperviousness. This analysis found that, on average, approximately 65 percent of each residential lot was impervious surface comprised of structures (house, porch, garage, shed) and driveways and parking pads. A similar sampling method used to estimate the percentage of impervious surfaces on commercial lots found that, on average, 90 percent of each lot was covered by building or parking lot surfaces prior to demolition.

11. U.S. Census Bureau, 1950. Figures represent Erie County Census Tract 16. Area of tract (in acres) is calculated using ArcGIS software to find population and housing density.

12. U.S. Census Bureau, 1990. Figures represent Erie County Census Tract 16.

13. U.S. Geological Survey, Digital Orthophoto Quadrangle. Image taken March 28, 1995. Retrieved March 29, 2018 from https://earthexplorer.usgs.gov. Original color-infrared image was converted to natural color using ArcGIS software by UBRI; U.S. Department of Agriculture, National Agriculture Imagery Program (NAIP). Image taken October 2, 2017. Retrieved March 29, 2018 from https://earthexplorer.usgs.gov.

14. Buffalo Sewer, GIS analysis of parcel data from the City of Buffalo Mayor's Office of Strategic Planning, 2012.

15. U.S. Environmental Protection Agency, "How We Use Water," 2017. Retrieved February, 2018 at https://www.epa.gov/watersense/how-we-use-water

16. UBRI analysis of parcel data from the City of Buffalo Mayor's Office of Strategic Planning, April, 2016. GIS software was used to calculate the area of all privately-owned land parcels. This figure was divided by the total area of all land parcels in the City (70%).

Methodology and Assumptions

Change in Runoff Calculations

Green infrastructure projects seek to reduce the quality, quantity and/or speed of runoff from a project site. The impact of any given intervention depends upon the size and slope of the geographic area that is draining to a practice; the types of surfaces (paving, turf, vegetation, etc) existing before and after a project; underlying soils; the ability of practices to "catch" water through inlets, elevation, etc; the amount of storage capacity created, if any; and the intensity and duration of the flow event.

While standard engineering practice is well established for calculating these factors, each project is different. Whenever possible, Buffalo Sewer has used the detailed drainage and/or stormwater management calculations and reports prepared by project engineers for this report.

In the case of the impervious surface reduction projects, including traditional demolitions, Pearl Street road diet and Ardmore projects, the runoff reduction was calculated using the Water Quality Volume formula contained in the NYS Stormwater Management Design Manual and was based upon the change in impervious surfaces from pre and post conditions.

Buffalo Sewer requires that green infrastructure projects be designed to capture 100% of the 90th percentile storm (0.9") to the maximum extent practicable. Therefore individual project capacity calculations assume 0.9" of precipitation for a "typical event". Annual figures in the Projects table on page 82 represent a typical year given a 24 hour antecedent.

For the rain barrels, the calculation is very simply based upon the volume of each barrel (132 gallons) times the number of barrels (1,310).

Modeling

Buffalo Sewer maintains a sophisticated Stormwater Management Model of its highly interconnected collections system. The model reflects land use conditions, such as impervious and pervious conditions, as well as smart, green and gray infrastructure projects. The model utilizes a "typical year" precipitation profile to estimate the number and volume of combined sewer overflows. The model is periodically updated and recalibrated to ensure that industry best practices and existing field conditions are fully reflected.

Converting Green Infrastructure Statistics to Relatable Terms

Various sources of information were used to convert the gallons of runoff reduced by green infrastructure investments to relatable terms. According to NBC Learn, there are 10,600 gallons of water in an NHL ice hockey rink (https://www.nbclearn.com/portal/site/k-12/flatview?cuecard=56618). According to the Patagonia Area Research Alliance, there are 660,430 gallons of water in an Olympic-sized swimming pool (http://www.patagoniaalliance.org/wp-content/uploads/2014/08/How-much-water-does-an-Olympic-sized-swimming-pool-hold.pdf). According to the U.S. Environmental Protection Agency, a shower consumes 17.2 gallons of water, on average. A typical washing machine uses 40 gallons per load of laundry (http://homeguides.sfgate.com/many-gallons-water-average-washing-machine-hold-full-80612.html). The engineering standard for the size of one typical city block was assumed—100,000 square feet, or 2.3 acres (http://www.land4ever.com/block.htm).

The Green Code and Green Infrastructure

The Buffalo Green Code incorporates City and neighborhood level land use policies recommended in both the NYS Stormwater Management Design Manual as well as the EPA's "Using Smart Growth Techniques as Stormwater Best Management Practices" and "Water Quality Scorecard". These policies promote the protection of natural hydrological resource areas and minimization of impervious areas. In particular, the Buffalo Green Code:

- Promotes compact, mixed use and transit oriented development, reducing the amount of impervious surface needed for new buildings and associated transportation services;
- Promotes street oriented development with build-to lines that help to minimize driveway lengths;
- Promotes traditional urban lot sizes, encouraging taller buildings with smaller impervious footprints;
- Preserves significant open space areas that retain, filter and store rainwater;
- Removes minimum parking requirements, discouraging the creation of unnecessary paved areas;
- Includes tree conservation, street tree, parking lot and other landscape provisions, with specific direction to integrate parking lot landscape with stormwater management
- Requires on site stormwater management for all new development with detailed engineering review for all projects greater than one-quarter acre in scope; and
- Requires management of construction runoff for projects greater than one-quarter acre in scope.

Spring 2018

The First Generation of Green Infrastructure in Buffalo

BUFFALO SEWER AUTHORITY

RAINCHECK

Learn more at raincheckbuffalo.org

A.4 Raincheck 2.0 Report

RAIN CHECK clean water buffalo 2.0

OPPORTUNITY REPORT

The Next Generation of Green Infrastructure in Buffalo

Buffalo Sewer Authority | Spring 2019

BUFFALO SEWER AUTHORITY

RAIN CHECK clean water buffalo 2.0

OPPORTUNITY REPORT

The Next Generation of Green Infrastructure in Buffalo

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BUFFALO
SEWER AUTHORITY

RAIN CHECK 2.0
clean water buffalo

OPPORTUNITY REPORT

The Next Generation of Green Infrastructure in Buffalo

Buffalo Sewer Authority | Spring 2019

This document describes the Buffalo Rain Check 2.0 Green Infrastructure efforts undertaken by the Buffalo Sewer Authority (Buffalo Sewer). As a benchmark report, the document synthesizes some of Buffalo Sewer's research and outlines future initiatives. As a tool to facilitate future investment in green infrastructure, this document provides a unified framework and strategies to support planning and decision making. As an opportunity analysis, this document identifies potential partners and community benefits to engage stakeholders and property owners in planning and funding of green infrastructure projects across the City of Buffalo.

All renderings shown in this document are intended to present the possibilities inherent in green infrastructure. They are for illustrative and discussion purposes only and are not necessarily representative of any proposed plan or anticipated action.

To learn more about Rain Check and find additional information please visit **raincheckbuffalo.org**.

CITY OF BUFFALO

MAYOR BYRON W. BROWN

Acknowledgements

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Buffalo Sewer Authority
Oluwole A. McFoy
Kevin Meindl
Catherine Knab
Rosaleen Nogle
Scott Steinwald
Regina Harris
Tracy F. King
Allison Lack
Julie Barrett-O'Neill

Buffalo Sewer Authority Board of Directors
Herbert L. Bellamy
John D. Kennedy, Sr.
Christopher Roosevelt
Eleanor Petrucci

Local Government Agencies
City of Buffalo Mayor's Office of Strategic Planning
City of Buffalo Department of Public Works
City of Buffalo Employment and Training Center
City of Buffalo Urban Development Corporation
City of Buffalo Urban Renewal Agency

Consultant Team
Arcadis of New York
evolve :: environment architecture
University of Buffalo Regional Institute
PUSH Buffalo
Center for Watershed Protection
Core Environmental
CallisonRTKL
Watts Architecture & Engineering

ARCADIS

evolve
environment :: architecture

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INTRODUCTION

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

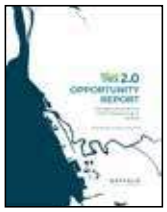
Buffalo Sewer has identified priority sewer basins for implementing green infrastructure to meet part of the LTCP goals and provide additional benefits to the community. This document summarizes the preliminary effort to identify opportunities for green infrastructure on sites within the priority combined 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 decision-making.

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.

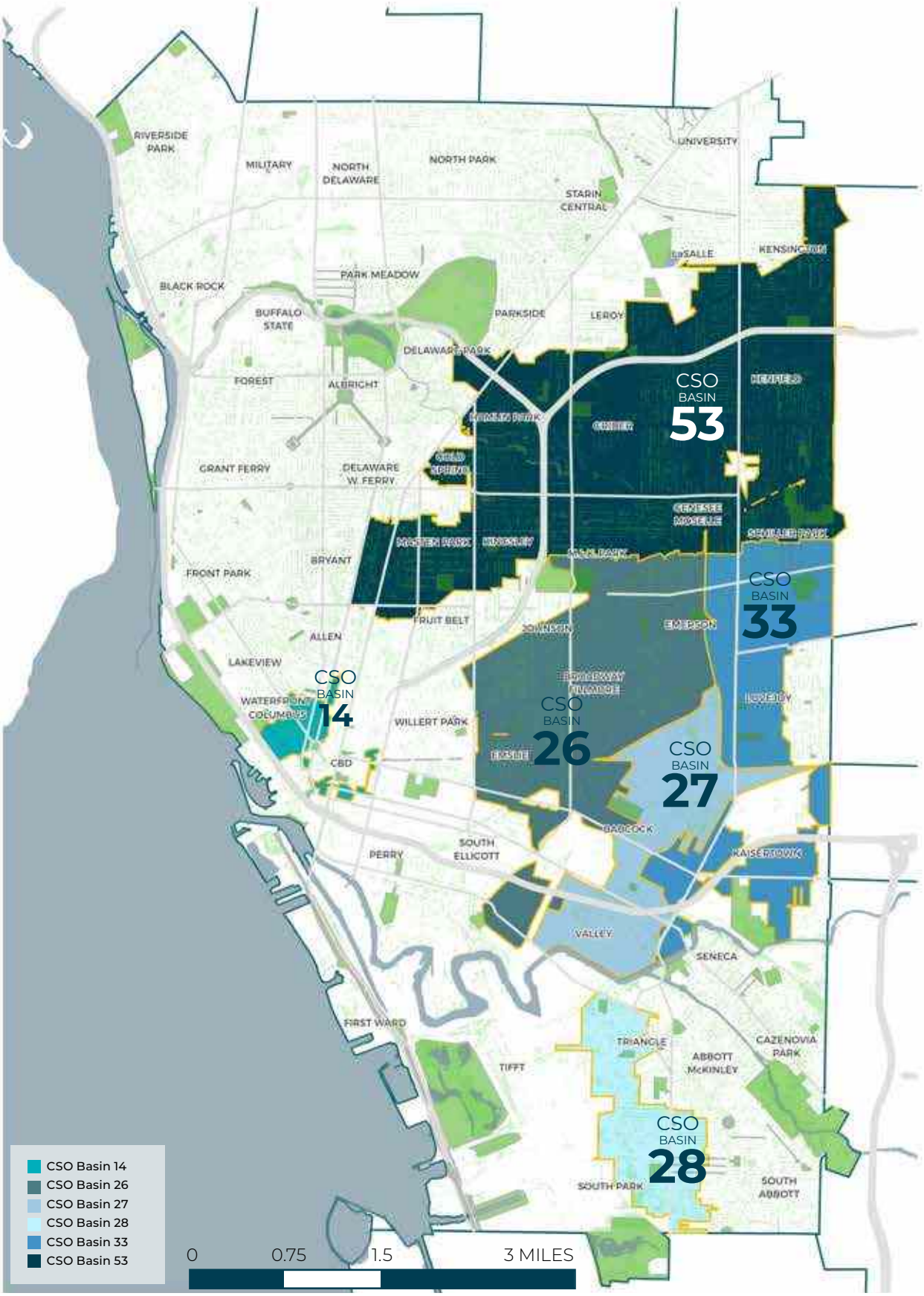


Figure 0.2: Map of Rain Check 2.0's six priority CSO Basins.

ONE
OPPORTUNITY

Green infrastructure can be a community amenity and perform key ecological services. Buffalo's neighborhoods could be transformed by connecting people to their environment with urban installations of green infrastructure. This chapter presents Buffalo's stormwater and green infrastructure goals, places these goals in the planning and regional context and details the opportunities for green infrastructure in six of Buffalo's most critical CSO Basins.

12 **Stormwater Goals**

18 **City & Regional Context**

36 **Priority CSO Basins**

- **42** CSO Basin 14
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- **122** CSO Basin 33
- **142** CSO Basin 53

STORMWATER GOALS

Building a Green Future

Buffalo, like many older cities, has a combined sewer system. As city neighborhoods were built, the combined sewer system was engineered to carry sewage and stormwater away as quickly as possible.

The system functions similary today. Both stormwater — rainfall and snow melt — and sanitary sewage flow into the same pipe. In dry weather all sewage is conveyed to the wastewater treatment plant and treated before being released to the Niagara River. In wet weather, however, a combination of stormwater and sewage enter the sewer and the wastewater treatment plant cannot always handle all the wastewater. As a result, untreated wastewater can overflow into our creeks, rivers, and lakes, resulting in a combined sewer overflow (CSO). By diverting stormwater from the sewers, capturing it and retaining it on site, green infrastructure reduces the amoung of stormwater entering the sewers and reduces the number of CSO events, protecting public health and the environment.

Anticipating Climate Change

According to researchers at the nonprofit Climate Central, Buffalo's summers could resemble the summer weather in southern Florida by 2100. While warmer weather might not sound bad in the winter, it will threaten native habitat and cause strain on Buffalo's buildings and infrastructure. Green infrastructure projects help build a more resilient and sustainable city and Buffalo Sewer is a key partner in addressing climate change in the region. Green infrastructure mitigates climate change impacts by decreasing the urban heat island effect, preserving water resources, and mitigating extreme precipitation events. Green infrastructure helps preserve ecological communities and allows for greater adaptation to a wide range of conditions. Green infrastructure is an effective strategy and tool for sustainability planning and action.

Buffalo's Nested Stormwater Strategies

PREVENT water from entering the system with green infrastructure

MANAGE water more effectively in the existing system with smart controls

IMPROVE the existing gray system for resiliency & large events

RAIN CHECK 2.0

Buffalo Stormwater Planning

Buffalo's stormwater planning has evolved from 2004 to the present. Buffalo, like other cities with combined sewer systems, has had to demonstrate to state and federal authorities that they have a plan to comply with the federal Clean Water Act requirements for safe, healthy water. Like other cities with combined sewer systems, Buffalo has prepared a Long-Term Control Plan (LTCP) (2014) that details the specific steps Buffalo Sewer will take to ensure compliance with the Clean Water Act.

Buffalo's LTCP was developed in consultation with community stakeholders. It contains plans for improving gray infrastructure, maximizing the use of existing sewer infrastructure with "smart" solutions that use real time control sensors, and the Rain Check program to maximize green infrastructure to reduce the amount of stormwater entering the sewer system. For more detail on the LTCP goals, refer to **Chapter Two.**

The Rain Check Programs

Launched in 2015, Rain Check is Buffalo's program to protect and restore the health of Buffalo's waterways by addressing the stormwater challenge. Rain Check 1.0 described the first generation of green infrastructure in Buffalo. Rain Check 1.0 focused on tackling the parts of the built environment that create the most runoff from stormwater—streets, parking lots, and roofs. Projects included: **green streets** with planted areas to collect and infiltrate stormwater and improve pedestrian safety; **green parking lots** that collect and absorb stormwater; **demolitions** and **vacant lot restorations** that created neighborhood green spaces to absorb stormwater; and **rain barrels and downspout disconnections** that enable homeowners to keep stormwater out of the system.

Rain Check 2.0 outlines strategies to deliver the next generation of green infrastructure projects to reduce runoff to meet the LTCP goals. Since a significant percentage of Buffalo's impervious surfaces are on private property, Rain Check 2.0 proposes three areas of focus: **new developments must meet strict stormwater requirements, new investments in the public sector should consider green infrastructure, and targeted properties should be encouraged to add green infrastructure**.

Lastly, Rain Check 2.0 will apply a lens of equity considerations to both the Rain Check 1.0 and 2.0 work. Buffalo Sewer is building upon regional equity initiatives to best understand how green infrastructure strategies can be equitably implemented and benefit communities and those involved in their construction and maintenance.

Establishing a Green Culture

It takes more than well-engineered systems to meet Buffalo's stormwater challenges. Organizations and individuals across the City need to have a shared commitment to implement change, resulting in shared benefits for all. Buffalo Sewer is committed to building a culture that supports green investment and builds new knowledge across the City.

Buffalo Sewer is adapting its internal processes to identify, evaluate, and adopt effective, economical, and equitable green infrastructure solutions. This involves ongoing discussions of how to best deliver projects and serve the needs of Buffalo Sewer's customers.

Buffalo Sewer is committed to working with partners and community stakeholders to find shared benefits and to making decisions and implementing projects that promote benefits in marginalized communities. Buffalo Sewer is prioritizing engagement, establishing relationships, and building trust with communities, especially those that have been historically underserved.

GOAL

569

impervious acres managed

CSO**53** 298ac

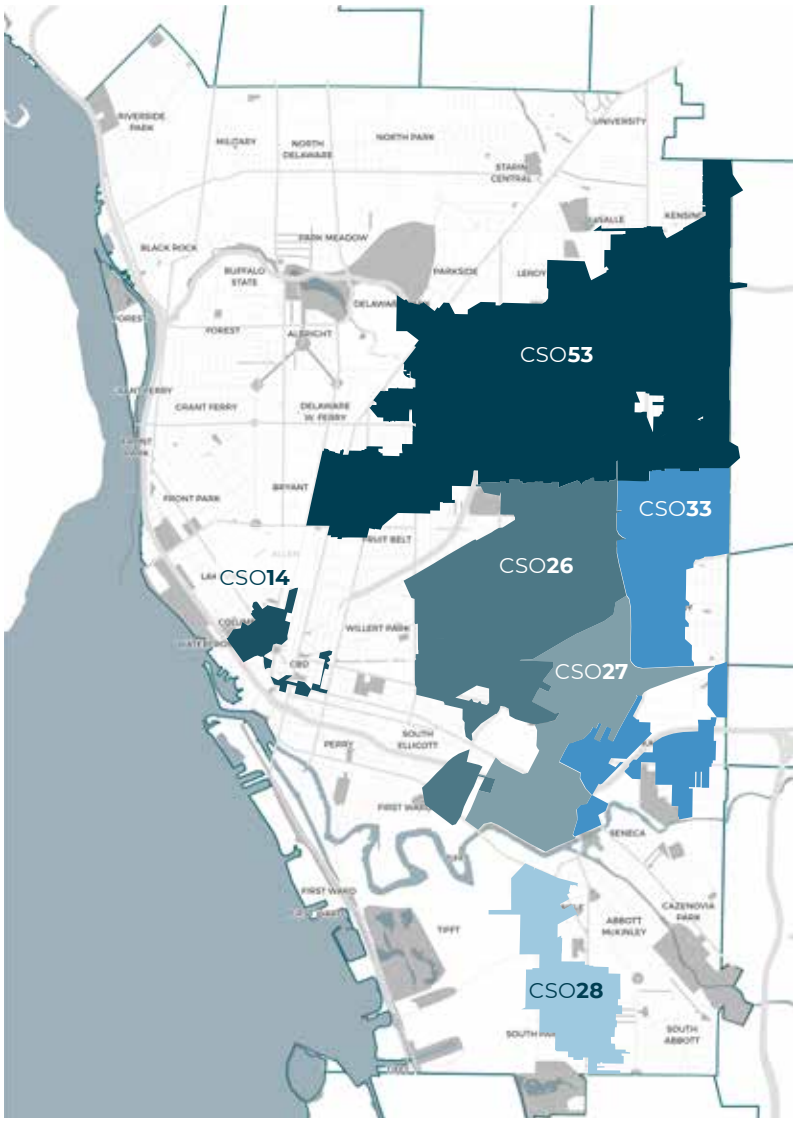
CSO**33** 94ac

CSO**28** 27ac

CSO**27** 73ac

CSO**26** 64ac

CSO**14** 13ac



2006

Buffalo Sewer tours green infrastructure in Toronto.

2010

Buffalo Sewer launches downspout disconnection pilot project.

2011

Buffalo Sewer supports a green infrastructure feasibility study. The study calls for a mix of gray and green infrastructure solutions and the creation of a citywide green infrastructure program.

2013

Buffalo Sewer prepares a **Green Infrastructure Master Plan** to accompany the Long Term Control Plan (LTCP).

The Long-Term Control Plan's goals are to dramatically reduce the number of CSO events and reduce the volume of CSO flows to local waterways.

GOAL
569
impervious acres managed by green infrastructure

By 2034, only 12 of the 52 permitted CSO discharge points are expected to activate. Forty discharge points will remain in place but not activate during a typical year.

By 2034, 11 of the permitted CSO discharge points will activate six or fewer times per typical year. Only CSO 55 will activate more often but water quality modeling shows that those activations do not prevent the attainment of Niagara River water quality objectives.

The volume of CSO flow to local waterways will be reduced by 73% and over 97% of all sanitary and stormwater flow will be captured and treated at the wastewater treatment facility.

The goal was set as a percentage of impervious area in the priority CSO basins where the number of CSOs exceeds what is permitted by the LTCP .

2014

Buffalo Sewer finalizes the LTCP and includes **first generation green infrastructure projects** with focus on green streets, green demolitions and vacant lots.

2015

Rain Check is launched.
Buffalo Sewer partners with Community Foundation for Greater Buffalo to secure a national Partners for Places grant.

2016

Buffalo Common Council adopts Buffalo Green Code, an updated city zoning ordinance that includes on-site stormwater management requirements for all new development.

2018

RAIN CHECK 1.0

Buffalo Sewer publishes Rain Check 1.0 Report. Together with the City, they partner with the Ralph C. Wilson, Jr. Foundation to explore opportunities with the private sector and start the next generation of green infrastructure in Buffalo.

2019

RAIN CHECK 2.0

Buffalo Sewer publishes Rain Check 2.0 Report and begins work on the next phase of green infrastructure in Buffalo.

STORMWATER GOALS

Buffalo's Six Priority CSO Basins

Buffalo Sewer focused on 6 priority CSO basins that span neighborhoods across Buffalo's East Side, as well as areas in downtown Buffalo and South Buffalo. These basins encompass a quarter of the City's land area and almost half of its population. The 6 priority CSO basins were chosen to have the greatest impact on water quality and public health in Buffalo, to improve basins with high numbers of CSO events, to leverage other investments, and to decrease impervious cover where its percentage is highest. For each of these basins, Buffalo Sewer conducted an equity analysis, environmental analysis, and site analysis as discussed in the next sections.

ERIE

CSO Basin 14 is in the central business district and close to waterfront access. Green infrastructure in this CSO basin can build on recent and future private development in this area to help reduce storm runoff.

BUFFALO

CSO Basin 26 is the site of many environmental improvement projects. Buffalo Sewer contributes to these projects as an important part of demonstrating environmental leadership.

CSO Basin 27 is anticipated to undergo significant investment in the near future in the East Side commercial corridors and revitalization. Buffalo Sewer wants to ensure that green infrastructure is part of these developments. This CSO basin has a very high percentage of impervious area, making work on green infrastructure here a priority.

CSO Basin 28 has the highest number of annual CSO events. This CSO basin also has a very high percentage of impervious area. Very little green infrastructure work has occurred in this CSO basin to date.

CSO Basin 33 is also anticipated to receive significant investment in the near future as part of the East Side commercial corridors and revitalization. This CSO basin also has a very high percentage of impervious area.

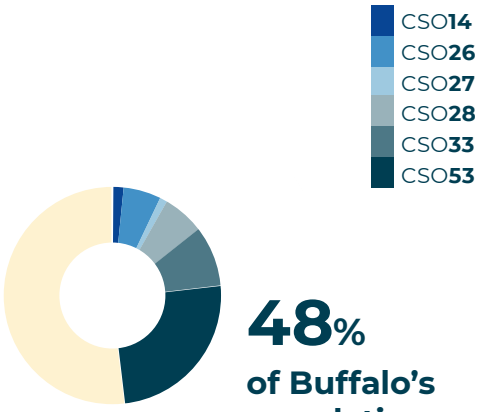
SCAJAQUADA

CSO Basin 53, where approximately one quarter of Buffalo lives, contributes to Scajaquada Creek. Recently, Scajaquada Creek has been dredged for contaminated sediment and habitat has been restored. CSO Basin 53 has a high number of annual CSO events and work in this basin can complement real time control projects that are part of Buffalo's Smart Sewer System and can augment anticipated future water quality projects by other organizations. Similar to other basins, there is anticipated investment in East Side commercial corridors and revitalization.

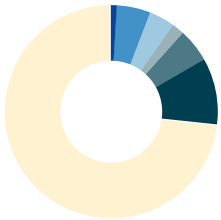
ERIE BASIN The **Erie Basin** is a popular recreation area and is part of Buffalo's iconic waterfront. CSO Basin 14 flows to the Erie Basin.

BUFFALO RIVER The **Buffalo River** is part of the industrial heart of Buffalo and is increasingly a focus of tourism and recreation. Buffalo Sewer's work in the 4 priority CSO basins contributing directly to the Buffalo River (CSO Basins 26, 27, 28, and 33) builds on work done by other agencies to improve water and habitat quality in the Buffalo River, including dredging of contaminated sediment and habitat restoration.

SCAJAQUADA CREEK
Scajaquada Creek runs both above and below grade and receives surface runoff as well as CSO drainage. CSO Basin 53 flows to Scajaquada Creek.



48%
of Buffalo's population lives in the six priority basins



26%
of Buffalo's land area is within the six priority basins

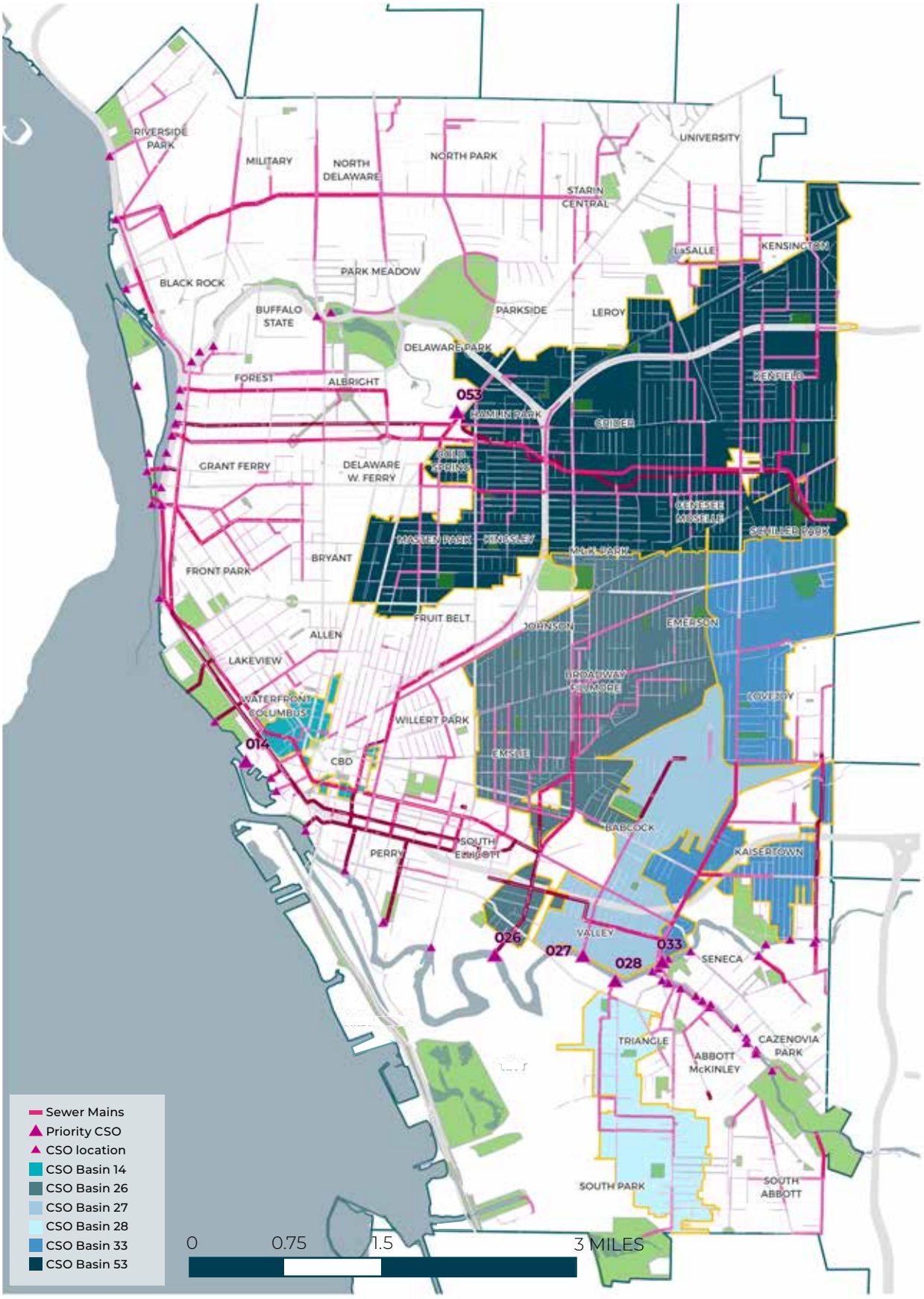


Figure 1.1: Map of Buffalo Sewer Network and Priority CSO Basins.

Green Infrastructure & Existing Initiatives

There are many signs of a more sustainable, prosperous future across Buffalo, driven by strategic planning, collaborative partnerships, and community engagement. Buffalo Sewer will help advance shared goals by working collaboratively with other agencies and aligning with existing planning efforts.

Revitalizing Buffalo's Waterfront

For years, many plans have focused on Buffalo's waterfront. These efforts strive to revitalize former industrial areas and waterfront neighborhoods, restore natural environments, and enhance waterfront access. Major efforts include the City's new development ordinance, the **Buffalo Green Code,** and the **Local Waterfront Revitalization Program (LWRP).** The Green Code integrates shoreline protection and green infrastructure into standards for commercial waterfront zones that intersect sewer basins targeted by Rain Check 2.0 along the Buffalo River.

The LWRP calls for enhancing access to waterways and improving water quality through green infrastructure. Other initiatives, like the **Ralph C. Wilson Jr. Foundation's plan to transform LaSalle Park** which lies adjacent to the downtown area targeted by Rain Check 2.0, are more geographically specific but also call for substantial improvements and better connections to key waterfront assets. Efforts to revitalize Buffalo's waterfront, whether through commercial development or natural restoration, offer high-profile opportunities to incorporate green infrastructure on both public and private lands.

Waterfront Initiatives

- Remedial Action Plan Stage 2 Addendum: Niagara River Area of Concern (2012)
- Niagara River Habitat Conservation Strategy (2014)
- Buffalo Green Code: Land Use Plan and Unified Development Ordinance (2016)
- Buffalo River Corridor: Brownfield Opportunity Area (2017)
- Imagine LaSalle: A Community Vision for Buffalo's LaSalle Park (2018)

Reinvesting in Commercial Corridors

Efforts are being made to revitalize neighborhood commercial areas across Buffalo. This is evident in City plans like the **Buffalo Green Code**, which prioritizes improving the visual character of commercial areas through form-based zoning codes to promote redevelopment. Commercial revitalization is also an economic development priority for New York State. Through the **Better Buffalo Fund** and the **East Side Corridor Economic Development Fund**, Empire State Development is partnering with the City of Buffalo to fund development and infrastructure projects along key corridors and neighborhood commercial districts. This includes a focus on Fillmore, Jefferson, Michigan, and Bailey—all of which overlap Rain Check 2.0's target areas. In downtown, public infrastructure investments are being guided by the **Public Realm Framework for Downtown Buffalo**, which promotes investment in strategic parts of downtown that also overlap Rain Check 2.0 priority areas. As these plans stimulate investment, they can create opportunities to add green infrastructure in commercial areas that tend to lack green space and are highly visible to residents.

Commercial Corridor Initiatives

- Michigan Street African American Heritage Corridor Draft Management Plan (2012)
- Buffalo Green Code: Land Use Plan and Unified Development Ordinance (2016)
- Buffalo River Corridor: Brownfield Opportunity Area (2017)
- Tonawanda Street Corridor: Brownfield Opportunity Area (2017)
- The Buffalo Billion II East Side Corridor Economic Development Fund (2018)

Existing initiatives focus on six strategic areas:

Revitalizing Buffalo's Waterfront
Reinvesting in Commercial Corridors
Enhancing the Transportation Network
Promoting Environmental Sustainability
Strengthening City Neighborhoods
Boosting the Regional Economy

Many recent plans and initiatives share common strategies with Buffalo Sewer's Rain Check program. Buffalo Sewer's investments can reinforce other plans and uplift community visions for parts of the City where relatively few plans are in place.

Figure 1.2: City of Buffalo, Buffalo Sewer and partners meet for press event during CSO Basin 60 green infrastructure pilot project.

Figure 1.3: Aligned corridor investment can support green infrastructure.

Enhancing the Transportation Network

Across the City and region, plans are underway to enhance Buffalo's transportation network by promoting alternative transportation modes. These plans call for multi-modal facilities, like bike lanes, recreational trails, and complete streets, all of which can involve green infrastructure. The **Buffalo Bicycle Master Plan** proposes specific streets for bicycle routes—such as Jefferson Avenue and Utica Street. Meanwhile, in outlining general strategies to promote multiple modes of transportation in the region, **Moving Forward 2050** envisions ways to incorporate green infrastructure on local roadways.

The **Comprehensive Transit-Oriented Development Plan for Niagara Frontier Transportation Authority** recommends green space around the City's transit stations, several of which fall within Rain Check 2.0 target investment areas, including Utica and Summer/Best. Similarly, the **Public Realm Framework for Downtown Buffalo** calls for green waterfront connections and Complete Green Streets in CSO Basin 14, including projects on Main Street, Delaware Avenue, and Erie Street. These efforts, as well as other transportation projects, provide opportunities to add green infrastructure in public rights-of-way, and potentially on private development projects spurred by public investments.

Transportation Initiatives

- Queen City Waterfront: Buffalo Waterfront Corridor Initiative: A Strategic Plan for Transportation Improvements (2007)
- Downtown Buffalo Infrastructure and Public Realm Framework (2015)
- Buffalo Bicycle Master Plan (2016)
- Niagara Street Now: A Community Vision to Guide the Streetscape Transformation (2016)
- Moving Forward 2050: A Regional Transportation Plan for Buffalo Niagara (2018)

Promoting Environmental Sustainability

Making the City and region sustainable through smart growth and environmental preservation is the objective of several recent plans. This includes regional plans, like **One Region Forward**, that share similar goals with Rain Check 2.0, namely improving water quality, preserving natural spaces, and increasing public access to waterways. Regional plans offer Buffalo Sewer an opportunity to make progress on these broader goals while helping to promote similar work across the region through collaborative networks.

Plans specific to the City of Buffalo also point to the need to add green infrastructure to improve local water quality. This includes the **Green Code**, which requires on-site stormwater management for any new development project in the City greater than 1/4 acre. The Green Code also sets vegetative buffer requirements for shoreline properties in the commercial waterfront overlay district that overlaps investment areas targeted by Rain Check 2.0 along the Buffalo River. **Plans for public parks, including for Buffalo's Olmsted Park system**, which is currently being updated, also open opportunities for enhanced green space for stormwater management in and around many public lands.

Sustainability Initiatives

- The Olmsted City: The Buffalo Olmsted Park System: Plan for the 21st Century (2007)
- Western New York Regional Sustainability Plan (2013)
- Niagara River Habitat Conservation Strategy (2014)
- One Region Forward: A New Way to Plan for Buffalo Niagara (2015)
- Buffalo River Corridor: Brownfield Opportunity Area (2017)

Figure 1.4: Map of Buffalo Planning Areas and Priority CSO Basins. The darker color indicates overlapping plans. More detailed planning maps for each priority basin can be found in each basin section.

Strengthening City Neighborhoods

Many plans aim to revitalize communities throughout Buffalo. These include city-wide plans, like the **Queen City Comprehensive Plan**, as well as neighborhood plans by community groups. Key examples include the **Michigan Street African American Heritage Corridor plan**, which stresses the need for green space on public and private land in its vision. Additionally, a **master plan for the Bailey-Green neighborhood** within CSO Basin 53, proposes a greenway to enhance the pedestrian experience and create community gathering spaces. Empire State Development's **East Side Corridor Economic Development Fund** is aimed at revitalizing neighborhood commercial areas within Buffalo Sewer's targeted basins.

A regional plan—**Complete Communities for a Changing Region**—highlights possibilities for using green infrastructure on vacant land to improve aesthetics and add recreational assets in distressed neighborhoods. Federal initiatives, like the recently designated Opportunity Zones, could support these local plans through tax incentives aimed to spur investment in low income communities around Rain Check's sewer basins. The City's sharpening focus on equity in community development is also clear in local plans. The **Greater Buffalo Racial Equity Roundtable** calls for analyses of racial equity impacts in decision-making, while the **City's Opportunity Pledge** urges community members to commit to a culture of inclusion and equality. All these initiatives can guide Rain Check green infrastructure investments so that they support community visions and advance equity in city neighborhoods.

Neighborhood Initiatives

- Queen City Hub: A Strategic Regional Action Plan for Downtown Buffalo (2007)
- Michigan Street African American Heritage Corridor Draft Management Plan (2012)
- PUSH Buffalo-BNSC: Building for the Future: Community Development Plan for the Massachusetts Avenue Corridor Green Development Zone (2012)
- The Racial Equity Dividend: Buffalo's Great Opportunity (2016)
- The Buffalo Billion II East Side Corridor Economic Development Fund (2018)

Boosting the Regional Economy

The **WNY Regional Economic Development Council** and its **Buffalo Billion** initiative is supporting capital investments in strategic areas that can involve green infrastructure. The recently constructed **Northland Workforce Training Center** and **Tesla's Gigafactory 2**, both signature investments of the Buffalo Billion, integrate green infrastructure. Brownfield Opportunity Areas (BOAs), another NYS initiative, promote economic growth in former industrial areas. The **South Buffalo, Buffalo Harbor, and Buffalo River BOAs** overlap with Rain Check 2.0 investment areas. Along with promoting strategic investments, these initiatives promote water quality, waterfront access, community revitalization, and infrastructure enhancements.

Economic development plans include strategies to develop the local workforce that could help promote, install and maintain green infrastructure. Community organizations, such as **PUSH Buffalo**, are also involved in training efforts for the local green workforce. As the regional economy evolves, opportunities for green infrastructure will grow, along with the ability of the workforce to install and maintain these investments.

Regional Economy Initiatives

- Queen City for the 21st Century: Buffalo's Comprehensive Plan (2006)
- WNY Regional Economic Development Strategic Plan: A Strategy for Prosperity in WNY (2011)
- Erie County Industrial Development Agency Comprehensive Economic Development Strategy (2017)
- Buffalo Billion: Buffalo Niagara's Strategic Plan for Prosperity (2017)
- WNY Regional Economic Development Council, A Strategy for Prosperity Progress Report (2018)

Figure 1.5: Enhancing the transportation network. Buffalo Niagara Medical Campus Streetscape, Design and Photo from SCAPE Studio.

Figure 1.6: Image of Buffalo's waterfront from The Racial Equity Dividend.

Figure 1.7 Niagara Street Corridor.

Equity Considerations

Beneath the headlines around waterfront revitalization and startup hubs in Buffalo lies the reality of inequities by race, ethnicity, and neighborhood in the City and region. Progress is happening on multiple fronts and Rain Check is part of the solution to creating a more equitable city.

Toward a More Equitable Future for Buffalo

Buffalo Sewer's green infrastructure initiative supports ongoing efforts to build greater equity in the region. Thousands of individuals, organizations, and businesses have signed the City of Buffalo's **Opportunity Pledge** to help build a culture of equity and inclusion across the City. The Greater Buffalo Racial Equity Roundtable, comprised of more than 30 community leaders from major public, non-profit, private, and faith institutions, has been meeting to develop innovative approaches to racial equity work that is data-driven, identifies and promotes promising practices, and promotes racial equity impact analysis. Furthermore, a range of stakeholders across Buffalo is developing more equitable and inclusive approaches to workforce training, business development, land use planning, neighborhood revitalization, and community engagement and leadership. Examples include the Northland Workforce Training Center and Beverly Gray Business Exchange Center.

Integrating Equity into Rain Check 2.0

PolicyLink, a national nonprofit research and advocacy organization, provides a useful definition of equity: "Just and fair inclusion into a society in which all can participate, prosper, and reach their full potential."

Equity is different from the formal legal equality conferred by landmark laws such as the Civil Rights Act. Equality gives everyone the right to ride on the bus, in any seat they choose. Equity ensures there are bus lines where people need them so they can get to school or the doctor or work. It means policies and investments that grow good jobs and expand entrepreneurship opportunities for low-income people and people of color. It means policies that build human capabilities by upgrading the education and skill of the nation's diverse workforce. It means policies that dismantle destructive barriers to economic inclusion and civic participation, and build healthy communities of opportunity for all.

Source: "Equity Is...," PolicyLink, October 5, 2016.

GI Equity Commitment

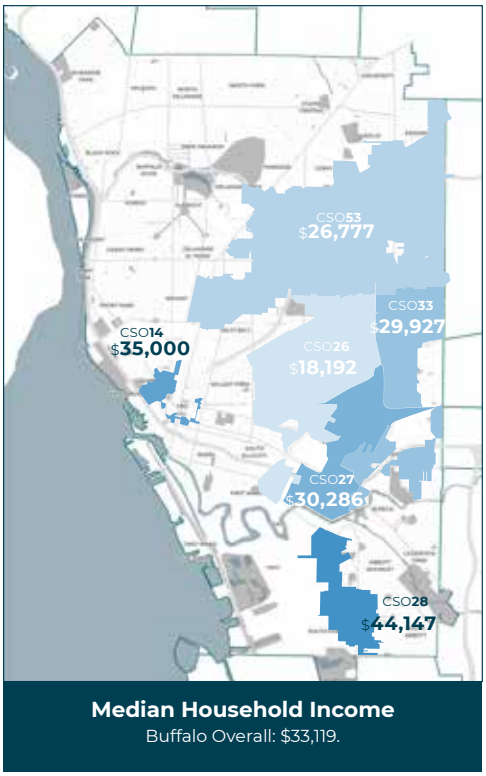
Buffalo Sewer will examine the following principles to maximize equitable investments:

- Embed equity into Rain Check mission
- Meet people where they are
- Identify and cultivate community champions
- Develop and communicate clear criteria for project selection
- Invest in social capital alongside physical capital
- Recognize that building trust takes time

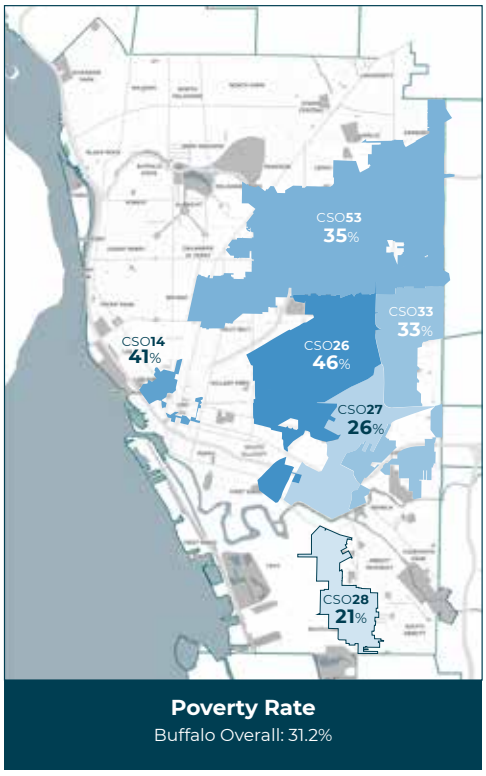
Through Rain Check, Buffalo Sewer can advance equity by creating opportunities for communities to share in the economic, social, and environmental benefits of green infrastructure and have a role in stormwater management in their communities. Many forms of green infrastructure such as rain gardens, bioswales, and planters are above-ground, vegetated practices that can be found in a wide range of urban spaces—from school playgrounds to sidewalks and rooftops. These practices may not be recognized as a form of water infrastructure by the general public, but they can help alleviate stresses to Buffalo's sewer system and improve water quality. National conversations around water challenges and equitable water management can inform local strategies around green infrastructure in Buffalo.

Green infrastructure investments can also support educational programs, local employment and career pathways, business development and contracting opportunities, and neighborhood improvements. Buffalo Sewer can maximize outcomes by partnering with educational institutions, workforce trainers, community-based organizations and other stakeholders across Buffalo.

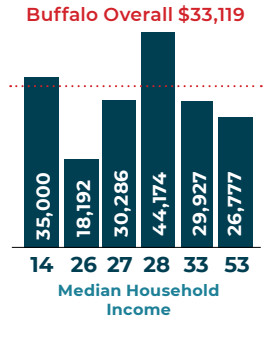
Green Infrastructure Equity Analyses and Index

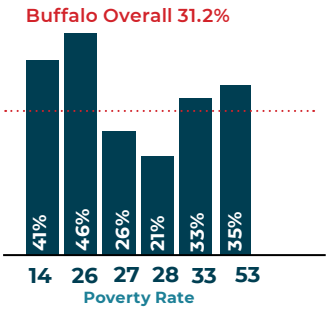


Median Household Income
Buffalo Overall: $33,119.



Poverty Rate
Buffalo Overall: 31.2%





Source for maps and graphs: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

Buffalo Sewer is committed to evaluating how its decisions and projects can reduce inequities across Buffalo. Site selection for green infrastructure is often driven by engineering and technical concerns. An equity analysis layers environmental, economic, and social factors onto the engineering approach when evaluating opportunities for green infrastructure. Several new planning tools use indexes and other need-based approaches to account for a wider range of potential program impacts. Buffalo Sewer has developed a Green Infrastructure Equity Index (GI Equity Index) that incorporates elements of existing green infrastructure indexes and racial equity analysis tools to conduct a preliminary analysis of various equity considerations. These in-depth analyses help form a guiding framework for Buffalo Sewer to build equity through the implementation of Rain Check 2.0 projects and the GI Equity Index allows comparison of measures of equity metrics across Buffalo. The GI Equity Index includes 17 variables related to disadvantage and vulnerability (socioeconomic factors), and environmental factors related to exposure to environmental risk and access to environmental amenities (built environment measures). To learn how the Equity Index was developed and the data sources used, reference **Appendix A** to this report.

Equity in Green Infrastructure

According to the U.S. Water Alliance, water equity "occurs when all communities have access to safe, clean, affordable drinking water and wastewater services; are resilient in the face of floods, drought, and other climate risks; have a role in decision-making processes related to water management in their communities; and share in the economic, social, and environmental benefits of water systems."

Source: U.S. Water Alliance, An Equitable Water Future: A National Briefing Paper (2017).

Equitable development considers the individuals, entities, activities and materials involved in the design, installation, and maintenance of green infrastructure projects. For example, issues of where materials are sourced, who gets contracts, and who makes up the local green infrastructure workforce could fall under equitable development considerations. Green infrastructure could create more access to opportunities for existing local, small, minority-, and women-owned businesses and workers from disadvantaged communities and provide opportunities for new businesses and workers to enter the field.

Equitable decision-making considers how the community members and government agencies make decisions and how they are engaged. Equitable decision-making considers broader community, economic, and environmental goals and tries to build partnerships and align green infrastructure development to advance shared goals. Issues of engagement are critical considerations for equitable decision-making, which aims to provide those potentially impacted by investments with opportunities to meaningfully engage throughout different phases and types of green infrastructure projects.

GI Equity Index Factors

Buffalo Sewer is examining how the following factors influence the decision-making process:

Socio-economic factors:

- Race and ethnicity
- Income
- Education attainment
- Young children
- Older adults
- Owner occupancy
- Limited English speakers
- Unemployment and labor force participation

Built environment factors:

- Traffic proximity
- Ozone levels
- Particulate matter
- Access to public open space
- Tree canopy cover
- Impervious surface cover
- Vacant land
- Residential vacancy rates
- Commercial vacancy rates

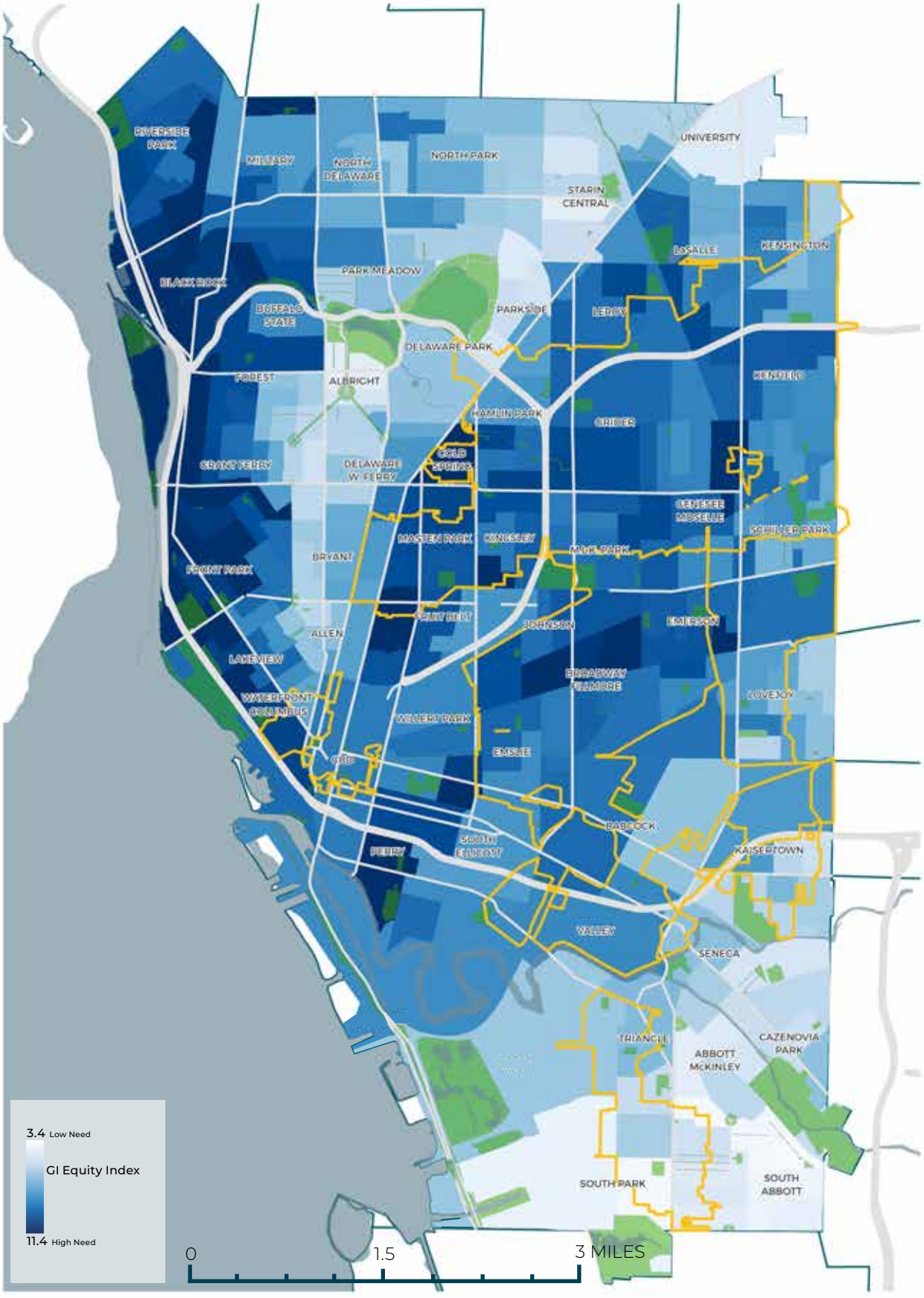
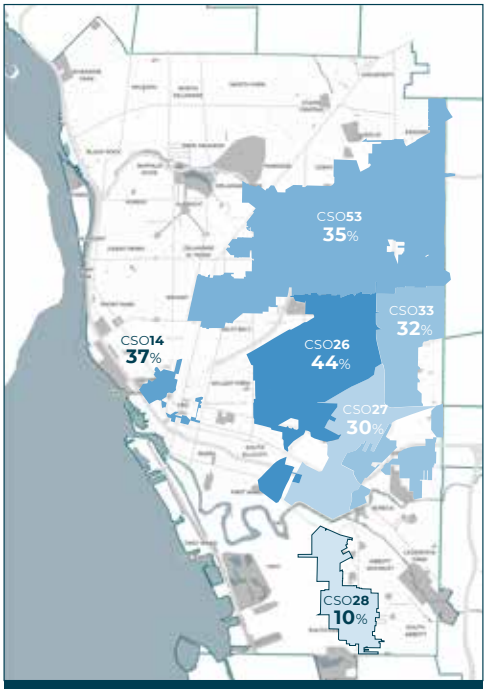


Figure 1.8: Map of Buffalo block groups with GI Equity Index Scores.

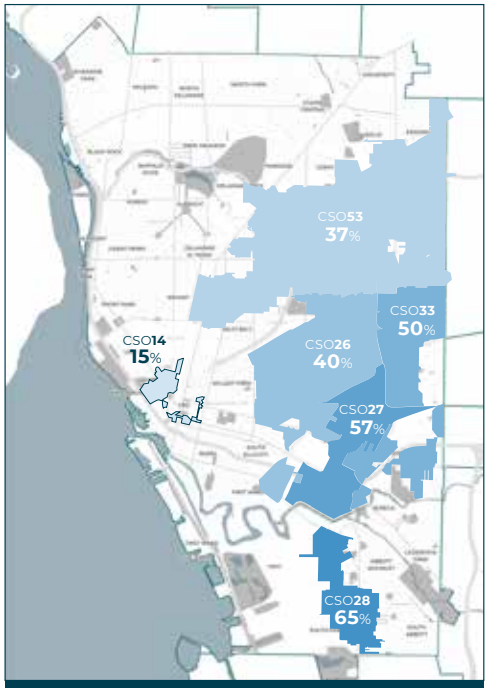
Existing Equity Challenges

In recent years, Buffalo has taken great strides to attract population, jobs, and investment to the City. However, the City still faces deeply entrenched challenges around population loss, concentrated poverty, and racial segregation. Across various indicators of economic well-being, the City of Buffalo performs worse than the Buffalo-Niagara region and the United States as a whole. Furthermore, across nearly every indicator—including income, education, employment, housing, health and environmental justice—there are significant and persistent disparities by race, ethnicity, and neighborhood.

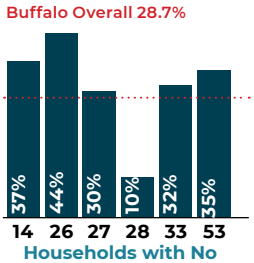
Despite overall population loss in the City, communities of color, especially immigrant communities of color, are growing. The City's population is mainly people of color (55.4%), with significant shares of Black (41.8%) and Latino residents (10.9%) and a rapidly growing Asian population (U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates). Communities of color are located throughout Buffalo, but are more concentrated in the northeastern and eastern neighborhoods of the City. Income inequality, as measured by the Gini coefficient, a summary measure of income inequality, is increasing and higher in Buffalo (0.51) than in the United

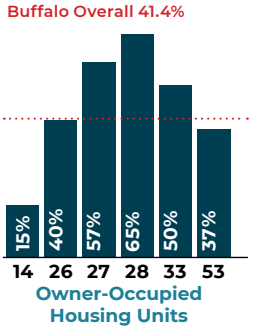


Households with No Vehicles Available
Buffalo Overall: 28.7%

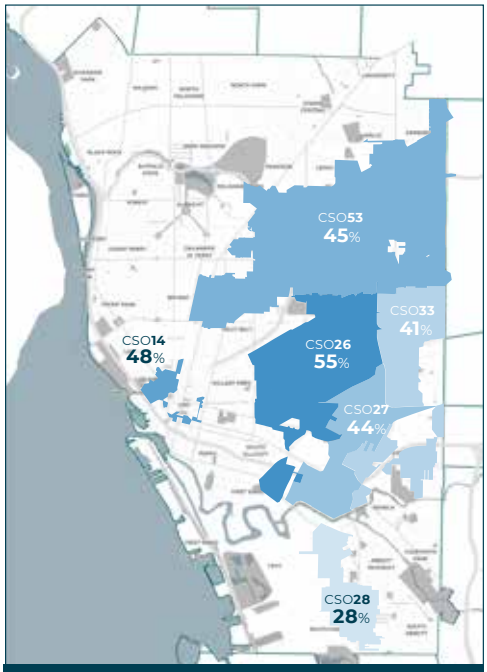


Owner-Occupied Housing Units
Buffalo Overall: 41.4%



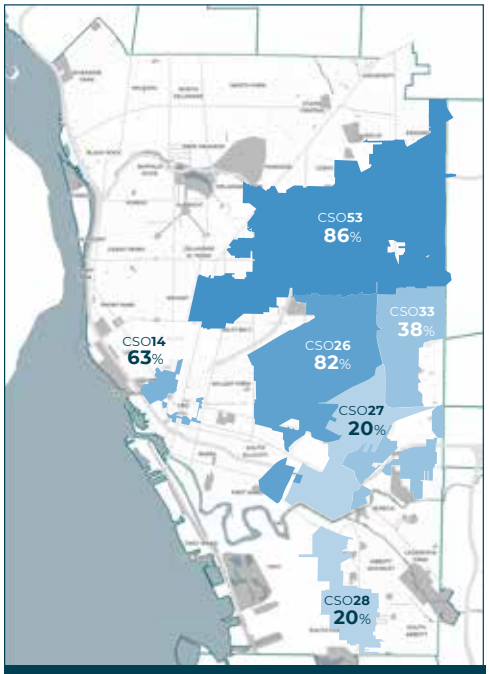


Source for maps and graphs: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.



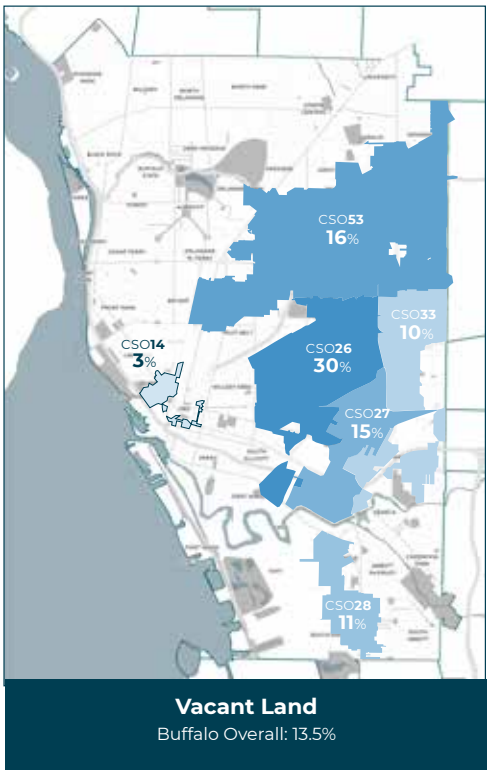
Working-age Population, Not Employed,
(16-64) including those unemployed or out of the labor force
Buffalo Overall: 40.1%

Source for map and graph: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.



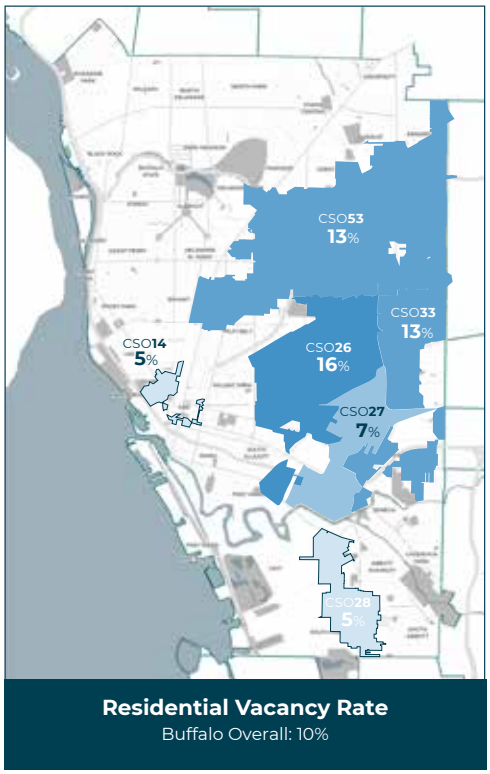
People of Color
Buffalo Overall: 55.4%

Source for map and graph: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.



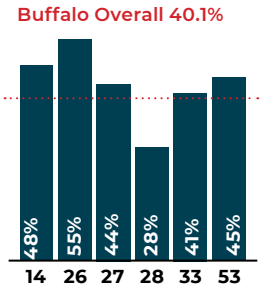
Vacant Land
Buffalo Overall: 13.5%

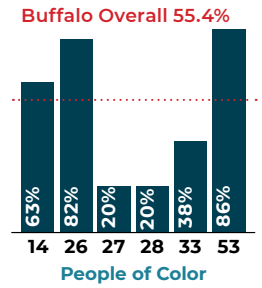
Source: UBRI analysis of parcel data from the Erie County Department of Environment and Planning, 2016.

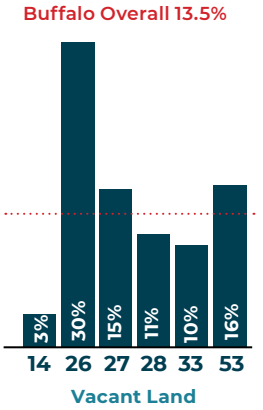


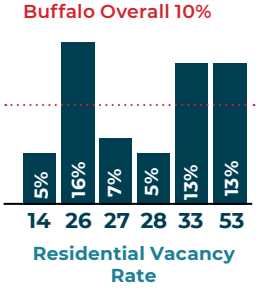
Residential Vacancy Rate
Buffalo Overall: 10%

Source: HUD-USPS data on address vacancies, June 2018.









States overall (0.48), for the period from 1979-2014. (U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates; PolicyLink and USC Program for Environmental and Regional Equity, "Advancing Health Equity and Inclusive Growth in Buffalo," (Oakland, CA: PolicyLink, 2017). Buffalo has higher rates of poverty and unemployment, and lower levels of educational attainment and car access, than the broader region and country as a whole. While rates of poverty and unemployment are relatively high overall, they vary by neighborhood and by race and ethnicity. For example, unemployment rates are higher on the east side of the City, where several neighborhoods have an unemployment rate that exceeds 21%. (PolicyLink and USC Program for Environmental and Regional Equity, "Advancing Health Equity and Inclusive Growth in Buffalo," (Oakland, CA: PolicyLink, 2017). Rates of unemployment in the City are highest for Black (15.2%) and Latino residents (12.3%). (U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates).

There are also challenges around work readiness, housing affordability, and car access that are unevenly distributed across the City. The education levels of the City's population are not keeping up with employers' educational demands. The non-profit organization, PolicyLink, estimates that by 2020, 51% of jobs in New York State will require at least an associate's degree. Only 24% of Black residents and 20% of Latino residents in Buffalo have that level of education today. (PolicyLink and USC Program for Environmental and Regional Equity, "Advancing Health Equity and Inclusive Growth in Buffalo," (Oakland, CA: PolicyLink, 2017). Although the share of affordable rental housing is higher in Buffalo than in the region and country overall, the majority of renter households are cost burdened (spending more than 30% of income on rent) and those on the east side of the City are particularly affected. Furthermore, Black households are more likely than White households to be cost burdened, regardless of whether they rent or own. Finally, car access is a serious issue in the City and varies significantly by neighborhood. There are several neighborhoods in the City where 43% of households or more do not have a vehicle and likely rely on public transit. (PolicyLink and USC Program for Environmental and Regional Equity, "Advancing Health Equity and Inclusive Growth in Buffalo," (Oakland, CA: PolicyLink, 2017).

Equity Considerations for Rain Check 2.0

The equity analysis prepared for Rain Check 2.0 provides context for understanding a wide range of inequities across the City overall, and in the target CSO basins. Buffalo Sewer has identified several equity considerations that it can influence through its own work or in partnership with others.

GI Equity Priorities

To leverage positive equity impacts of green infrastructure investment, Buffalo Sewer will focus on:

- Workforce Development
- Contracting and Procurement
- Neighborhood Revitalization
- Inclusive Outreach and Public Engagement

Figure 1.9: Buffalo Sewer lending a hand at Waterworx Pop-Up Park event.

WORKFORCE DEVELOPMENT

Skilled workers are needed to design, build, and maintain green infrastructure systems. By intentionally expanding opportunities for more diverse populations to enter the green infrastructure workforce, Buffalo Sewer and partners can encourage local industries to be more reflective of the communities they serve. Green infrastructure could be a unique opportunity for Buffalo Sewer, educational institutions, workforce trainers, and community-based organizations to come together to prepare the next generation of green infrastructure workers. Partnership will be critical to the success of diverse and inclusive workforce development programs.

CONTRACTING AND PROCUREMENT

Public investment in green infrastructure is an opportunity to generate economic benefits for local, small, minority-, and women-owned businesses in professional service and construction contracts. While there may be existing programs and standards for inclusion, Buffalo Sewer will likely encounter challenges that hinder successful participation in green infrastructure projects. Investments in contracting, consulting, and procurement can provide direct opportunities for local small businesses and disadvantaged firms and help expand their contacts, clients, skills, and experience. There may also be opportunities to partner on business accelerators and development programs that support the growth of new firms and build the capacity of existing firms.

NEIGHBORHOOD REVITALIZATION

Green infrastructure projects can be a tool for neighborhood transformation by creating green space, adding vegetation, and upgrading aging infrastructure. Green infrastructure can leverage public dollars to provide multiple benefits to historically disinvested neighborhoods, especially when coordinated with investments in transportation, education, clean energy, and public space. These investments can contribute to building complete communities that offer residents spaces to live, work, and move in healthier and safer ways. At the same time, by spurring new economic development or expanding green space in disinvested places, these investments have the potential to contribute to increasing rents and property taxes, as well as other neighborhood changes that may not be desirable by existing residents.

INCLUSIVE OUTREACH AND PUBLIC ENGAGEMENT

Public green infrastructure planning and projects can create venues for residents, community-based organizations, and other stakeholders to connect to and shape local decision-making processes. Robust outreach and engagement can provide mutual benefits to both Buffalo Sewer and community members by deepening understanding of community priorities; increasing legitimacy and support for public plans and projects; cultivating resident and community stewardship of projects; and improving government/community relations. Additionally, green infrastructure projects can initiate and facilitate community visioning in disinvested neighborhoods to help distribute these benefits to parts of the City that need it most.

Evaluate what is **possible**
by inventorying the opportunities and identifying partners, issues, and concerns.

Analyze what is **probable**
based on factors related to partner capacity, development momentum, need, or other criteria.

Identify what is **preferred**
by soliciting community preferences, aligning with other plans, and considering other benefits.

Environmental Systems & Regional Context

Buffalo's stormwater performance is closely linked to environmental systems including waterways and tree canopy.

Buffalo is located on the eastern shore of the Niagara River and Lake Erie, between Lake Erie and Lake Ontario – a key gateway between the United States and Canada. It is located in the Erie-Ontario Lake Plain province, with a topography typical of an abandoned lake bed – gently rolling and flat. The bedrock is Onondaga Limestone formation with a glacial till soil above this bedrock, which allows stormwater to infiltrate. High bedrock can be found just below the surface in some places and most soil types in the City are anthropogenic and the result of urban development.

Buffalo's climate is a humid continental type climate influenced by the Great Lakes. Buffalo experiences cold, snowy winters due to the lakes. The ground is typically covered with snow from December through early March. Buffalo's average annual precipitation between 2000 and 2018 was 40.3 inches. These patterns are likely to change, with an increase of snow, an extended growing season, and a temperature increase of between 3-5 degrees by mid-Century.

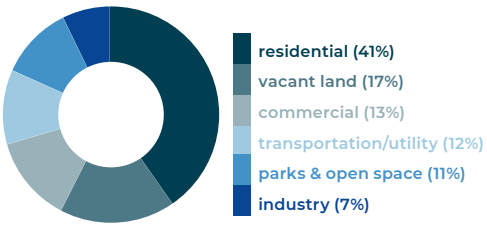
The Western New York region is characterized by hardwood forests. The most common forest communities include beech-maple forests, elm-ash forests, maple-basswood, hemlock-northern hardwood forests, oak openings and pitch pine areas. Common mammals include the cottontail rabbit, eastern chipmunk, woodchuck, raccoon, striped skunk and white-tailed deer. Characteristic birds include the American kestrel, mourning dove, downy woodpecker, red-eyed vireo, common yellow-throat, song sparrow and norther oriole. Common reptiles and amphibians include the American toad, leopard frog, painted turtle, and garter snake. Green infrastructure can support plant and animal communities by using native plants and avoiding invasive plants.

Waterways

Buffalo has a special place in the Great Lakes system. All water that drains into the western Great Lakes flows past Buffalo and into the Niagara River before flowing over Niagara Falls, into Lake Ontario, and into the Saint Lawrence River. This makes the City of Buffalo a steward for all water in the Great Lakes—about one-fifth of the world's freshwater.

The creeks and streams that run through the City of Buffalo also drain into the Great Lakes system. While the health of local waterways depends on the health of this broader system, steps taken to care for local waterways can also have big impacts on water quality throughout the Great Lakes. For example, algal blooms result from land-based runoff. The water quality in the Great Lakes can affect the environment, public health, and economy of all communities across the basin.

Buffalo's land use informed the priorities for Rain Check 1.0 and Rain Check 2.0.



Land Use Distribution Within the City of Buffalo

The priority CSO Basins discharge to the **Buffalo River** (CSO Basins 26, 27, 28 & 33), the **Erie Basin** (CSO Basin 14) and **Scajaquada Creek** (CSO Basin 53). The Buffalo River discharges into Lake Erie at the Buffalo Waterfront. All of Buffalo's stormwater eventually flows into the **Niagara River.**

The fast-flowing **Niagara River** is the distinctive waterway of the Buffalo Niagara region. The 37-mile river feeds the world famous Niagara Falls, connects Lake Erie to Lake Ontario and forms part of the border between the U.S. and Canada. Today, the Niagara River is widely used by residents and tourists for fishing, boating, sight-seeing and other recreation.

Historically, industry took root near the **Buffalo River**. It still serves that purpose today in a reduced role. The river is increasingly being used for recreation and tourism. Water quality in the Buffalo River is impaired due to a history of industrial pollution and runoff from many sources throughout the watershed, but has benefited from recent dredging and riparian restoration projects. As the Buffalo River becomes more important as a recreation and tourism amenity, cleaning up the river is a priority. Tributaries to the Buffalo River include Buffalo Creek, Cayuga Creek, and Cazenovia Creek. The river winds through South Buffalo before draining into Lake Erie at the City's Inner Harbor.

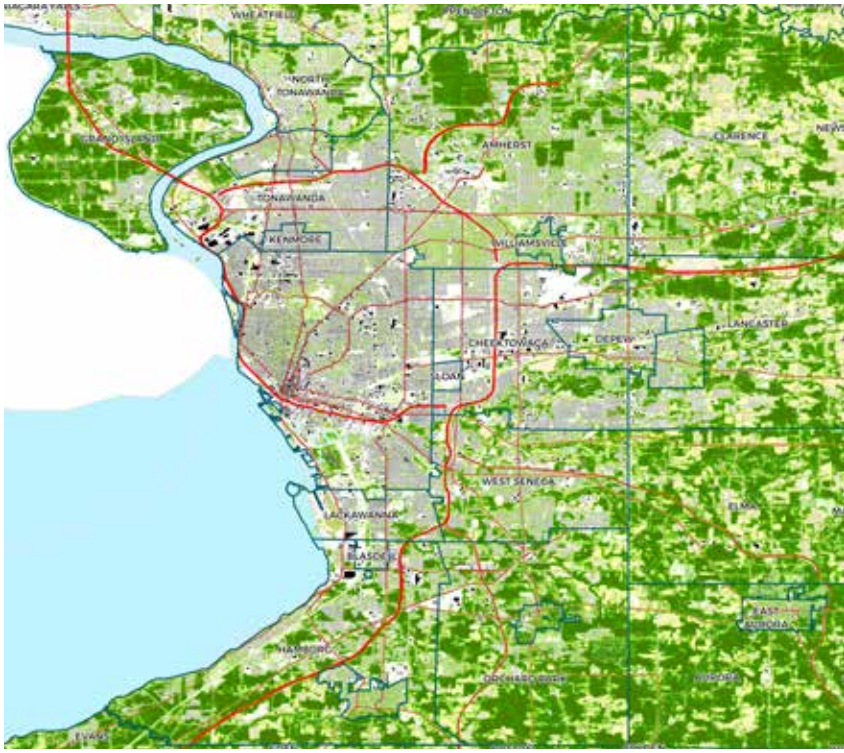


Figure 1.10 Buffalo's regional land cover from USGS national land cover dataset.

The New York Department of Environmental Conservation identified the Buffalo River as an Area of Concern in 1987. This designation resulted in restrictions on fish and wildlife consumption and dredging activities.

Lake Erie, the smallest Great Lake in terms of overall volume, links Buffalo with major shipping channels and has a substantial impact on the local climate. The Great Lakes to the west, and tributary streams south of the city, feed into Lake Erie, which is the source of all of Buffalo's water supply.

Scajaquada Creek, a tributary of the Niagara River, begins in the Town of Lancaster and flows west through Cheektowaga where it enters an underground channel before resurfacing at Forest Lawn Cemetery in Buffalo. From there, the creek travels through the cemetery and Delaware Park, feeding Hoyt Lake in the park before ultimately flowing into the **Black Rock Canal**.

The **Black Rock Canal** is formed by a break wall that reroutes the Niagara River waters between Unity Island and the City's shoreline. This channel was constructed so ships could travel from Buffalo more safely by avoiding the rapid current of the Niagara River. Today, the Black Rock Canal is a destination for boating, fishing, and for taking in waterfront scenery.

A tributary of the Buffalo River, **Cazenovia Creek** forms in southern Erie County, traveling through various towns before entering the City of Buffalo. It flows through South Buffalo neighborhoods and forms the prime water feature of Cazenovia Park, part of the City's Olmsted Park system. The creek can overflow and create flooding issues for nearby residents during significant wet weather events.

Buffalo has already taken a number of steps to address water quality concerns in the region. The **Buffalo River Ecological Restoration Master Plan** provides a framework for addressing habitat related impairments in the lower Buffalo River watershed. The **Great Lakes Legacy Act Sediment Action Plan** addresses many concerns around the Buffalo River Area of Concern. The draft **Local Waterfront Revitalization Program** proposes waterfront improvement projects, and establishes a program for managing, revitalizing and protecting resources along Lake Erie, the Niagara River, the Buffalo River, Scajaquada Creek, and Cazenovia Creek. Buffalo Sewer's Long-Term Control Plan is part of this region-wide effort to improve water quality and habitat.

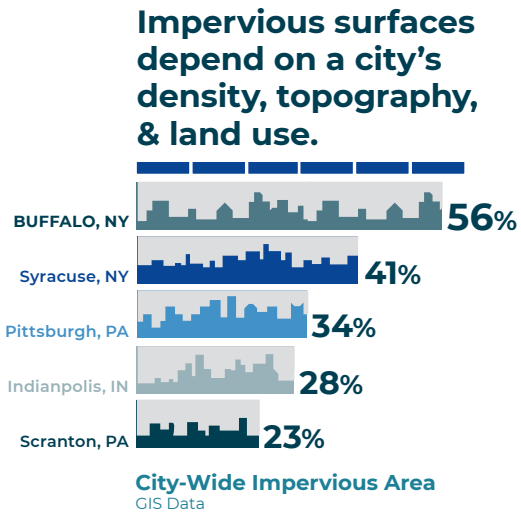
Tree Canopy Cover

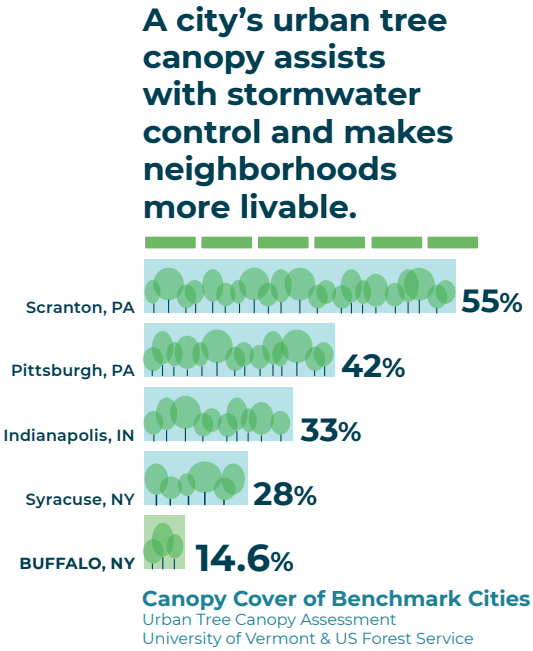
Trees intercept, absorb and filter stormwater. Increasing the tree canopy in Buffalo can help to reduce the amount of stormwater reaching the combined sewer and improve the quality of local waterways.

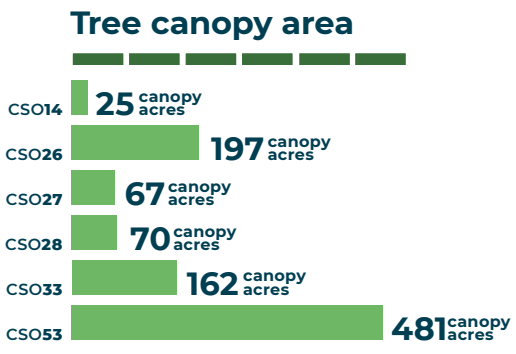
In addition to stormwater benefits, trees provide other benefits relating to equity goals and quality of life, including reducing urban heat island effect, improving walkability, increasing access to green space, and traffic calming. These many benefits of trees were also considered in the analysis of green infrastructure opportunities in Buffalo.

Buffalo's existing tree canopy in each priority CSO basin was analyzed to determine the amount of canopy within the public right of way and the amount of canopy on private land. The overall canopy cover for Buffalo is 14.6% or 3,836 acres of canopy. Most of the priority CSO basins have canopy cover on par with the city average. CSO Basins 27 & 33 are well below the city average. The city overall has more than 45,000 vacant acceptable street tree spaces. Increasing the canopy cover within the City and particularly within the priority CSO Basins would assist in meeting Buffalo Sewers stormwater goals.

To increase the tree canopy in the City, Buffalo Sewer is developing a system to account for the benefits of urban trees of different types and is examining programs to support tree planting. See Chapter Two for more information on what Buffalo Sewer is doing to understand the existing tree canopy and identify opportunities for urban forest expansion.







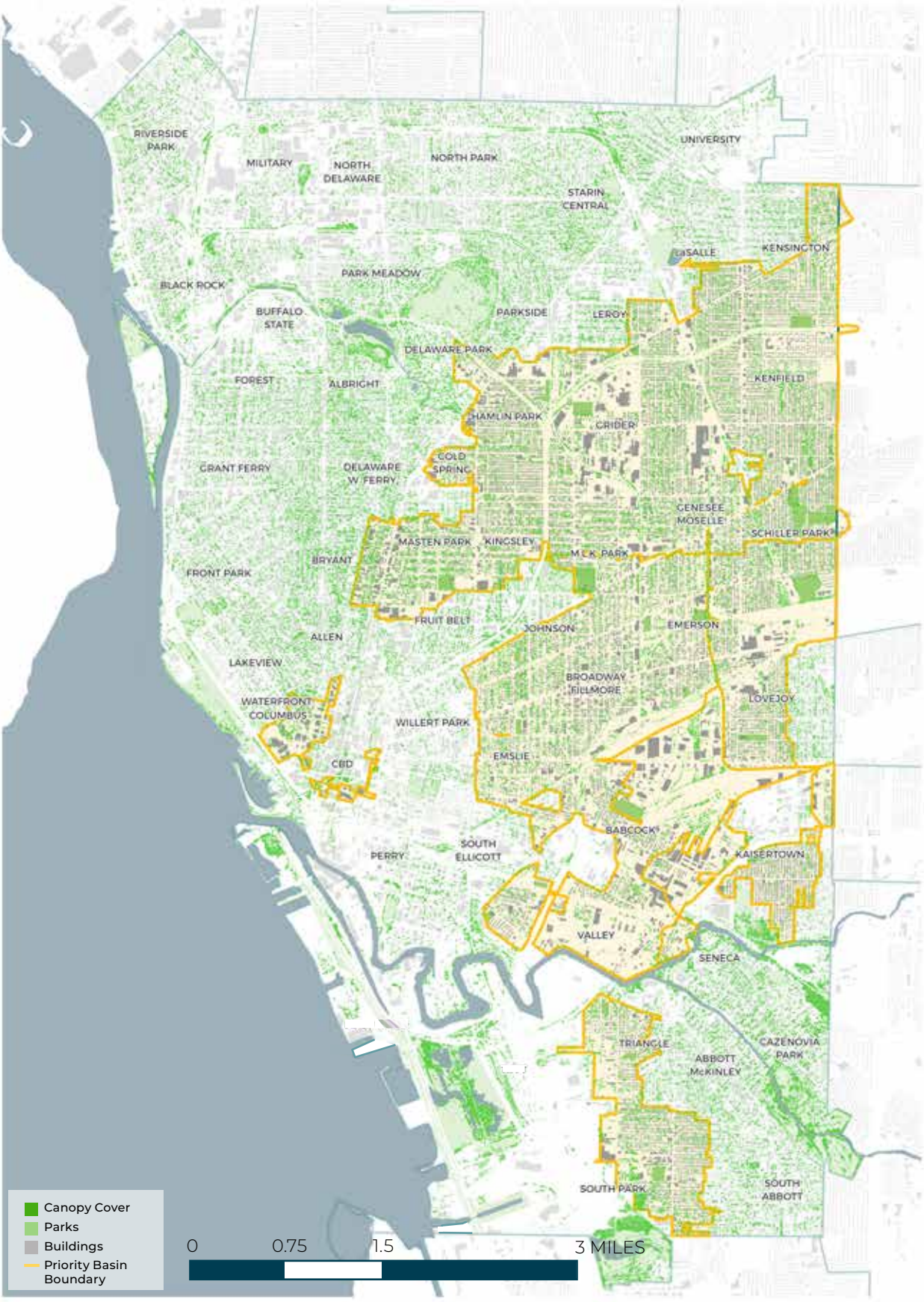


Figure 1.11: Map of Buffalo Canopy Cover and Priority CSO Basins.

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.

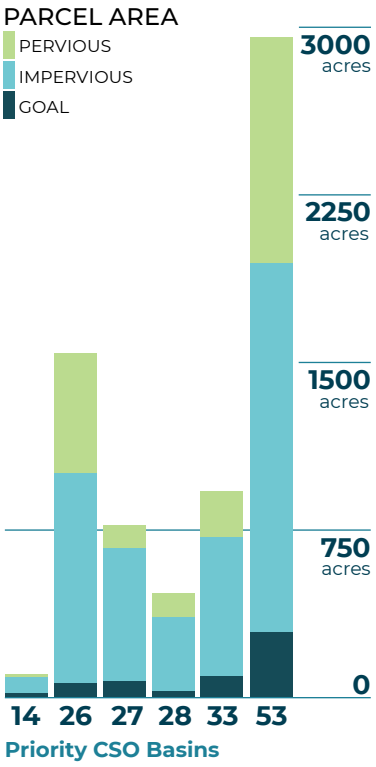
Based on this analysis, this opportunity report identifies types of green infrastructure opportunity sites. The opportunity sites are grouped by category - the key categories being corridors, commercial properties, parking lots, institutions, parks and vacant lots. These opportunity sites were identified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

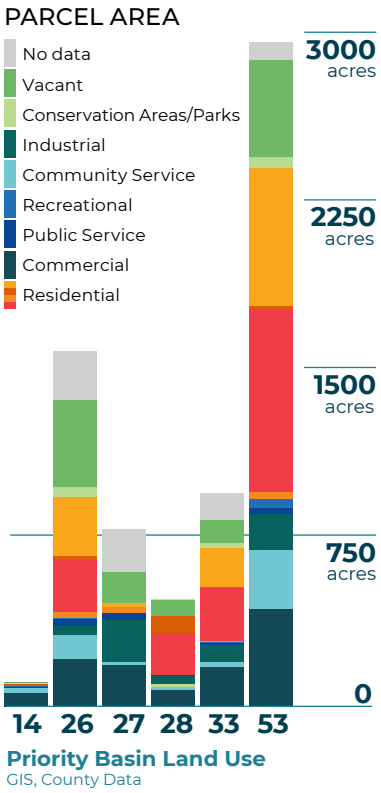
- **Equity considerations city-wide and within each CSO basin,**
- **Analysis of how green infrastructure would impact and improve environmental systems, and**
- **Site analysis to determine the best opportunities to retrofit green infrastructure based on the highest impervious area and the highest feasibility.**

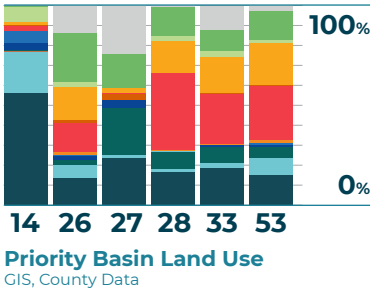
The next sections discuss each of the priority CSO basins in detail, presenting the analysis for each CSO basin. Within each CSO basin, opportunity sites are identified and an illustrative opportunity, project, or groups of projects lays out a vision of how green infrastructure can be deployed on a specific 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





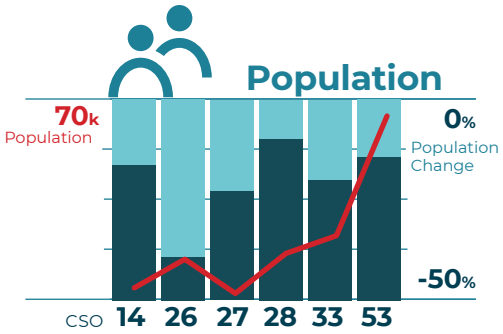


Basin Size

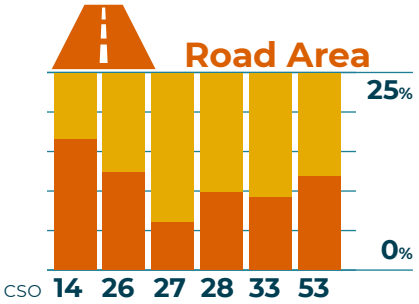
Rain Check 2.0 focused on 6 priority CSO Basins, each diverse in size, goal, and distribution of impervious surfaces. The charts above demonstrate total tax property parcel area, broken out by pervious and impervious area with the impervious reduction goal shown as a subset of impervious area.

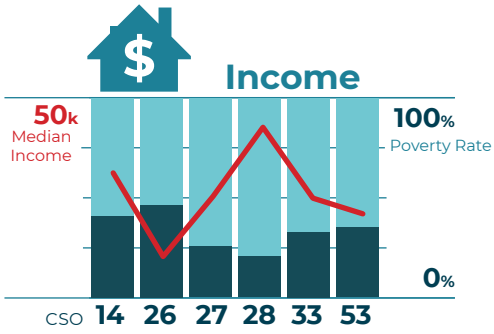
Land Use

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.

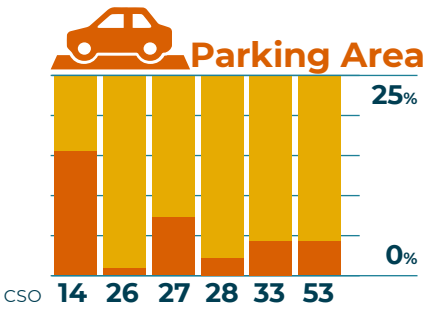


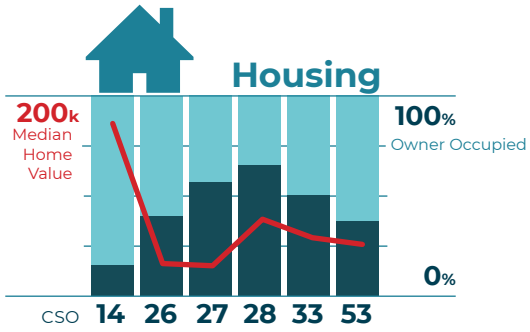
Priority Basin Trends
Population vs Population Change 2000-2016



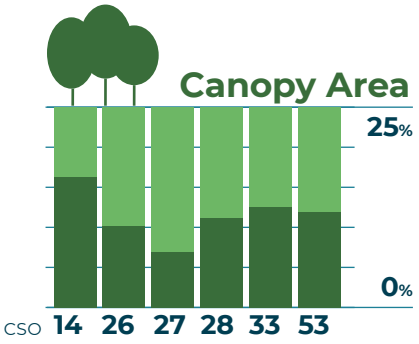


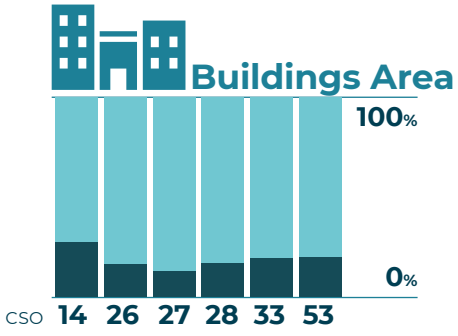
Priority Basin Trends
Rate of Poverty vs Median Income

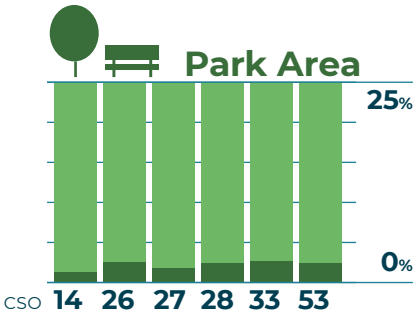




Priority Basin Trends
Rate of Owner Occupied Homes vs
Median Value of Owner Occupied Homes







PRIORITY CSO BASINS

Site Analysis

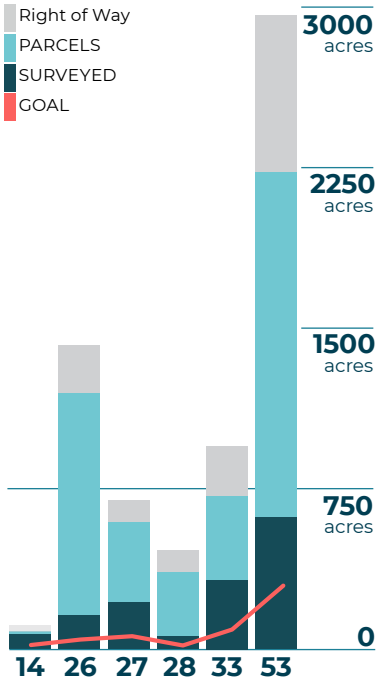
To understand the potential for managing large areas of impervious surface, detailed site analysis within the priority CSO basins were performed. This analysis involved two components: 1) a thorough desktop analysis utilizing advanced GIS and remote sensing techniques, and 2) detailed on-the-ground field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

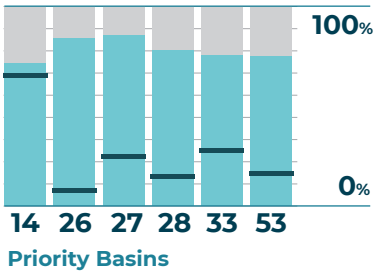
The initial desk top analysis identified potential parcels, property owners, and land use. The initial analysis also considered key community partners and property owners, including Public Schools, Parks, Buffalo Urban Renewal Agency, Buffalo Urban Development Corporation, Buffalo Municipal Housing Authority, 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 finding 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 where 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.

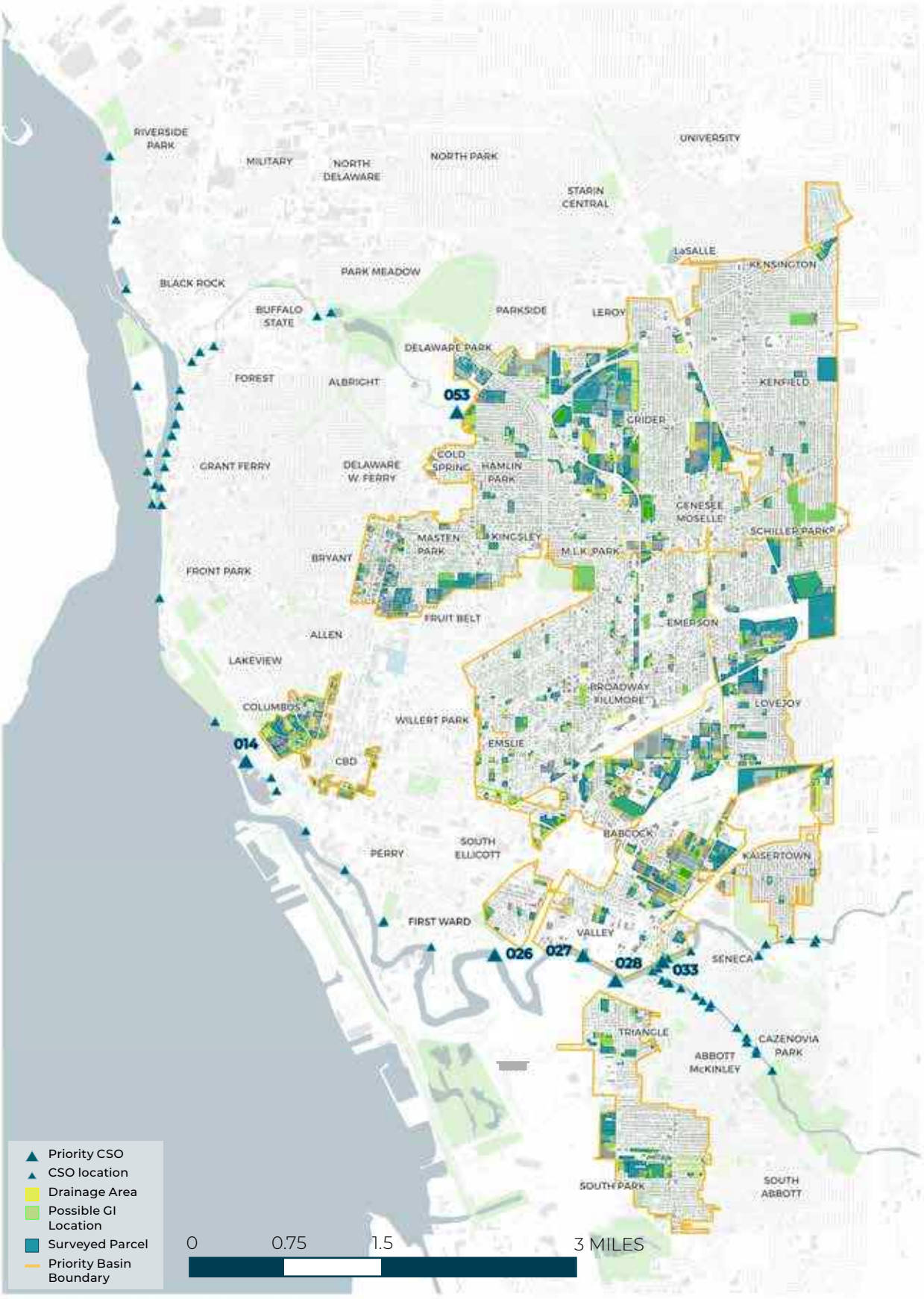


Figure 1.12: Map of Buffalo with Sites Surveyed and Priority CSO Basins.

CSO14

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When a drop of water lands at the intersection of Elmwood Avenue and Niagara Street, it is joined by water from the neighborhoods of Columbus and Waterfront. During heavy wet weather the rainwater combines with sewage and overflows into the Erie Basin Marina at Combined Sewer Overflow 14 (CSO 14).

Community benefits

- Walkability
- Traffic calming
- Public Health
- Enhanced connection to the waterfront
- Expanded tree canopy
- Reduced heat island effect

CSO **Basin 14 at a glance...**

Green Infrastructure Opportunities

The goal for CSO Basin 14 is to manage stormwater from 13 acres of impervious surface. CSO Basin 14 is very small and is part of Buffalo's central business district. It is a high priority since it discharges to the Erie Basin Marina, which is used for recreation. Buffalo Sewer will coordinate with larger downtown planning efforts, such as the Buffalo Public Realm Plan, to incorporate green infrastructure. Almost the entire area has been surveyed. The CSO basin goal can easily be met through green infrastructure implementation on commercial properties and along roadways.

Urban Character

CSO Basin 14 is dominated by privately owned commercial property, including both building and surface parking lots, as well as city owned property. There are some open spaces within CSO Basin 14, although it is dominated by impervious surfaces.

Environmental Systems

This CSO basin discharges to the Erie Basin Marina and has the highest impervious surface coverage of any targeted CSO basin. It has a tree canopy cover similar to the rest of the City, but there are only a few isolated patches and no habitat corridors. Green roofs on commercial buildings could provide habitat patches within the City as well as possible amenity space for building tenants.

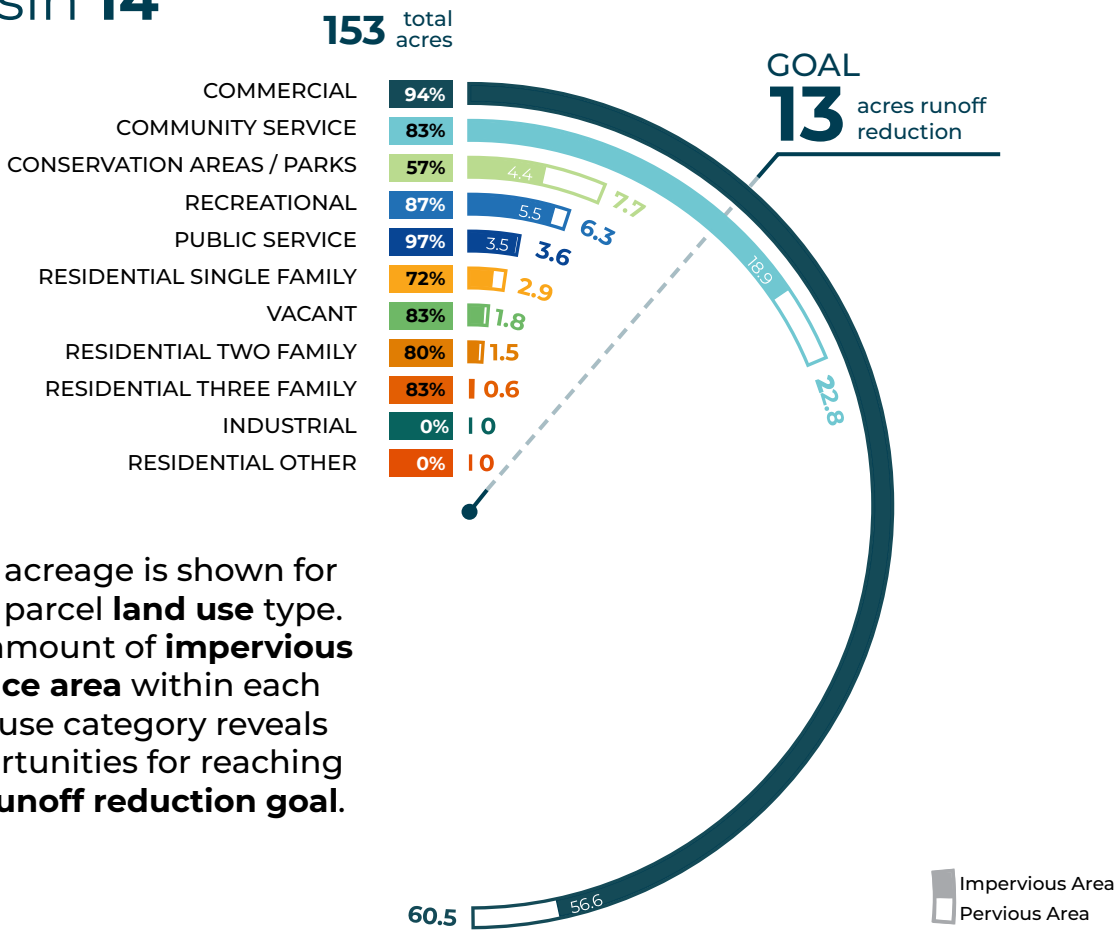
Equity Considerations

Although measures of economic vitality for CSO 14 neighborhoods, such as median household income and unemployment rate, are comparable to the City overall, there are considerable racial equity gaps. The overall unemployment rate is 7.7% among all residents, but is 15.4% among residents of color. Location and land uses indicate strategic engagement with public and private sectors is likely to be the top priority here, rather than a community-based planning process.

BY THE NUMBERS...

Land Use Opportunity and Impervious Surfaces by Area

Basin **14**



Total acreage is shown for each parcel **land use** type. The amount of **impervious surface area** within each land use category reveals opportunities for reaching the **runoff reduction goal**.

Basin Overview

153 acres
TOTAL BASIN AREA

4,375
RESIDENTS

$35,000
MEDIAN HOUSEHOLD INCOME

25 acres
OF CANOPY AREA

2 acres
OF PARK AREA

43 acres
OF RIGHT OF WAY

26 acres
OF ROAD AREA

42 acres
OF BUILDING AREA

24 acres
OF PARKING LOTS

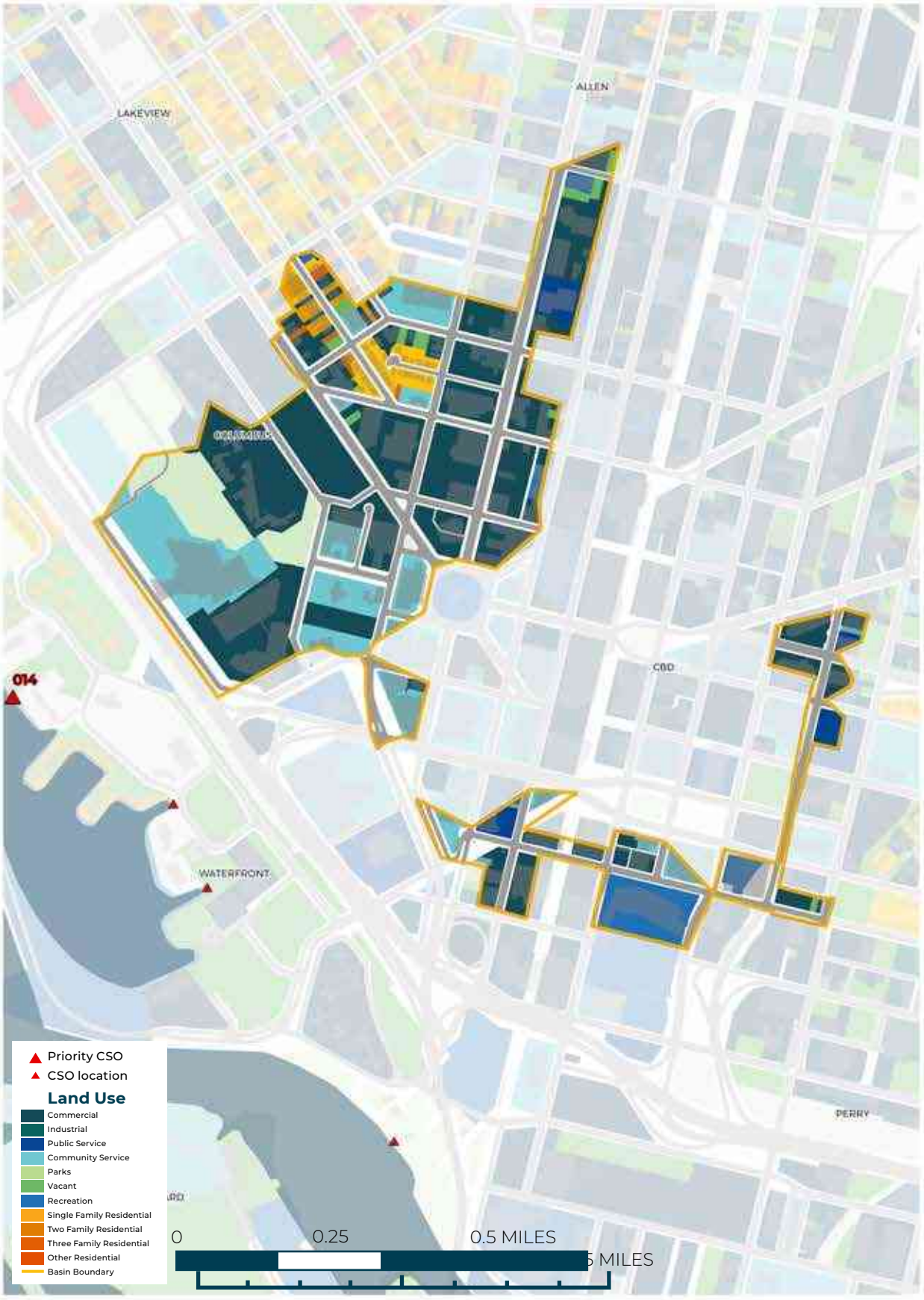


Figure 14.1: CSO Basin 14 Sites evaluated for impervious surface management through green infrastructure.

Opportunity Sites & Networks

Corridors

Because of the density in CSO Basin 14, corridors such as Elmwood Avenue, Huron, and Swan Streets present some of the largest spaces for implementing green infrastructure. These corridors also provide an opportunity for creating a green infrastructure network that connects most of the basin.

Sites

Most of the basin and many sites were found appropriate for green infrastructure retrofit. The sites naturally aggregate around the existing corridors. This analysis also indicates that a basin-wide network is possible.

Clusters and Networks

Given the small size and density of this basin, almost the entire basin could be aggregated into one or two networks, allowing for great efficiency in removal of stormwater from the system.

Key Corridors

- Elmwood Avenue
- Niagara Street
- Elm Street
- Swan Street
- Erie Street
- Huron Street

Key Institutions

1. Waterfront School,
2. Buffalo Bisons' Stadium
3. Hutchinson Central Technical High School
4. St. Anthony's of Padua RC Church

Key Commercial

5. Blue Cross/Blue Shield
6. Pine Harbor Apartments
7. Shoreline Apartments
8. Buffalo Regional Benefit Office, New Era Store.

Key Parking Lots

9. St, Anthony Parking
10. City Hall

All Pro (various locations)

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

Figure 14.2: CSO Basin 14 Green Infrastructure Opportunity Sites

Green Infrastructure Opportunity
Central Business District

Many of the buildings and streets in the basin are iconic to the image of Buffalo. Green infrastructure will be important to stormwater performance and can improve neighborhood quality. These buildings and streets, in combination with the many surface parking lots present the greatest opportunity for green infrastructure. Downtown has fewer residents and more commuters than other areas of the city, resulting in an abundance of surface lots, that contribute a substantial amount of stormwater runoff. Installing bioswales around the periphery of these lots and along parking rows would result in significant runoff reduction while reducing heat island effect and increasing canopy cover. As development pressures increase, some lots are likely to be developed. Investments in open space green infrastructure here, and across the City, should be evaluated against future land use.

The surface parking lots predominantly serve commercial buildings and institutions, which represent another green infrastructure opportunity. These buildings have large footprints and maintenance budgets, making them possible candidates for green roof installations. Green roofs also help to reduce heat island effect, increase habitat, and reduce impervious runoff. Installing green roofs on rooftops visible to building occupants on upper floors can also improve the views from above. Downtown buildings are the most likely to have the extra load capacity to support green roofs.

An important time to think about green infrastructure is when properties are undergoing redevelopment. For example, the Shoreline Apartments are being redeveloped in the near future. The redevelopment will include open space that could incorporate green infrastructure that would provide amenity space for residents as well as reduce stormwater runoff.

Strategies

- **Green roof retrofits**
- **Complete streets**
- **Green parking lots**
- **Impervious surface reduction**
- **Curb bump outs**

Potential Partners

- **City Hall**
- **Department of Public Works**
- **Waterfront School**
- **Hutchinson Central Technical High school**
- **Blue Cross Blue Shield**
- **St. Anthony's**
- **Division of Parks and Recreation**

Figure 14.3: Historic Image of downtown Buffalo

Figure 14.4: Buffalo City Hall

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Placemaking Opportunity with Green Infrastructure

In addition to providing stormwater benefit, green infrastructure can create beautiful and welcoming public green space for city residents. Particularly in a dense urban area the addition of street trees and green infrastructure can help to reduce urban heat island effect, calm traffic, and provide for greater walkability. Green infrastructure can also screen parking lots in the central business district, creating a strong edge and more attractive public space.

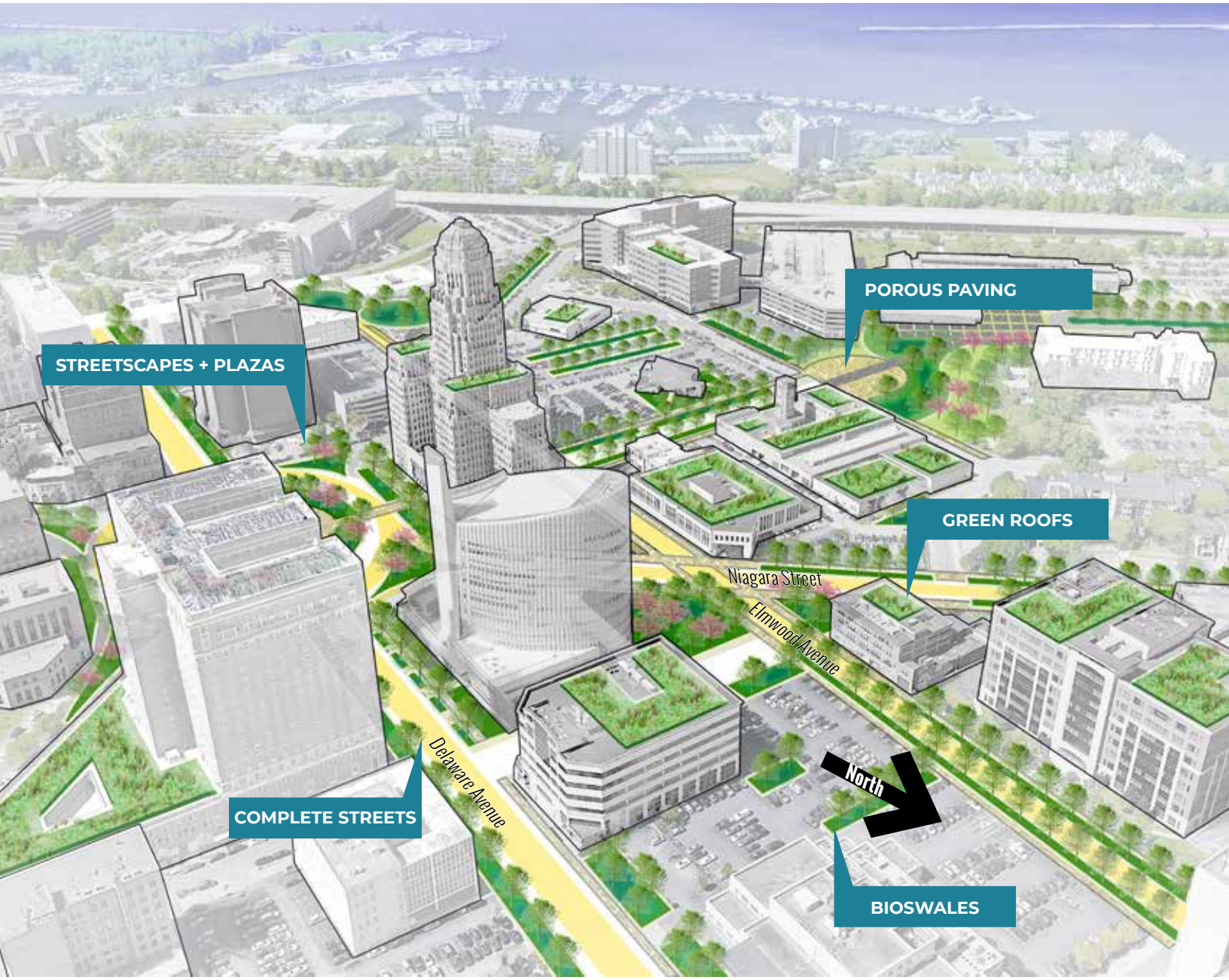

Figure 14.5: Downtown Buffalo Green Infrastructure Opportunities

ANALYSIS

Urban Character

The boundaries of CSO Basin 14 intersect with two City of Buffalo planning neighborhoods adjacent to the central business district in downtown Buffalo: Columbus and Waterfront. CSO Basin 14 also touches a number of planning areas, which green infrastructure planning and investment could support. CSO Basin 14 intersects the Local Waterfront Revitalization Program Boundary. Investment in green infrastructure in CSO 14 supports this effort to revitalize Buffalo's waterfront. Work in this basin will contribute to the Green Code's goal of improving water quality in the Erie Basin, supporting waterfront development and contributing to the momentum of Buffalo's downtown.

The urban form is characterized by large, tall office buildings, commercial uses and some large open spaces. Given the location of CSO Basin 14 neighborhoods in and around the central business district, the area is home to a mix of government offices, including Buffalo City Hall, as well as law firms and other professional services, hotels such as Embassy Suites and Westin, and numerous restaurants.

Downtown Buffalo is seeing consistently higher numbers of building permits and the heaviest commercial development per square mile compared to the other priority basins. CSO Basin 14 is experiencing the greatest overall development of all CSO basins per square mile.

Several schools are located in the area, but overall the CSO Basin 14 neighborhood area has a significantly smaller share of neighborhood groups and community institutions such as schools, religious buildings, and community centers compared to the other priority basins. This may be the only instance where it is a misnomer to characterize the priority area as a "neighborhood area." Still, the area is considered home to about 4,400 residents.

Figure 14.6: Downtown has many wide streets with many lines, Elmwood, Delaware, and Huron streets are seen here.

Figure 14.7: Downtown Buffalo has many high rise buildings and surface parking-lots leading to high levels of storm-water runoff.

Figure 14.8: Buffalo Bison's Baseball Stadium is one of many important cultural nodes downtown.

Figure 14.9: Down Town Institutions: Blue Cross Blue Shield of Western New York, City Hall

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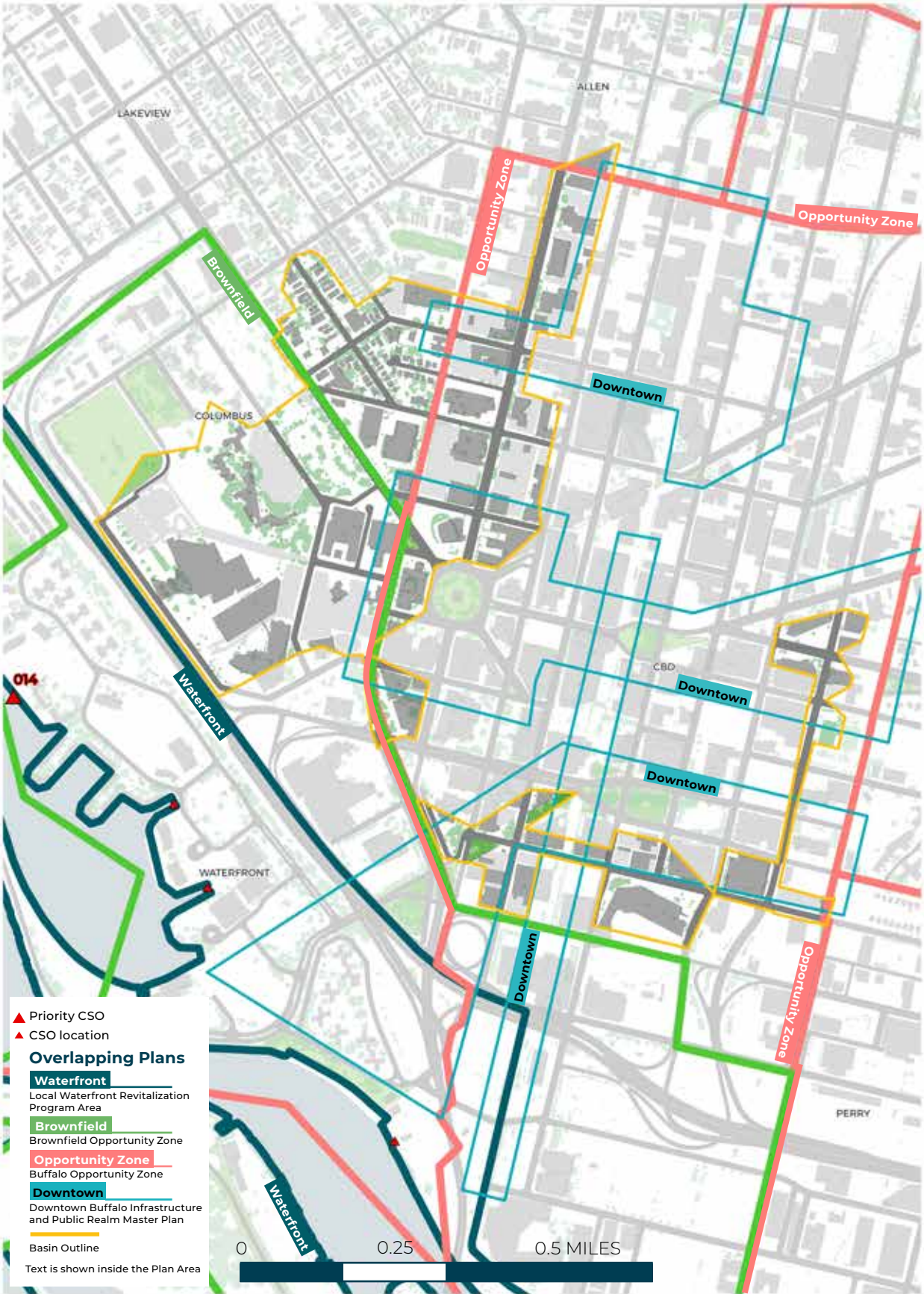

Figure 14.10: CSO Basin 14 Planning Map

ANALYSIS

Equity Analysis

Unlike some of the other priority areas where there is a predominance of one racial or ethnic group, CSO Basin 14 neighborhood areas have significant racial and ethnic diversity with relatively similar shares of White, Black, and Hispanic or Latino residents. One in five households speak Spanish, and 9.3% are limited English speaking—more than double the city rate. While overall measures of economic vitality for CSO Basin 14 neighborhoods such as median household income and unemployment rate are comparable to the City overall, there are considerable racial equity gaps. For example, the overall unemployment rate of 7.7% among residents in the area is lower than across the City, but the unemployment rate is 15.4% among residents of color.

Given the location of CSO Basin 14 adjacent to the central business district, land uses and business mix reflect that of a downtown. The basin has high impervious surface coverage, along with a small tree canopy footprint. CSO Basin 14 also has the highest traffic volumes among targeted CSO basins, due to commuter traffic and major highways nearby. Being in the active downtown area, CSO Basin 14 has the smallest share of vacant land cover and lowest vacancy rates of any targeted basin. The overwhelming majority (85%) of housing units are renter occupied, and there appear to be relatively few community-based organizations and neighborhood groups in the area.

While the need for green infrastructure is high based on the high percentage of impervious surfaces and presence of disadvantaged population groups, the feasibility of many green infrastructure investment options may be relatively limited, due to factors such as low owner-occupancy rates and a smaller amount of vacant land. Therefore, this is likely an area where engagement with public and private sectors may be the top priority or strategy, rather than a more community-based planning process.

Neighborhood Profile Snapshot

4,375
RESIDENTS

$35,000
MEDIAN HOUSEHOLD INCOME

69.4%
ATTAIN LESS THAN A BACHELOR'S DEGREE

$172,127
MEDIAN VALUE OF OWNER-OCCUPIED HOMES

37.2%
OF HOUSEHOLDS DO NOT HAVE A VEHICLE

-16.2%
2000–2016
POPULATION CHANGE

40.9%
RESIDENTS LIVING IN POVERTY

48.3%
WORKING AGE NOT EMPLOYED*

62.9%
RESIDENTS ARE PEOPLE OF COLOR

84.8%
HOUSEHOLDS ARE RENTERS

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.

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Figure 14.11: CSO Basin 14 and GI Equity Index

ANALYSIS

Environmental Systems

Waterways

CSO Basin 14 is located along lake Erie and north of the Buffalo River. The CSO basin discharges to Erie Basin. Erie Basin's status as a highly active recreational area made this basin a priority for stormwater runoff reduction targets. Currently the I-90 expressway and private developments make the waterfront feel separate and less accessible. Using stormwater improvements to increase the downtown's feeling of connection with water could be one strategy to break down some of this perception of separation.

Tree Canopy Cover

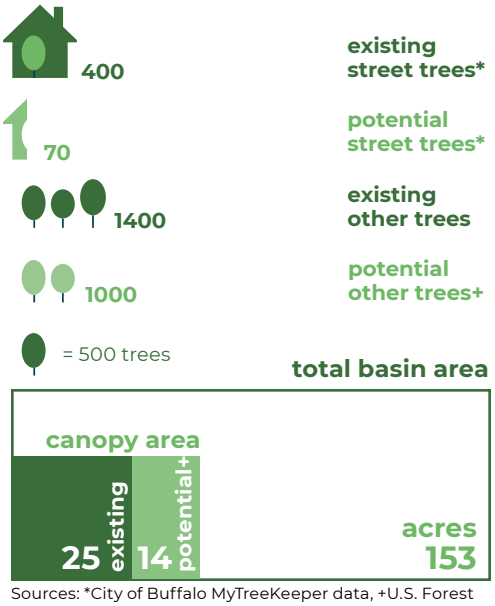
Tree canopy cover in CSO Basin 14 is slightly higher than the City average. Some planted patches exist near parks and along wide streets, but are not pervasive. There are plantable acres and street tree planting spaces available, to further expand canopy cover in the future.

Habitat Connectivity

CSO Basin 14 has a few isolated patches, but no corridors. Enhancing street tree planting in corridors is the most likely strategy to increase habitat connectivity. There are several parks or large lawns downtown that could be more heavily planted with shrubs and trees. For buildings where it is feasible, green roofs can also help to increase resting space for birds. Strategies like pollinator corridors and parking lot bioswales may also be viable techniques.

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

Figure 14.12: There is little urban habitat downtown, but increasing the open space network along the lake edge between Times Beach Nature Preserve to La Salle Park would be a valuable addition.

Figure 14.13: CSO Basin 14: Canopy Cover and Impervious Surfaces

ANALYSIS

Site Analysis

CSO Basin 14 is the smallest drainage area of all the priority CSO Basins and is located on the edge of the downtown region of Buffalo. The street grid is tighter here than in other areas of the City and historic buildings with large footprints occupy most of the blocks in the city center. Despite the dominance of large commercial buildings and parking surfaces, space is available for green infrastructure improvements.

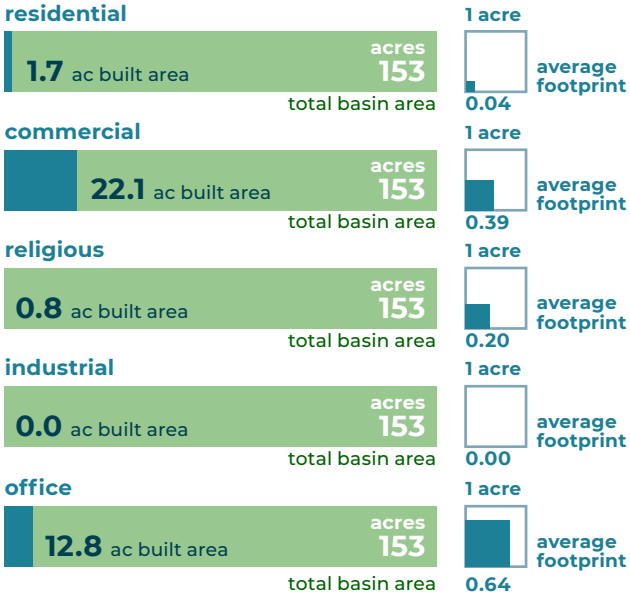
The CSO goal for impervious acres managed is also the lowest of all evaluated basins at 12.9 acres, about 8% of the total area. The greater part of the entire basin was surveyed as part of the site analysis process. Thus there is a high level of confidence that the CSO goals can be met.

Land use is mostly commercial and, to a lesser degree, city-owned land. An important advantage of city-owned land is that green infrastructure can be used to activate publicly funded public spaces. Existing public spaces include streets, sidewalks, intersections, and a larger public park to the northwest. High quality park space is limited in the downtown, so green infrastructure could benefit the existing park with additional plantings, and improved sidewalks or paved surfaces. These improvements could capture water and be welcoming for visitors representing Buffalo as a high functioning and sustainable city.

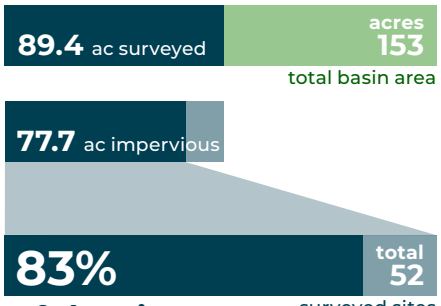
Opportunities for partnerships with top property owners could have a big impact on limiting impervious surfaces. Blue Cross/Blue Shield, Waterfront School, and the Buffalo Bisons' Stadium are top candidates for green infrastructure improvements.

Built Area by Land Use

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



The site analysis reviewed 59% of the basin and found 25.5 acres of potential drainage area.



of the sites were suitable for green infrastructure.

88% of sites are in full sun

50% of sites are highly visible

Figure 14.14: CSO Basin 14: Percent Impervious cover by Parcel

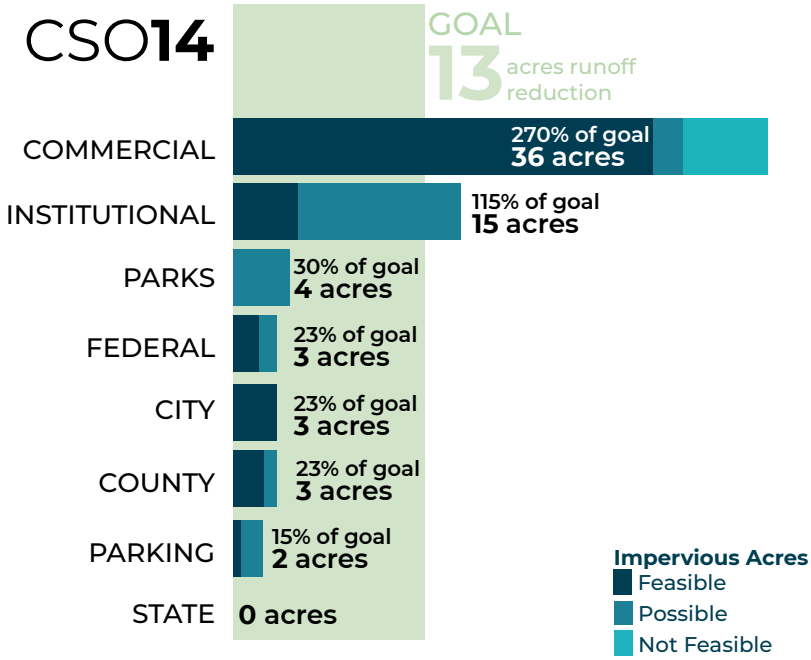
ANALYSIS

Site Analysis: Surveyed Properties

Figure 14.15: Examples of sites surveyed.

Surveyed Properties by Land Use and Ownership

GIS sources: Erie County data, Buffalo Sewer Authority data



LARGEST PROPERTY OWNERS BY LAND USE AND OWNERSHIP

COMMERCIAL

Blue Cross/Blue Shield of WNY
6.0 Imperv. acres

New Era Store
2.4 Imperv. acres

Delaware North Building
1.7 Imperv. acres

Embassy Suites by Hilton
1.6 Imperv. acres

The Benchmark Group
1.6 Imperv. acres

INSTITUTIONAL

AllPro Parking Lot (Elmwood)
1.4 Imperv. acres

St. Anthony's Parking
1.2 Imperv. acres

Lot 23 Parking
0.6 Imperv. acres

Swan Street Parking
0.5 Imperv. acres

SURVEY NOTE:

The survey team reviewed most sites intersecting the perimeter of the basin resulting in a surveyed area greater than the basin area. This is reflected in the survey summary numbers on this page.

Many different types of parking lots were surveyed in CSO Basin 14, including open lots and parking adjacent to a building.

From this, the team was able to discern if green infrastructure locations can address urban issues such as walkability and make recommendations for bioswales and tree pits to provide shade and make comfortable outdoor rooms. These recommendations are discussed on the opportunity pages.

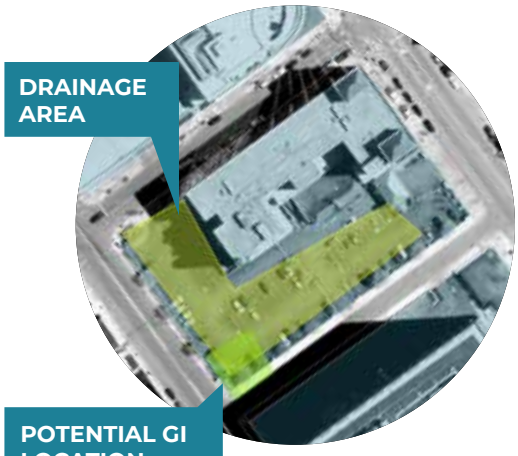


Figure 14.16: CSO Basin 14: Sites analyzed showing parcels, drainage areas and potential green infrastructure.

Figure 14.17: CSO Basin 14: Basin outline on aerial

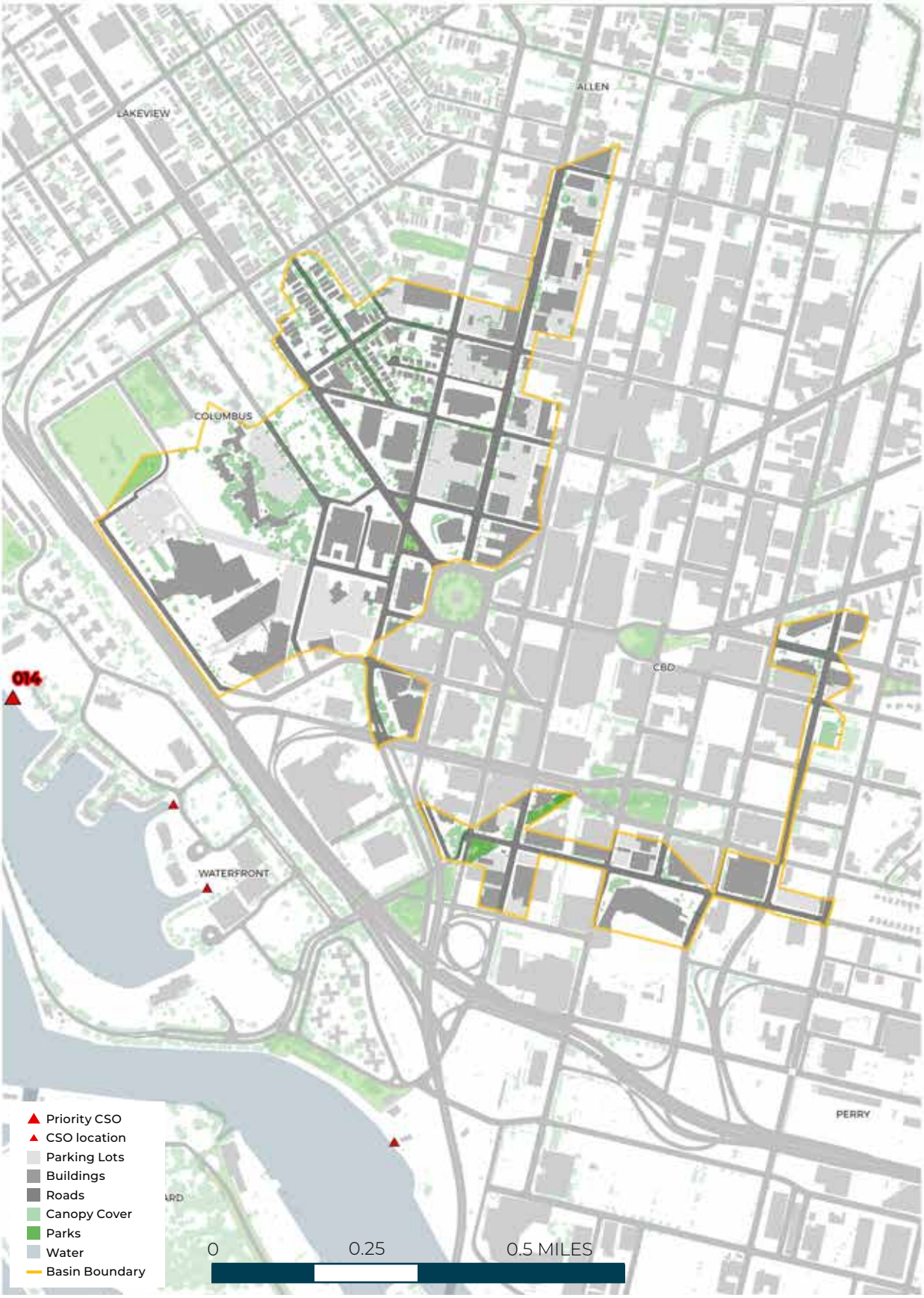


Figure 14.18: CSO Basin 14 Map of Built Environment and Tree Canopy

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

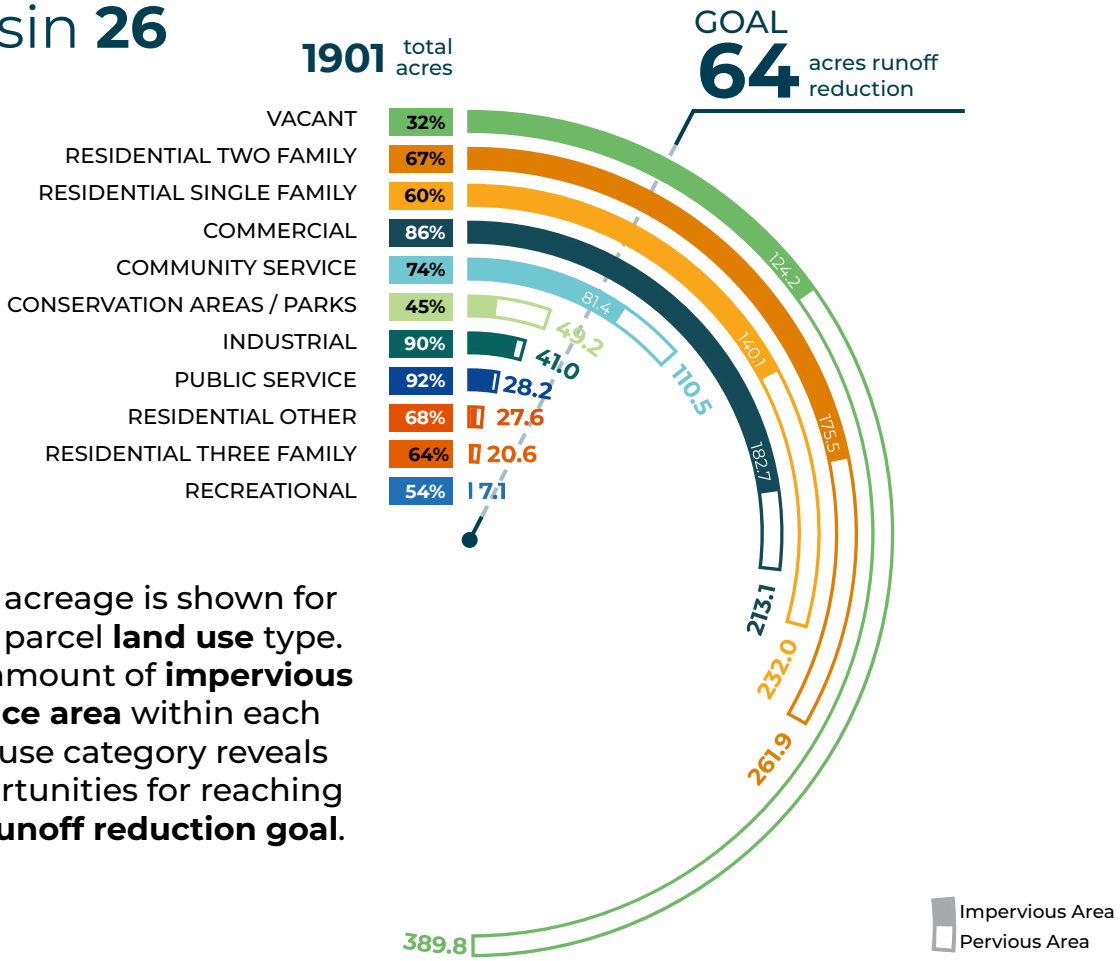
CSO Basin 26 discharges into the Buffalo River. Tree canopy is relatively low and should be augmented, particularly along major corridors. Focusing on complete streets and right of way improvements can help to grow the urban forest canopy and create habitat connectivity as well as the opportunity to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

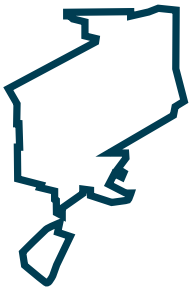
BY THE NUMBERS...

Land Use Opportunity and Impervious Surfaces by Area



Total acreage is shown for each parcel **land use** type. The amount of **impervious surface area** within each land use category reveals opportunities for reaching the **runoff reduction goal**.

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

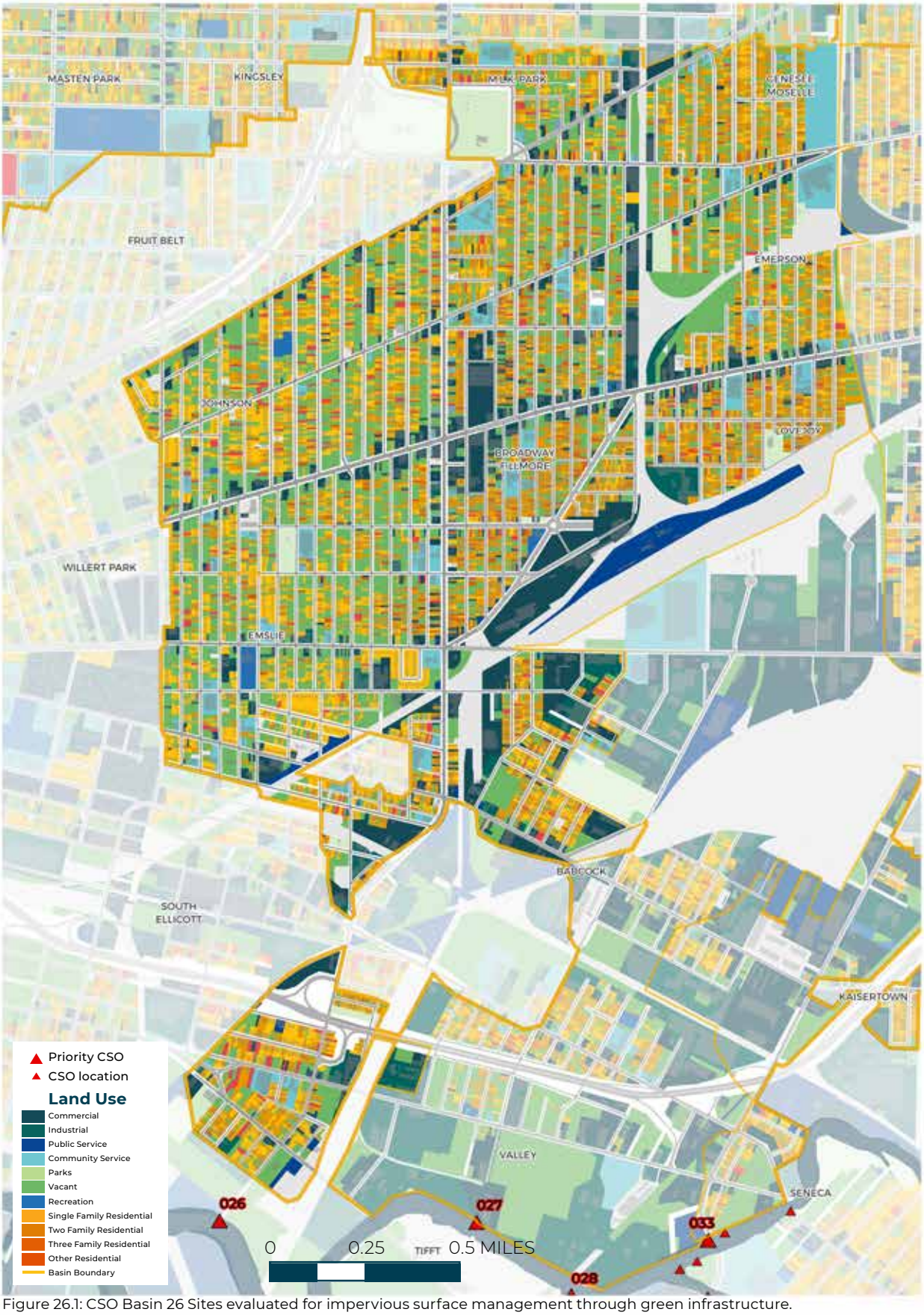


Figure 26.1: CSO Basin 26 Sites evaluated for impervious surface management through green infrastructure.

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

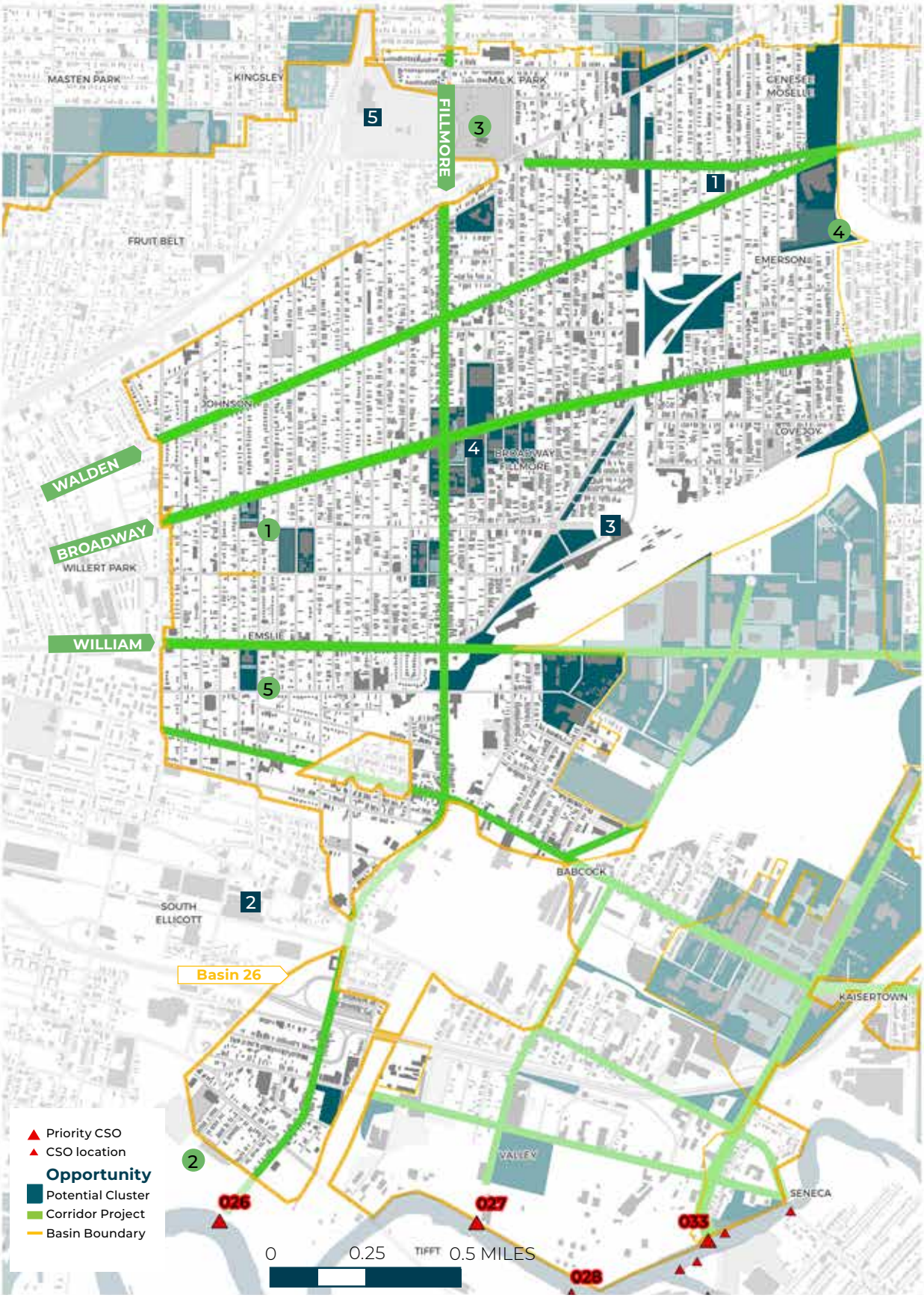


Figure 26.2: CSO Basin 26 Green Infrastructure Opportunity Sites

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.

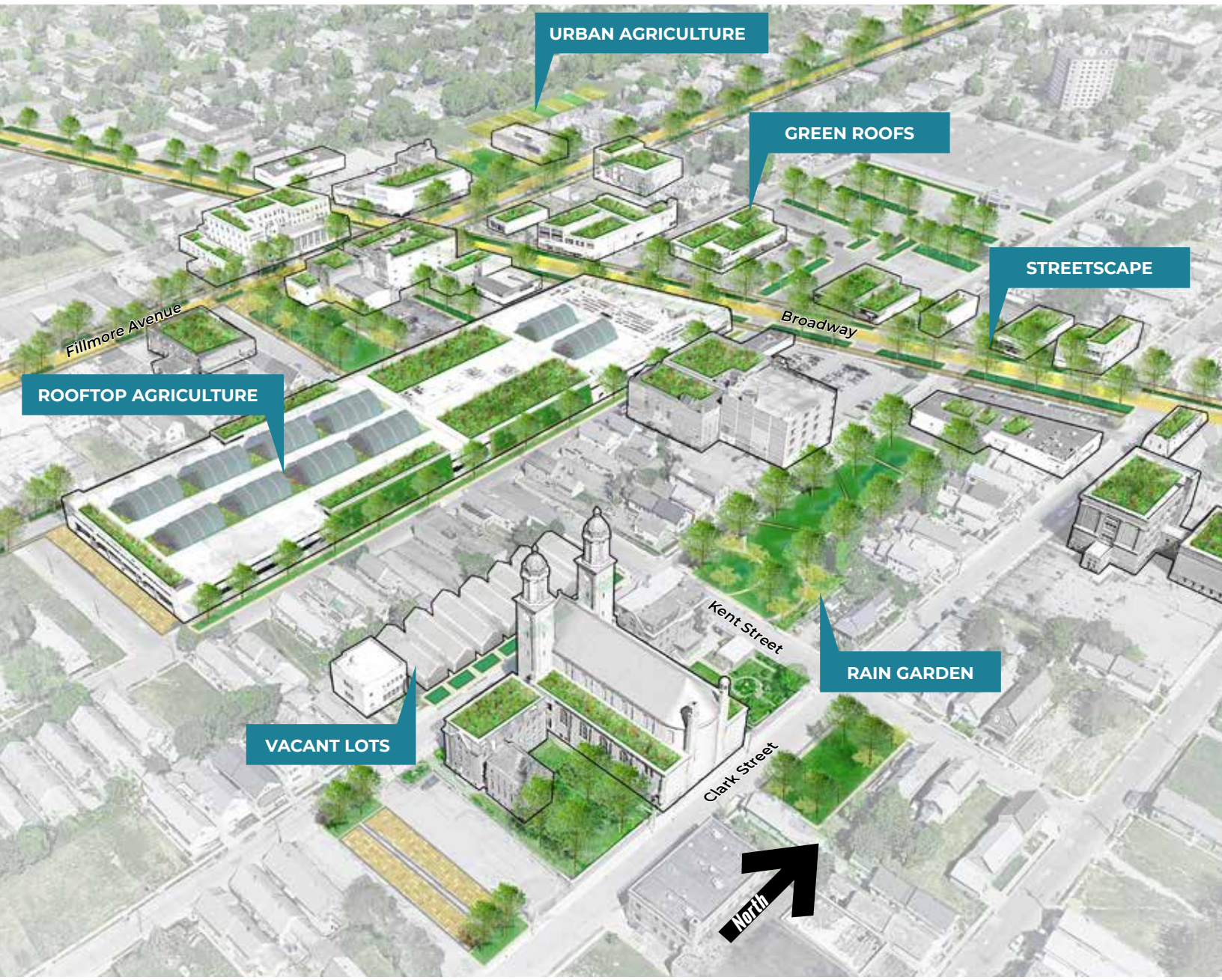


Figure 26.5 Rendering of Green Infrastructure at Fillmore and Broadway

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.

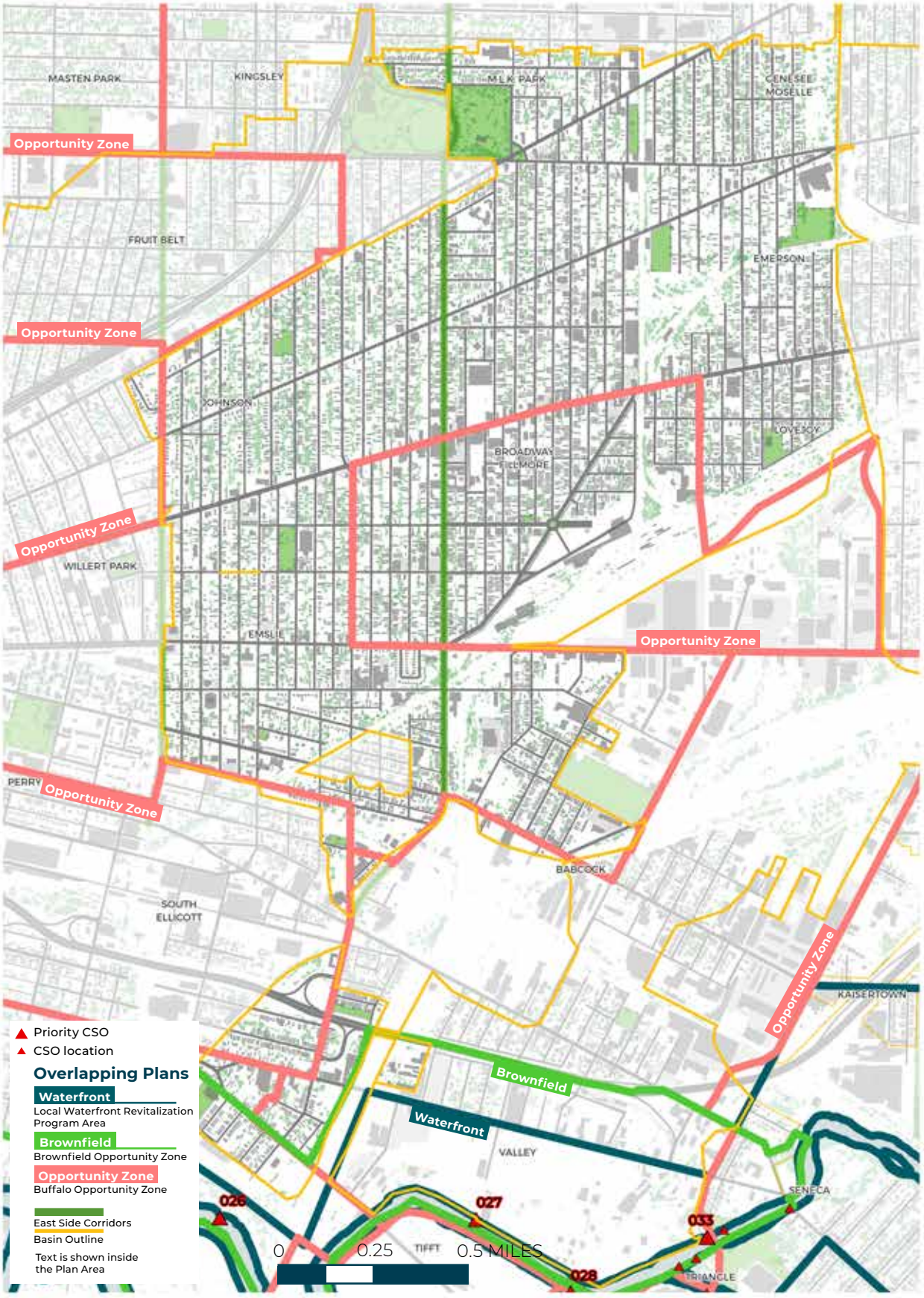


Figure 26.10: CSO Basin 26 Planning Map

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

14,349
RESIDENTS

$18,192
MEDIAN HOUSEHOLD INCOME

89.2%
ATTAIN LESS THAN A BACHELOR'S DEGREE

$31,988
MEDIAN VALUE OF OWNER-OCCUPIED HOMES

43.6%
OF HOUSEHOLDS DO NOT HAVE A VEHICLE

-39.2%
2000–2016
POPULATION CHANGE

46.4%
RESIDENTS LIVING IN POVERTY

54.5%
WORKING AGE NOT EMPLOYED*

81.5%
RESIDENTS ARE PEOPLE OF COLOR

60%
HOUSEHOLDS ARE RENTERS

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.

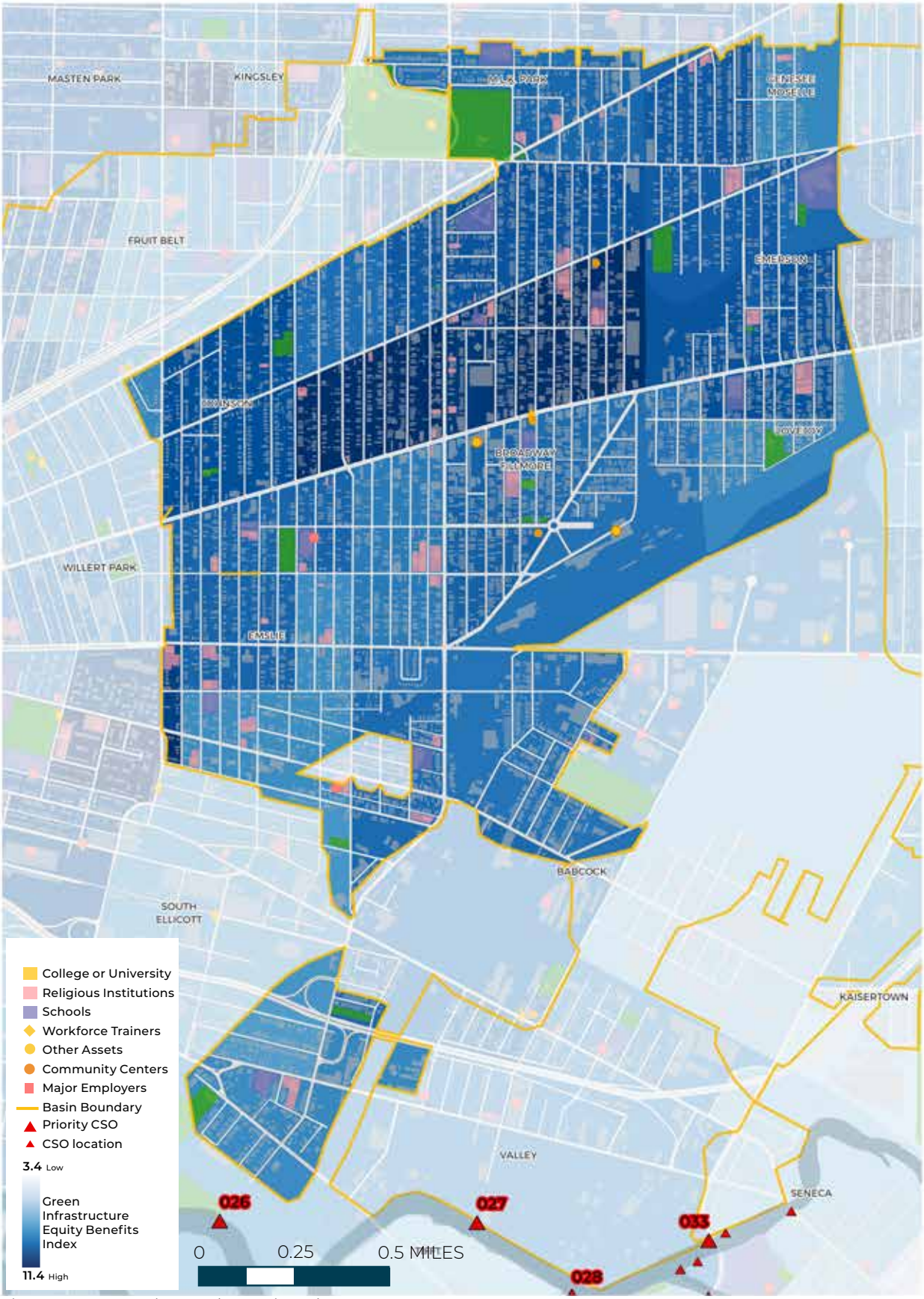


Figure 26.11: CSO Basin 26 and GI Equity Index

Environmental Systems

Waterways

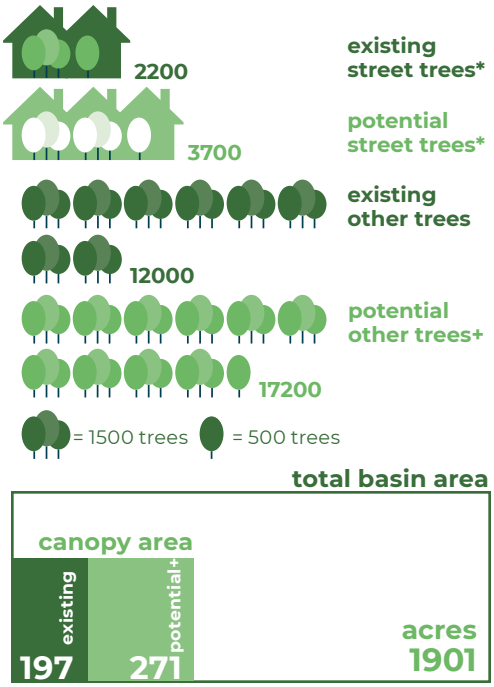
CSO Basin 26 discharges into the Buffalo River along the lower, meandering, post-industrial section of the river. The Basin does not make direct contact with the Buffalo River, stopping at Red Jacket River Front Park. This termination in the park may provide an excellent opportunity to incorporate stormwater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

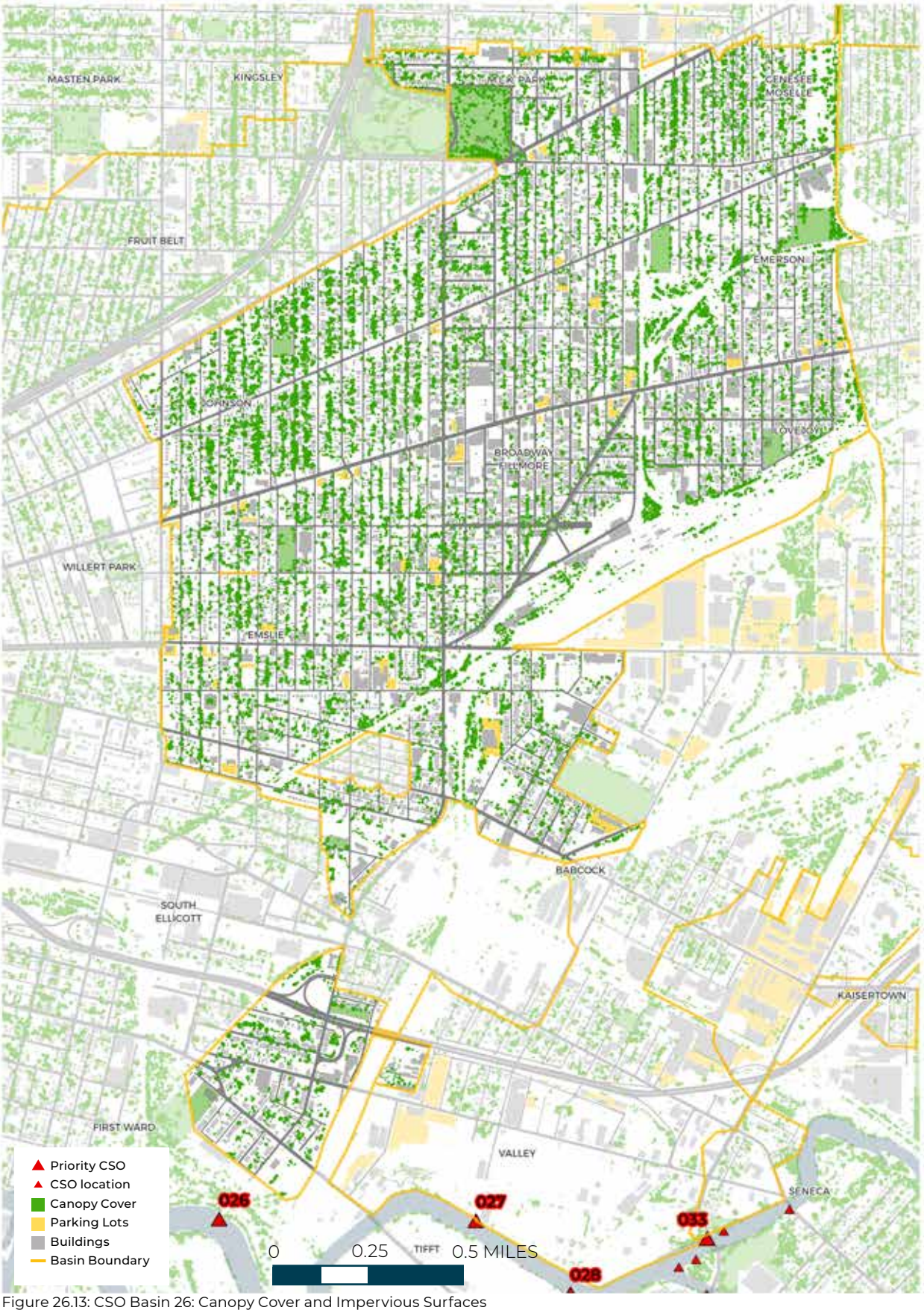


Figure 26.13: CSO Basin 26: Canopy Cover and Impervious Surfaces

ANALYSIS

Site Analysis

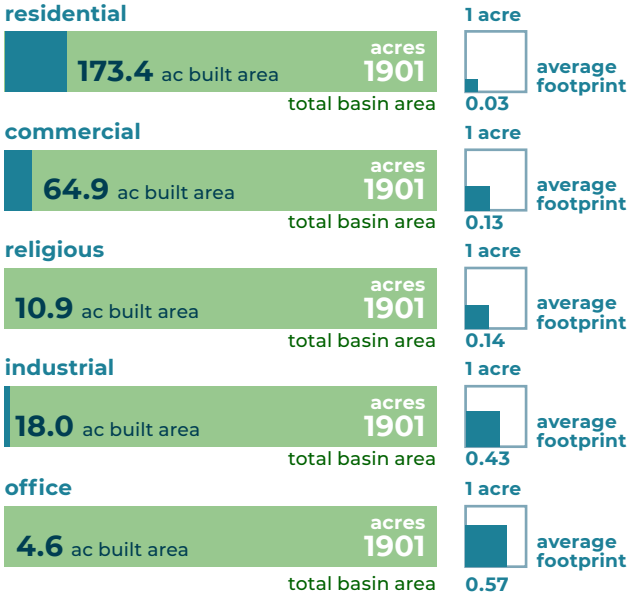
CSO Basin 26 is characterized by residential properties and commercial corridors with institutional and city-owned properties adding to the potential management area. No single category can fulfill the required acres-managed and the managed acres will need to include commercial, institutional, and city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

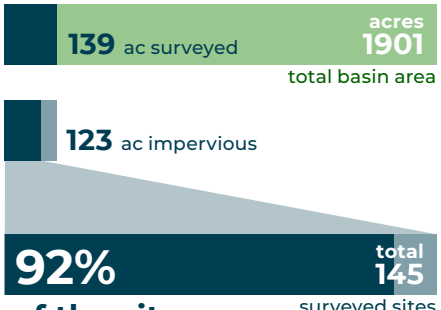
Apart from cooperation with neighbors and managing lot level run-off, there are opportunities for commercial partnerships and business owners to take advantage of the visual improvements through green infrastructure installations in this area. Green infrastructure could be incorporated into streetscape 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.



of the sites were suitable for green infrastructure.

63% of sites are in full sun

34% of sites are highly visible

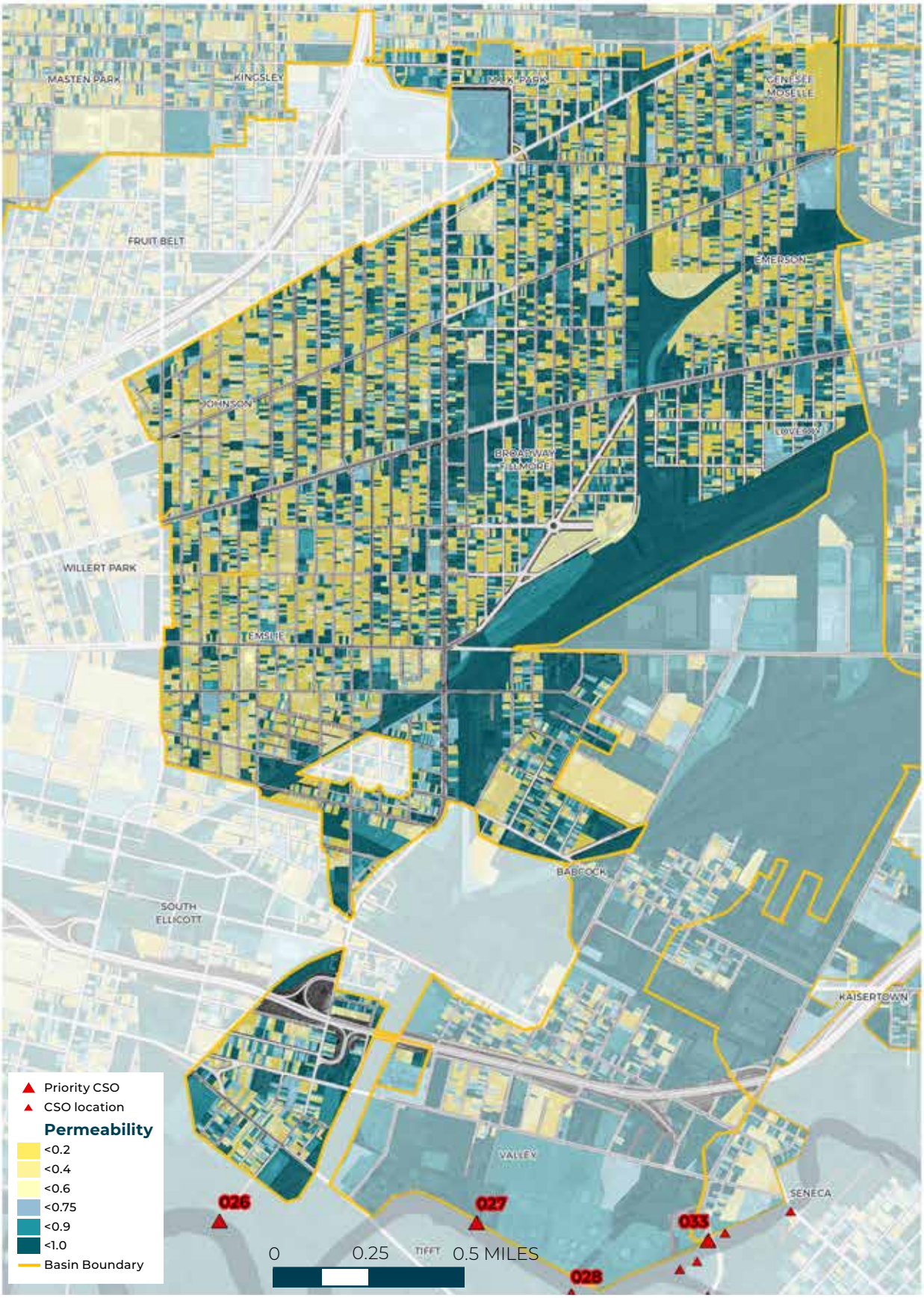


Figure 26.14: CSO Basin 26: Percent Impervious cover by Parcel

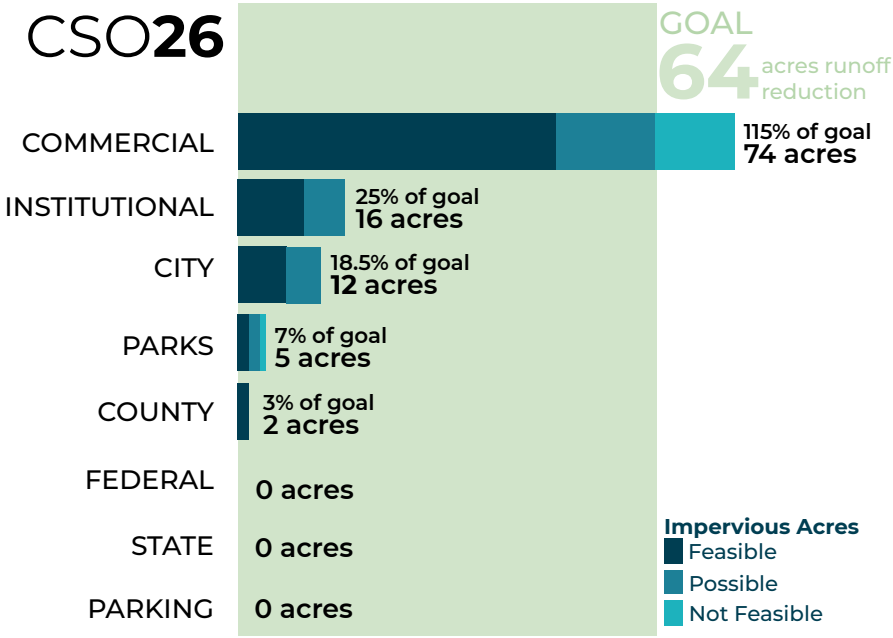
ANALYSIS

Site Analysis: Surveyed Properties

Figure 26.15: Examples of sites surveyed.

Surveyed Properties by Land Use and Ownership

GIS sources: Erie County data, Buffalo Sewer Authority data



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

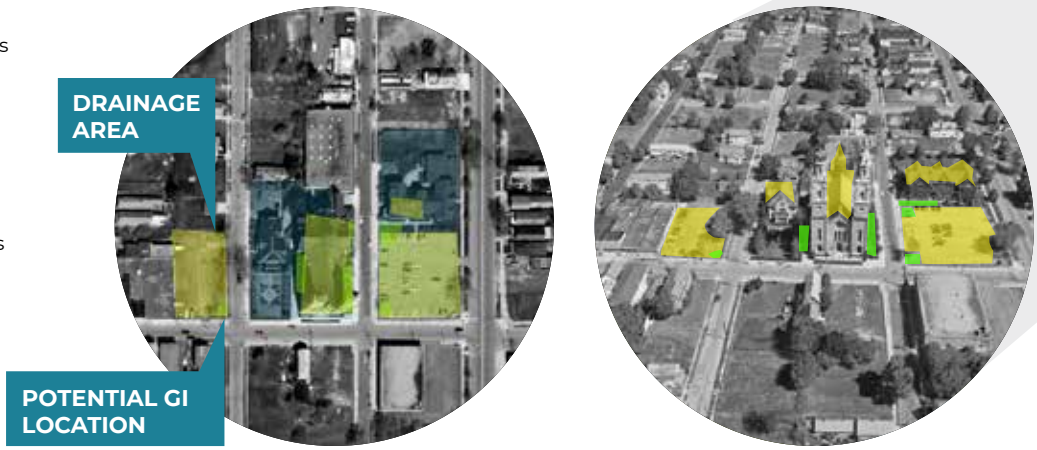
St Clare Parish
1.3 Imperv. acres

St. Stanislau 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.



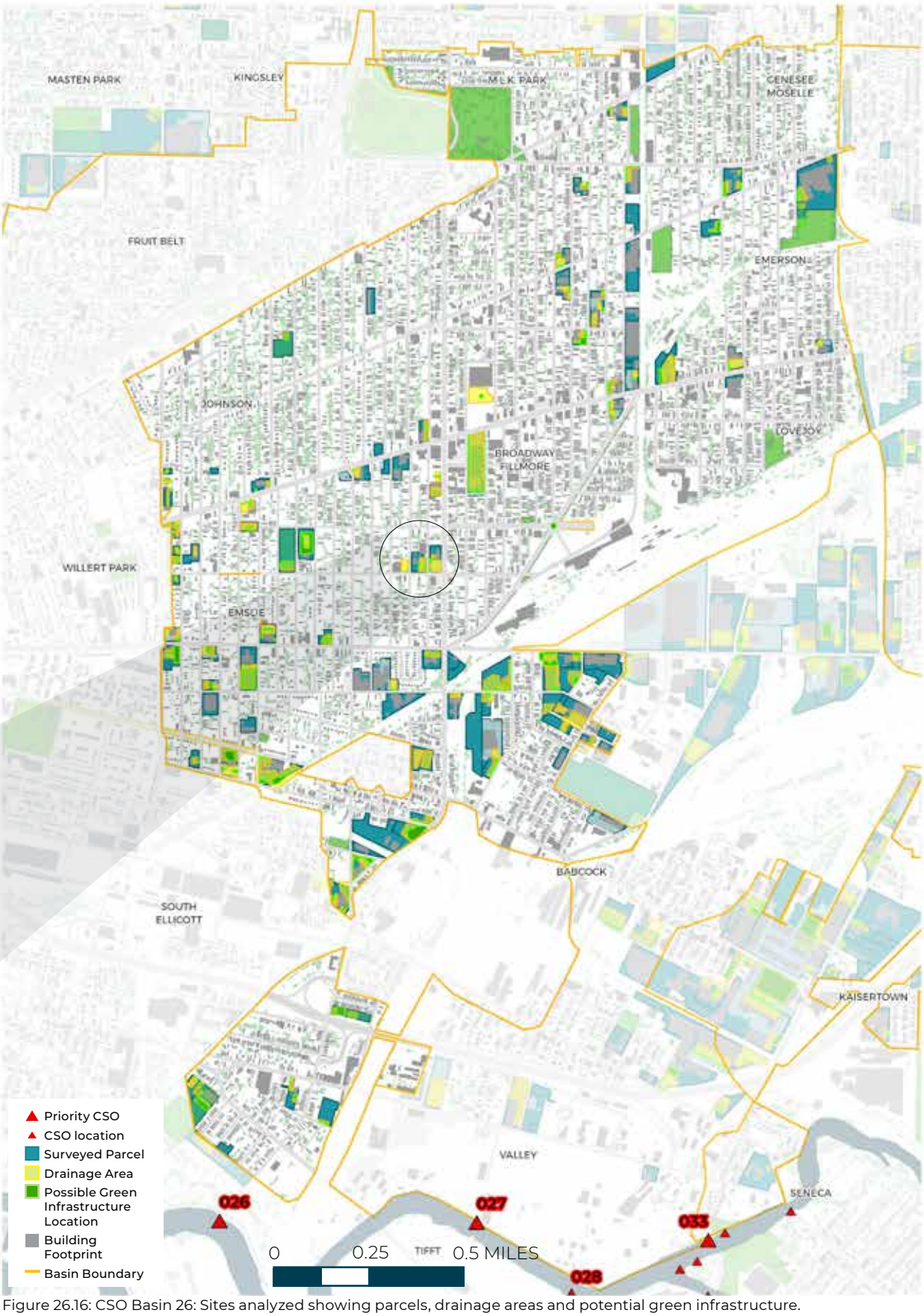


Figure 26.16: CSO Basin 26: Sites analyzed showing parcels, drainage areas and potential green infrastructure.

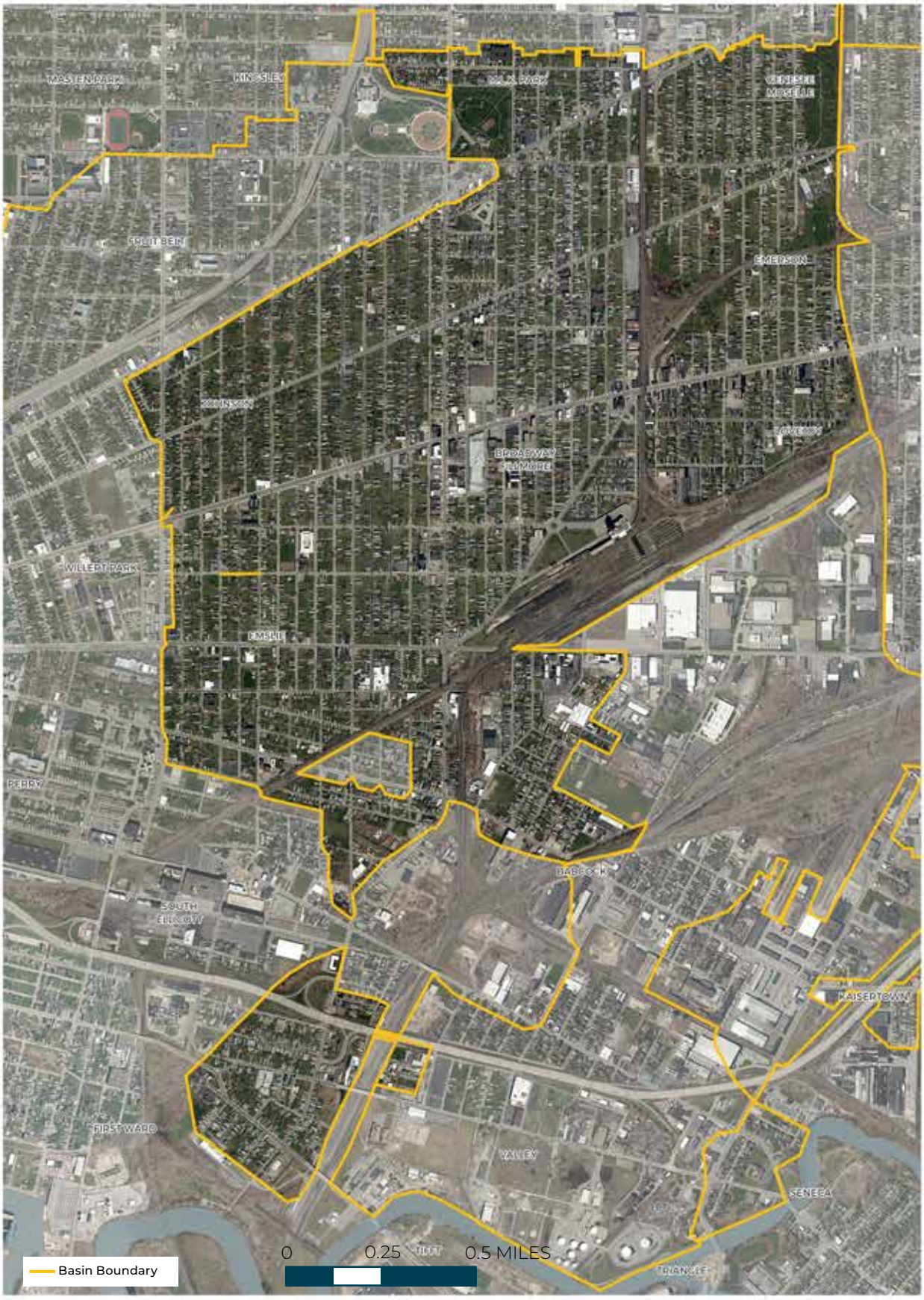


Figure 26.17: CSO Basin 26: Basin outline on Aerial.

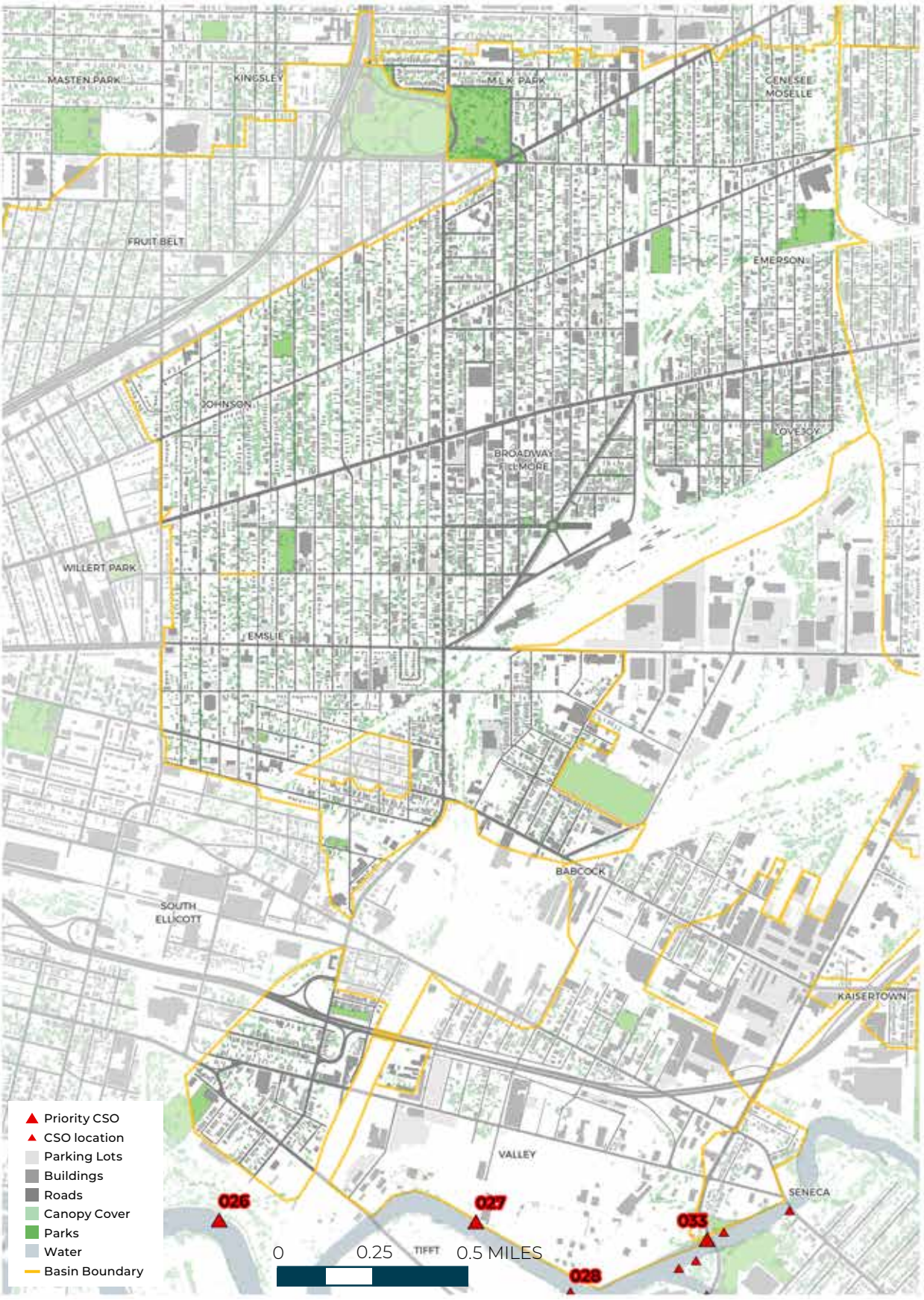


Figure 26.18: CSO Basin 26 Map of Built Environment and Tree Canopy

CSO27

When a drop of water lands at the intersection of Bailey Avenue and Clinton Street, it is joined by water from the neighborhoods of Babcock, Kaisertown, the Valley, and Broadway-Fillmore. During heavy wet weather, the rainwater combines with sewage and overflows into the Buffalo River at Combined Sewer Overflow 27 (CSO 27).

Community Benefits

- Workforce development
- Buffer between residential and industrial uses
- Tree planting programs
- Green Jobs
- Support of neighborhood revitalization efforts
- Access to the River
- Expanded canopy cover
- Clean up and revitalization of vacant land
- Traffic calming

CSO **Basin 27 at a glance...**

Green Infrastructure Opportunities

The goal for CSO Basin 27 is to manage stormwater from 73 acres of impervious surface. The majority of sites surveyed were commercial properties. The site analysis concluded that total acreage of commercial property surveyed greatly exceeds the management goal. High vacancy rates (both commercial and residential) provide the opportunity to implement distributed green infrastructure. There are also major corridors that pass through this CSO basin. In addition, many sites have significant paved areas and it may be effective to focus on impervious surface reduction in these industrial areas. Many of the commercial properties are large parcels, which may simplify implementation.

Urban Character

CSO Basin 27 is characterized by large industrial corridors, brownfield sites, and small areas of dense residential housing.

Environmental Systems

CSO Basin 27 has the lowest tree canopy cover of the six targeted CSO basins. Augmenting the tree canopy would contribute to stormwater runoff reduction and reducing urban heat island effect.

Focusing on complete streets and right of way improvements can increase the urban forest canopy, create habitat connectivity, create opportunities to network green infrastructures systems within the CSO basin, and provide a buffer between residential and industrial uses.

Equity Considerations

Neighborhoods have close proximity to high traffic corridors, so green infrastructure along corridors can provide a much-needed buffer to residential communities.

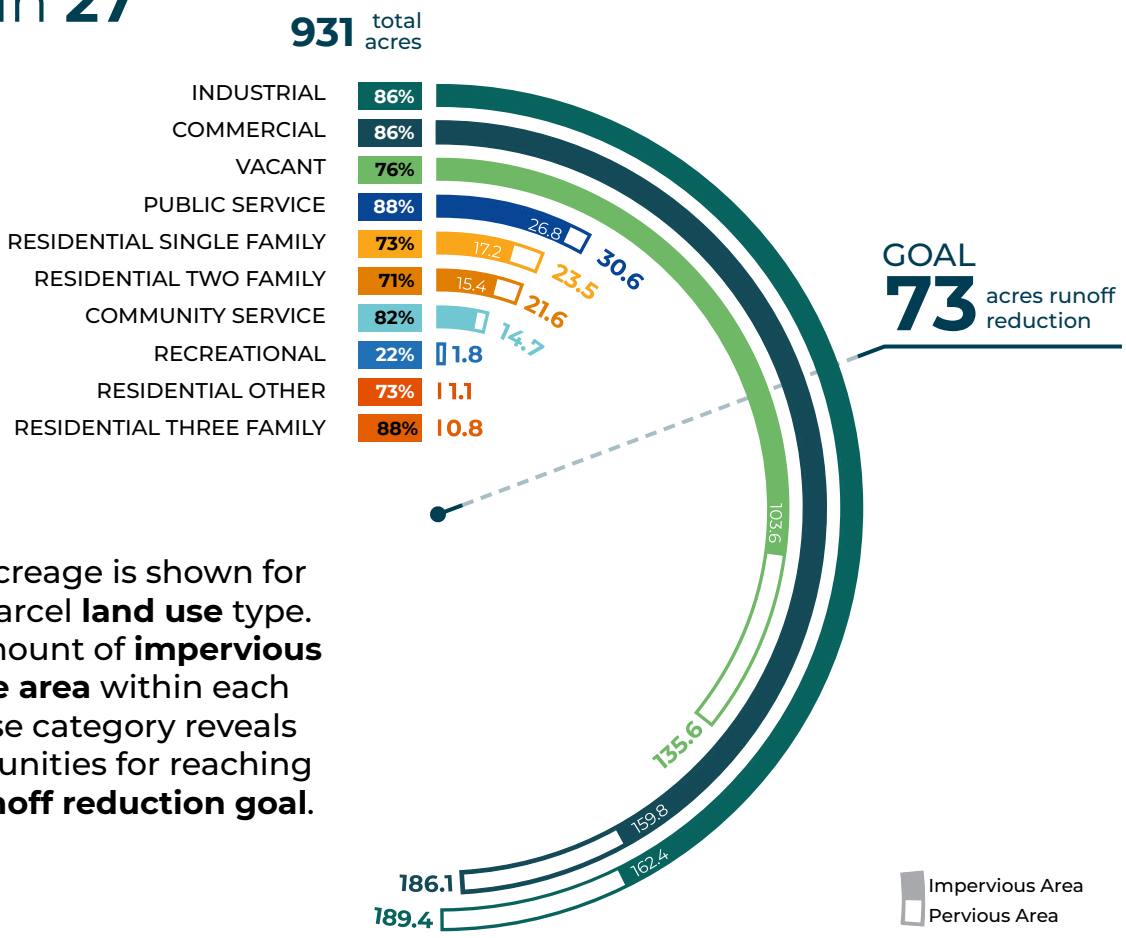
Because most properties are owner occupied there may be opportunities for residential green infrastructure or tree planting.

Unemployment in this area is higher than the City average so green infrastructure-related training and jobs would contribute to improving equity in this CSO basin.

BY THE NUMBERS...

Land Use Opportunity and Impervious Surfaces by Area

Basin **27**



Total acreage is shown for each parcel **land use** type. The amount of **impervious surface area** within each land use category reveals opportunities for reaching the **runoff reduction goal**.

Basin Overview

931 acres
TOTAL BASIN AREA

2,425
RESIDENTS

$30,286
MEDIAN HOUSEHOLD INCOME

67 acres
OF CANOPY AREA

17 acres
OF PARK AREA

132 acres
OF RIGHT OF WAY

59 acres
OF ROAD AREA

122 acres
OF BUILDING AREA

68 acres
OF PARKING LOTS

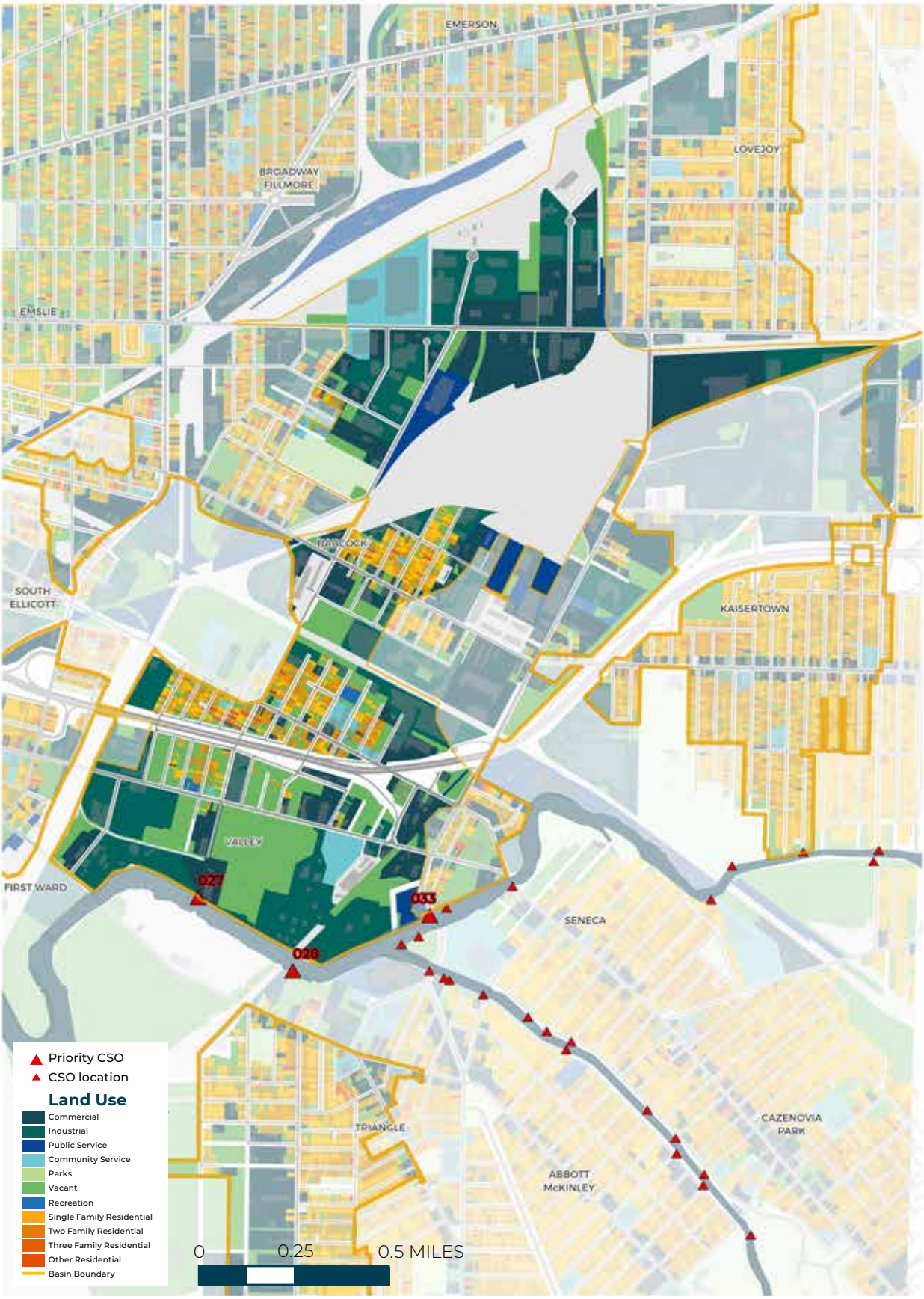


Figure 27.1: CSO Basin 17 Sites evaluated for impervious surface management through green infrastructure.

Opportunity Sites & Networks

Corridors

New Babcock, Bailey, Clinton, William, Elk, and Seneca Streets cover much of the basin, creating the armature for a green infrastructure network connecting significant sites as well as adjacent CSO basins, including Basin 33 to the east, Basin 26 to the northwest. Focusing on green infrastructure in these corridors can improve walkability and in some cases provide buffers between residential neighborhoods and industrial properties and high traffic roadways.

Sites

Important opportunity sites for green infrastructure retrofit in CSO Basin 27 are primarily large warehouse, manufacturing and distribution services that have large parking lots and impervious area. There are two large clusters of such sites along Elk and William Streets. Reducing impervious area on these properties will make a significant contribution to addressing the stormwater challenge in this basin. Also, adding green infrastructure to these sites will help address the low canopy cover and low access to green space that exists in this basin.

Clusters and Networks

Grouping these sites into clusters and networks along key corridors can improve the effectiveness of green infrastructure at reducing stormwater runoff to the sewers as well as increasing canopy cover in the basin. Since unemployment is high in this basin, the jobs created by the implementation of large-scale green infrastructure would contribute to reducing unemployment, particularly if paired with green infrastructure job training.

Key Corridors

- Elk Street
- Seneca Street
- Bailey Avenue
- William Street
- Clinton Street
- New Babcock Street

Key Parking Lots

1. US Post Office
2. American Douglas Metals
3. Food Bank of WNY
4. Niagara Frontier Transit Authority
- Industrial Locations (various)

Key Businesses

5. UPS Customer Center
6. R&R Salvage
7. Comet Flasher, Inc.
8. Robinson Home Products
- Warehouse Properties (various)

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

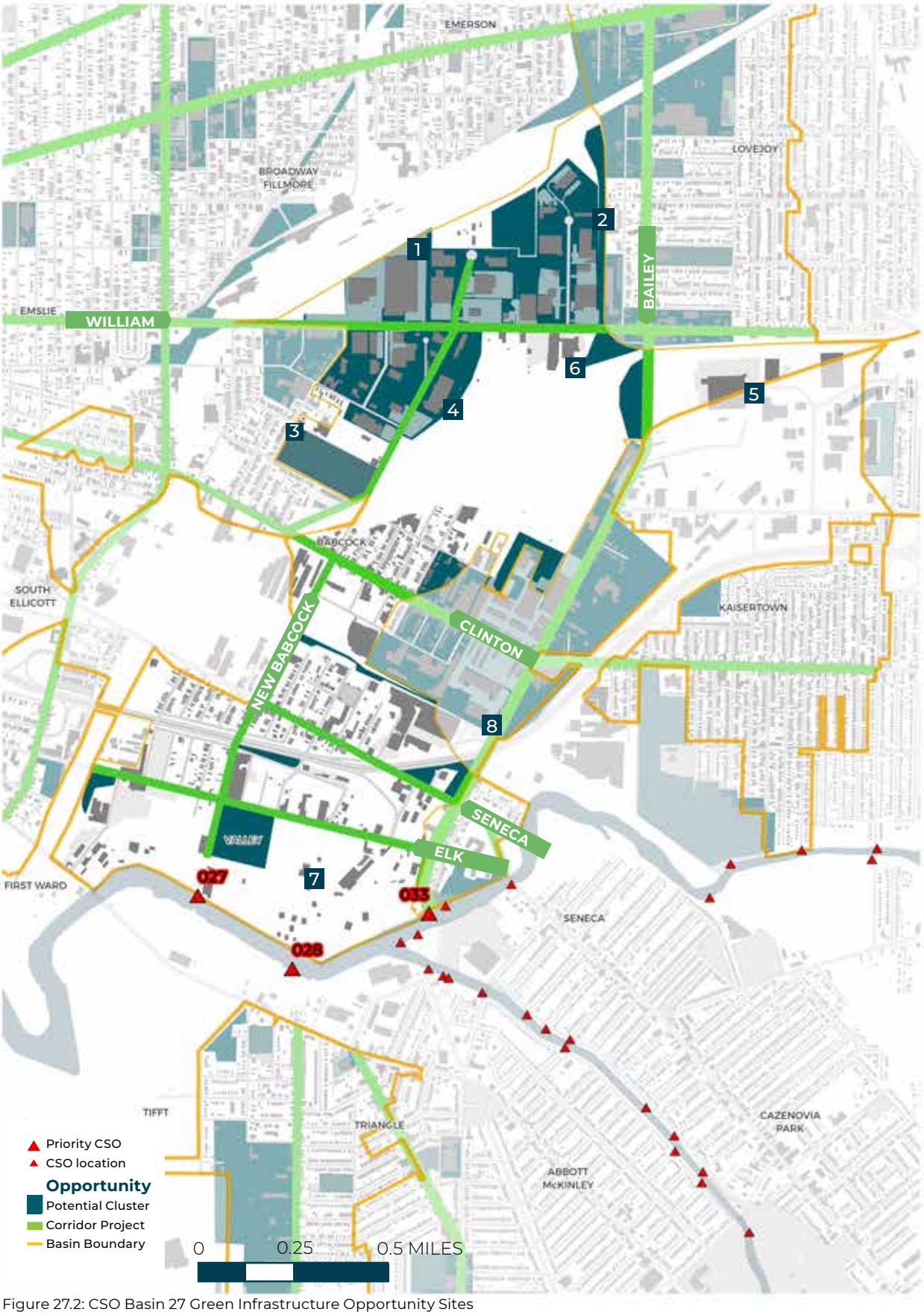


Figure 27.2: CSO Basin 27 Green Infrastructure Opportunity Sites

Green Infrastructure Opportunity
William Street Industrial Green Zone

The neighborhoods of CSO 27 have clear geographic boundaries defined by the Buffalo River, I-190 Highway and railroads. Within this bounded CSO basin the land is mostly dedicated to industrial and commercial activity, which surrounds the small neighborhoods of the Valley and Babcock. The large commercial and industrial uses provide the largest opportunity for runoff reduction while also enabling streetscape beautification and expansion of the large habitat corridors that follow the river and railways.

The William Street corridor provides a case study of this approach. Large industrial and commercial buildings with larger impervious parking lots adjacent to the railroad line could be retrofitted with green infrastructure. Porous paving could be used in parking lots, some buildings may be able to be retrofitted with green roofs, and the use of bioswales in and surrounding large surface parking lots can reduce stormwater runoff, help reduce urban heat island effect, and provide additional canopy cover. Buffalo Sewer could make use of the high rate of vacancy within CSO Basin 27 to develop networked green infrastructure that directs runoff to undeveloped parcels adjacent to key partners like that of US Postal Service and Niagara Frontier Transit Authority. Finally the use of green infrastructure along streets can also help reduce urban heat island effect, improve walkability, and calm traffic.

Strategies

- **Porous paving**
- **Green roofs**
- **Downspout Disconnections**
- **Tree planting**

Potential Partners

- **Commercial property owners**
- **Goodwill Industries**
- **US Postal Service (USPS)**
- **Niagara Frontier Transit Authority (NFTA)**
- **New York State DOT**
- **Buffalo Division of Parks and Recreation**
- **Food Bank of Western NY**

Figure27.3: Nearby neighborhood mural by artist Vinny Alejandro

Figure 27.4: Slow Roll Buffalo bikeing event. Photo by Clay Davies

Placemaking Opportunity with Green Infrastructure

The implementation of green infrastructure on existing properties along the William Street corridors could provide many neighborhood benefits in addition to stormwater runoff reduction. Green infrastructure along streets can help buffer residential communities from truck traffic. By putting vacant land to productive use and adding green space, green infrastructure can support neighborhood revitalization efforts.

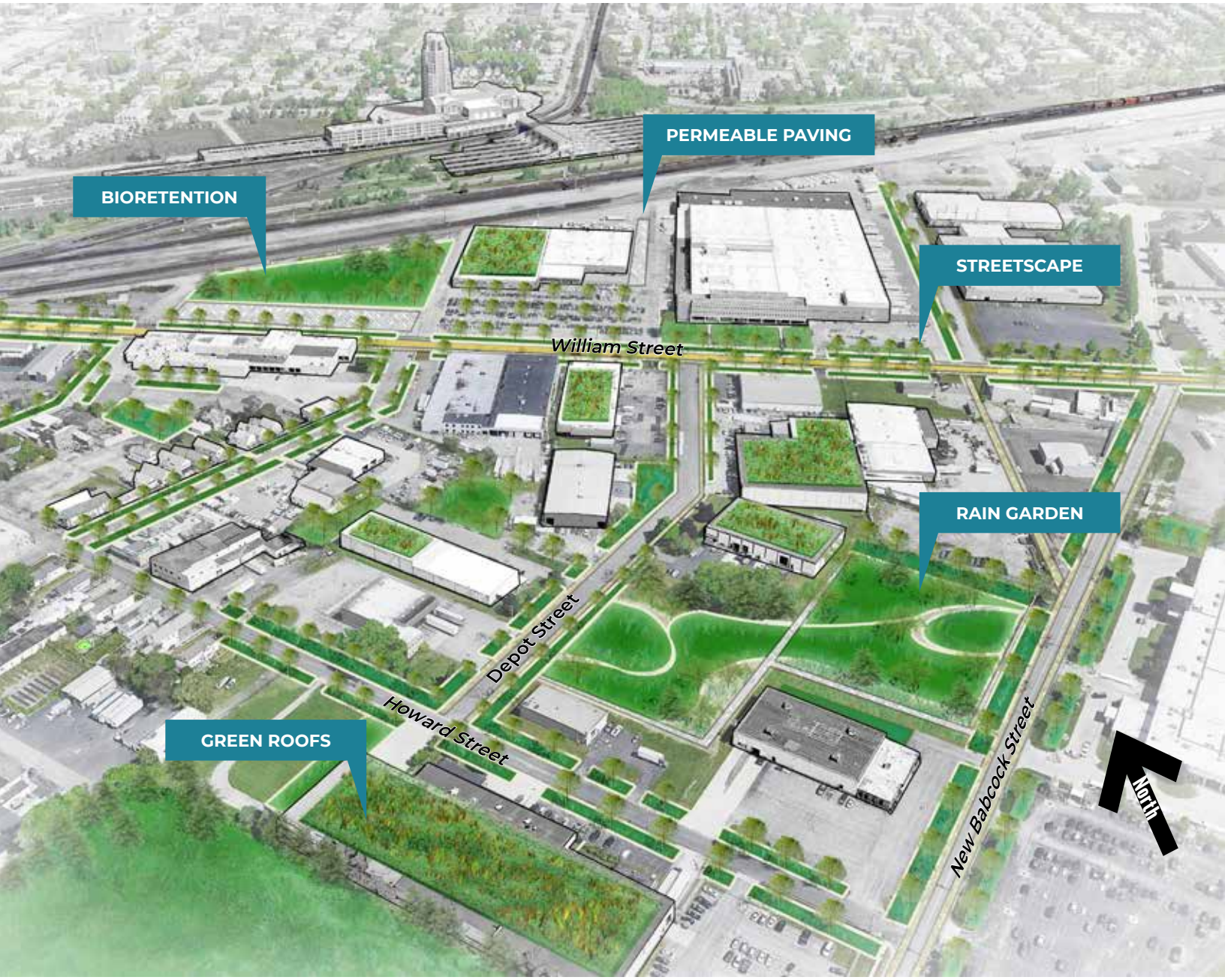


Figure 27.5: Rendering of Williams Street Corridor Cluster with Green Infrastructure

ANALYSIS

Urban Character

CSO Basin 27 intersects a small cluster of neighborhoods in Southeast Buffalo, including Babcock, Kaisertown, the Valley, and Broadway-Fillmore. CSO Basin 27 neighborhoods are dominated by large industrial land uses and truck traffic characteristic of the wholesale trade. CSO Basin 27 has a population of only about 2,400. Commercial properties dominate the sites inventoried for green infrastructure retrofit and those sites have significant paved surfaces. CSO Basin 27 includes several large industrial sites on the northern bank of the Buffalo River as well as a large rail yard area. The William Street corridor passes through CSO 27 and is dominated in that stretch by large logistical warehouses and truck traffic.

Investment in green infrastructure in CSO Basin 27 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 William Street, Seneca Street, and Clinton Street are focuses of revitalization efforts through the Buffalo Green Code and are also opportunity sites for green infrastructure. Clinton Street and Seneca are important neighborhood centers. Green infrastructure investment in these neighborhood centers will support implementation of the Buffalo Green Code and neighborhood revitalization efforts.

CSO Basin 27 is seeing the least amount of overall development per square mile of all the priority CSO basins, but has the highest concentration of industrial permits in the last 2 years. The Kaisertown neighborhood, which is partially located in CSO Basin 27, has one of the highest projected increases in home values according to Zillow.

Figure 27.6: Brownfield and industrial sites along Elk Street cut off the Valley neighborhood from the Buffalo River to the south.

Figure 27.7: The north end of CSO Basin 27 is characterized by large commercial and industrial sites flanking William Street with large flat roofed buildings and big parking lots.

Figure 27.8: CSO Basin 27 has several small residential blocks that are isolated by rail corridors and industrial zones. This example is in the Babcock neighborhood along Clinton Street.

Figure 27.9: CSO Large openspace around current and former rail yards.

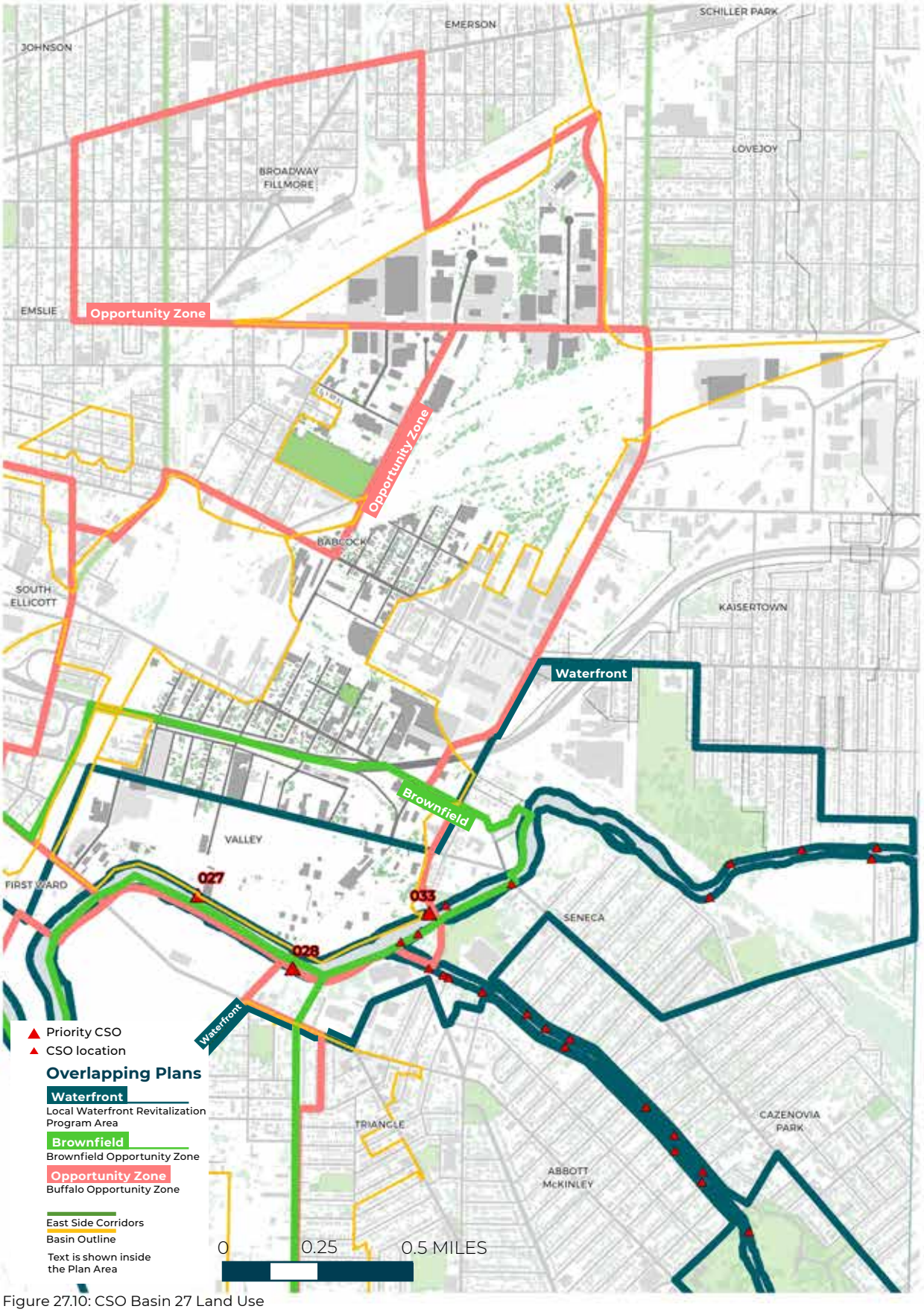


Figure 27.10: CSO Basin 27 Land Use

ANALYSIS

Equity Analysis

There is a small community of about 2,400 residents, the overwhelming majority of whom are White. Most households are owner-occupied, and median household incomes and poverty rates largely reflect the City as a whole. However, CSO Basin 27 stands out for a few environmental indicators of green infrastructure need. The basin has the highest vacancy rates, both commercial (16%) and residential (24%), of the six targeted CSO basins, along with a relatively high share of vacant land (15%). CSO Basin 27 also has the lowest tree canopy coverage of any targeted basin—7.4%, which is half that of the City as a whole. Also, as Interstate 190 runs through the basin, neighborhoods in CSO Basin 27 have a notably high proximity to heavy volumes of traffic. The highway and other barriers, including the predominant industrial land uses, railroads, and the Buffalo River, contribute to this geographic isolation, raising a number of equity considerations for the residential community.

Although the basin is one of the smallest and least diverse areas prioritized by Rain Check 2.0, green infrastructure installations could contribute to placemaking in residential areas, create attractive buffers between residences and surrounding industrial land uses, and also promote healthier environments for workers of major employers in the area. However, given the area's industrial heritage and neighborhood identities, consideration should be given to what types of green infrastructure practices can maintain or promote the neighborhood character that residents value. With the majority of households being owner-occupied, there may be potential interest in and capacity to maintain green infrastructure on private property.

Although industrial sites within the CSO basin may present the greatest opportunities to reduce stormwater runoff, residents may still benefit from installations on these properties. The proportions of residents employed in manufacturing and wholesale trade are triple the rates for the City overall, so residents employed in these industries may work at the employers located in the area. While income and poverty levels are on par with the City as a whole, the unemployment rate is nearly double the rate of the City overall. Furthermore, levels of educational attainment are relatively low, including a significant share of youth who are neither enrolled in school nor working. Job training programs could be targeted towards students, unemployed and underemployed young people living in the area, as well as workers in trade industries. There are a number of community centers in the area that could be potential partners for workforce training initiatives, as well as community outreach and engagement activities.

Neighborhood Profile Snapshot

2,425
RESIDENTS

$30,286
MEDIAN HOUSEHOLD INCOME

95.4%
ATTAIN LESS THAN A BACHELOR'S DEGREE

$29,800
MEDIAN VALUE OF OWNER-OCCUPIED HOMES

30.2%
OF HOUSEHOLDS DO NOT HAVE A VEHICLE

-22.9%
2000–2016
POPULATION CHANGE

25.9%
RESIDENTS LIVING IN POVERTY

43.8%
WORKING AGE NOT EMPLOYED*

19.9%
RESIDENTS ARE PEOPLE OF COLOR

43.3%
HOUSEHOLDS ARE RENTERS

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 27.11: CSO Basin 27 and GI Equity Index

Environmental Systems

Waterways

CSO Basin 27 sits along the north shore of, and discharges to, the Buffalo River. The properties bordering the river are large industrial sites and there is no riparian buffer. A number of these sites are currently vacant or fallow, and prevent riverside access by residents. This area has been identified as a brownfield opportunity zone, and any future development would improve upon community resources by increasing neighborhood access to the river and restoring the riparian zone.

Tree Canopy Cover

CSO Basin 27 has the lowest canopy cover of any of the priority CSO Basins, with only half as much canopy cover as the City overall. There are many vacant tree spaces and the acreage of canopy cover is small compared to the available plantable acres.

Habitat Connectivity

The overall lack of canopy cover and the large industrial uses limit habitat connectivity. There is a large patch owned by the railroad that could have canopy increased to serve as a large habitat patch. The I-190 highway and industrial sites currently cause significant discontinuity in the network but this could be remedied by strategically developing tree canopy or habitat corridors along rail lines and vacant lots as habitat stepping stones.

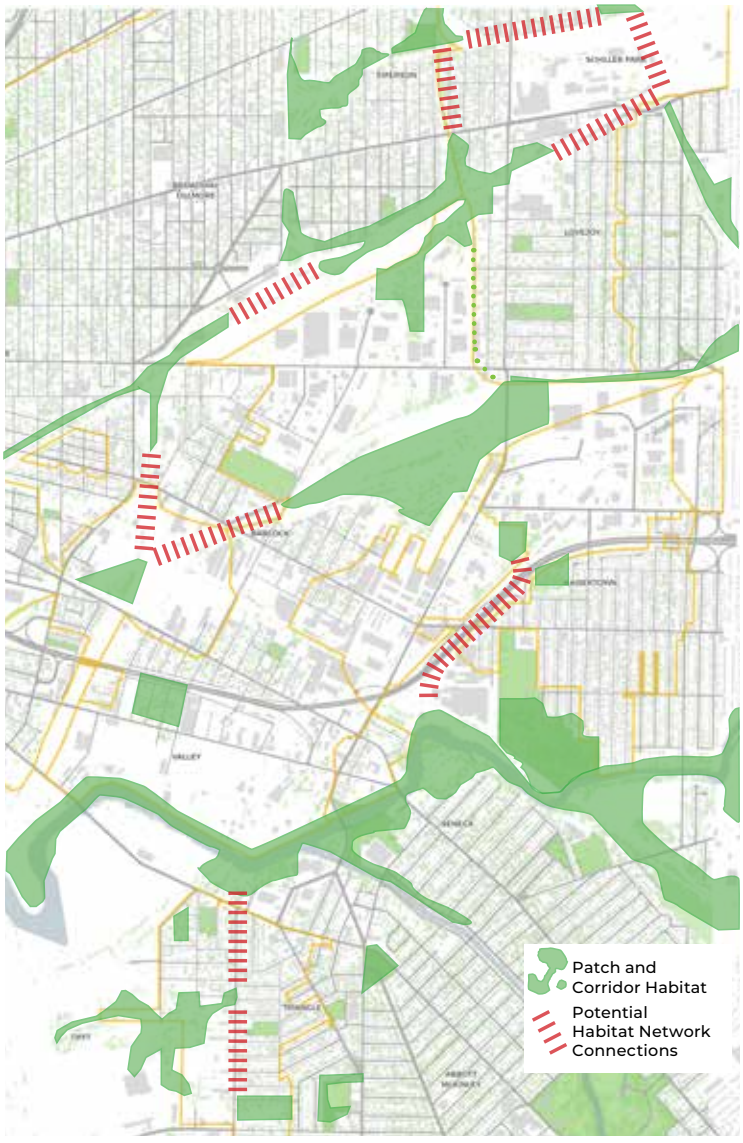
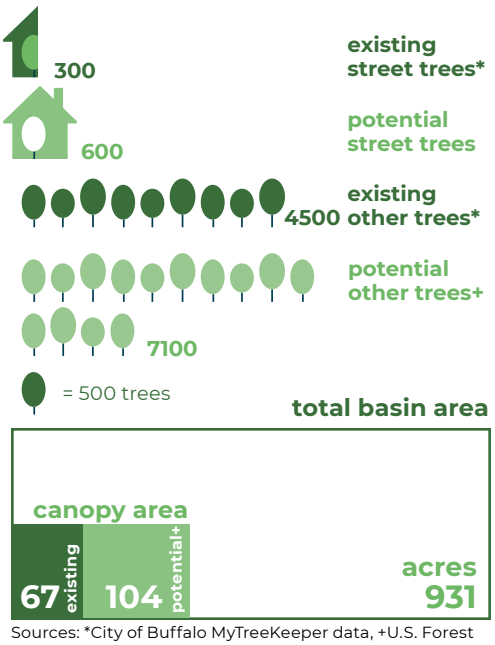


Figure 27.12: Potential for Habitat Connectivity in CSO Basin 27

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

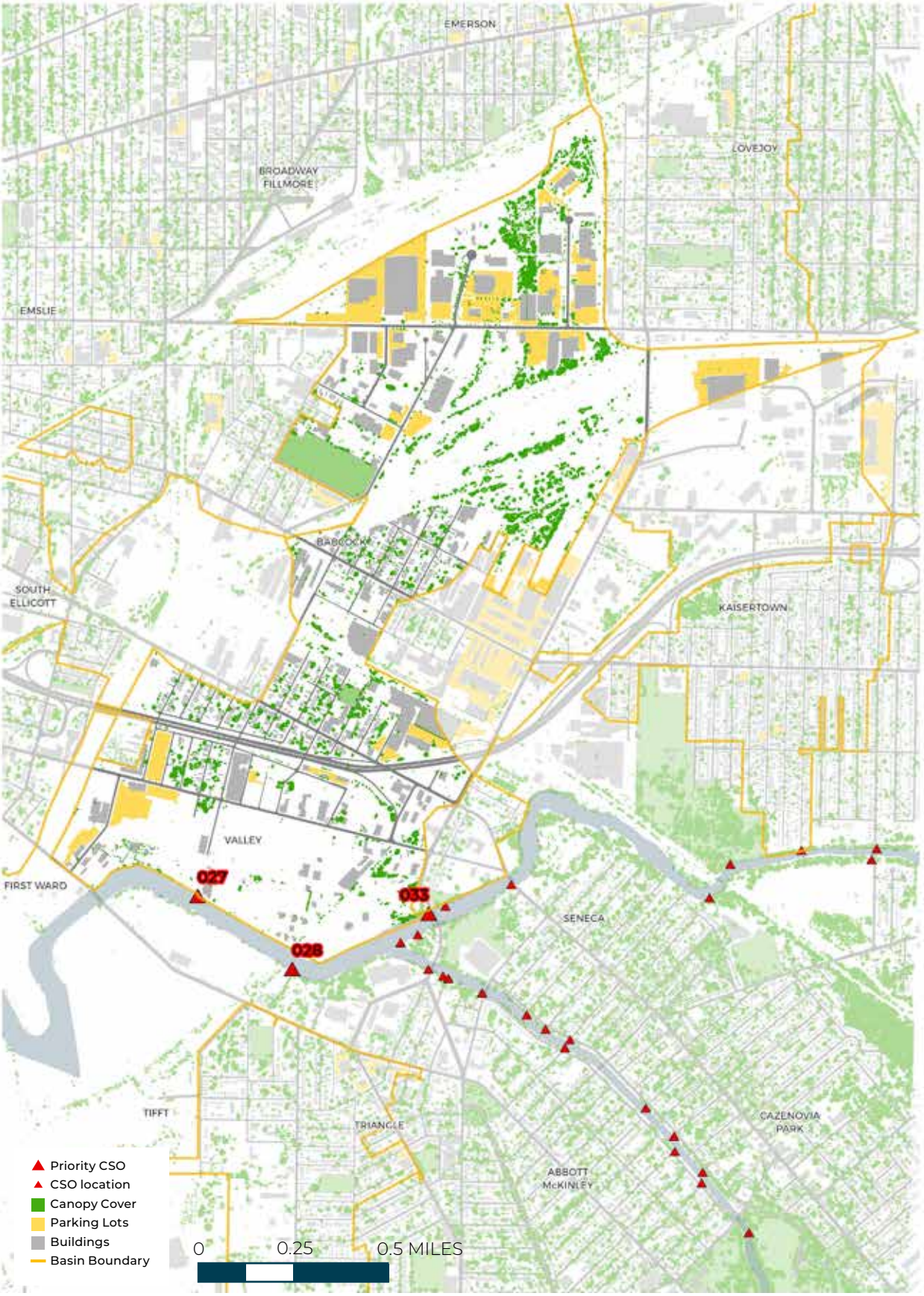


Figure 27.13: CSO Basin 27: Canopy Cover and Impervious Surfaces

ANALYSIS

Site Analysis

CSO Basin 27 is dominated by warehouses for manufacturing and distribution centers. Industrial and commercial uses to the north and south isolate residential neighborhoods. The Erie Railroad cuts through the area and comprises a large land area.

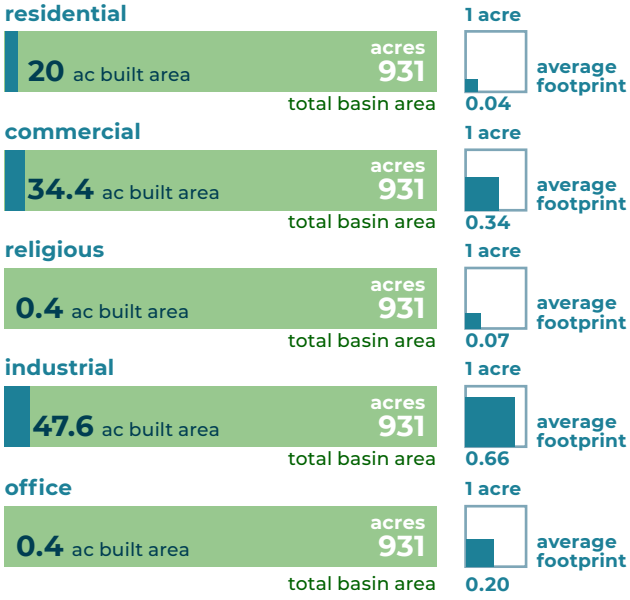
Many of the buildings have large footprints and paved areas for loading bays that, when combined with large access roads, cause this basin to have a very large percentage of impervious surfaces. The impervious surface reduction goal is 73 acres, approximately 7% of the total area. The site analysis process focused on large parcels. Because sites are so large, fewer owners would need to be engaged, possibly simplifying the implementation of green infrastructure. The sites inventoried capture about half of the total area, and are mostly concentrated along Elk Street and William Street.

The land use distribution is dominated by active commercial properties that require large driving surfaces. Porous paving may be a good option for these parcels. Along the Buffalo River there is opportunity for infiltration; however impacted soils may need remediation, and contamination may limit the feasibility of these sites for infiltration.

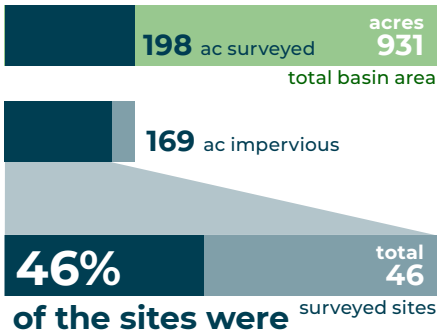
In underutilized or vacant properties along the river, there may be opportunity for green infrastructure to tie into long term redevelopment goals for the area. Green infrastructure can be designed into streetscape improvements along visible areas and improved open space should incorporate stormwater management technologies.

Built Area by Land Use

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



The site analysis reviewed 21% of the basin and found 26.5 acres of potential drainage area.



46% of the sites were suitable for green infrastructure.

87% of sites are in full sun

26% of sites are highly visible

Figure 27.14: CSO Basin 27: Percent Impervious by Parcel

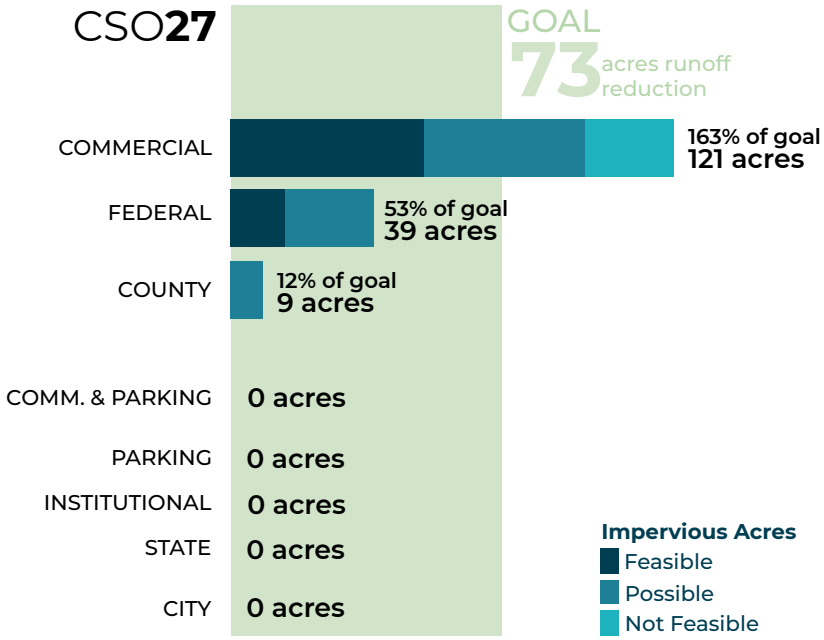
ANALYSIS

Site Analysis: Surveyed Properties

Figure 27.15: Image of sites where field work was conducted

Surveyed Properties by Land Use and Ownership

GIS sources: Erie County data, Buffalo Sewer Authority data



LARGEST PROPERTY OWNERS BY LAND USE AND OWNERSHIP

COMMERCIAL

UPS Customer Center
14.8 Imperv. acres

R&R Salvage, Inc.
11.5 Imperv. acres

Comet Flasher, Inc.
8.9 Imperv. acres

Warehouse Property
6.8 Imperv. Acres

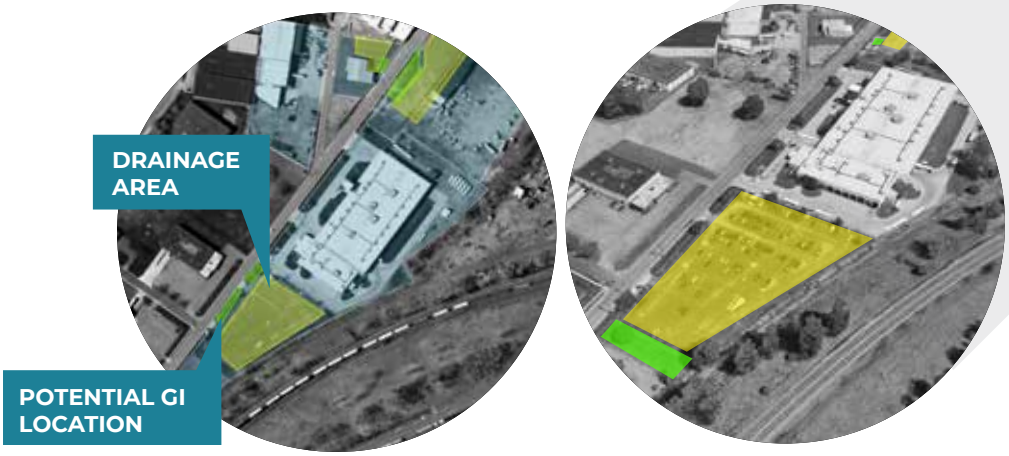
Robinson Home Products
6.4 Imperv. acres

FEDERAL

USPS William Street Site
23.8 Imperv. acres

A number of institutions and large properties were surveyed in CSO Basin 27 during this process.

This information helped the team understand that many have campuses or sizable properties that can be managed as a series of smaller green infrastructure installations or as a networked system.



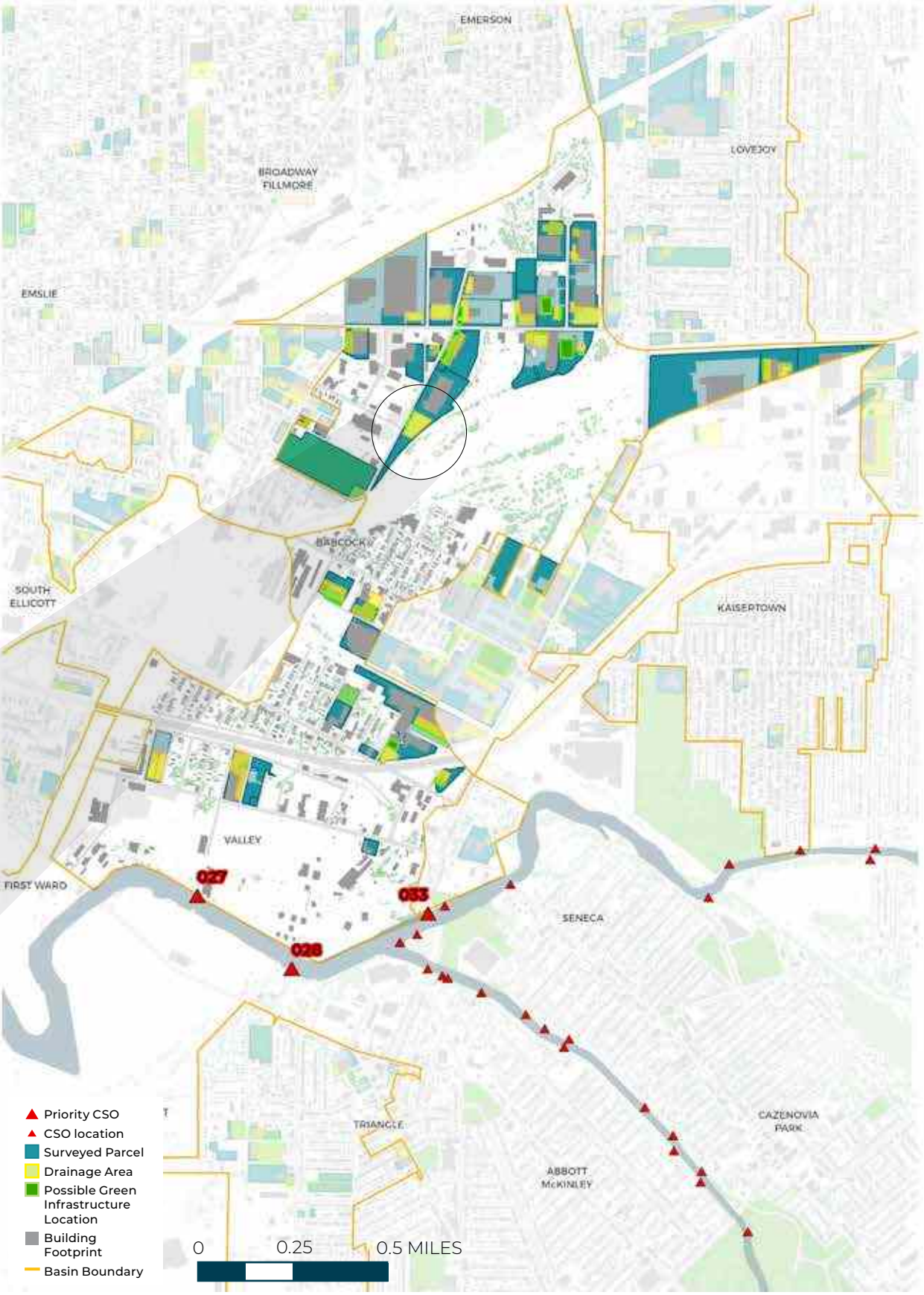


Figure 27.16: CSO Basin 27: Sites analyzed showing parcels, drainage areas and potential green infrastructure.

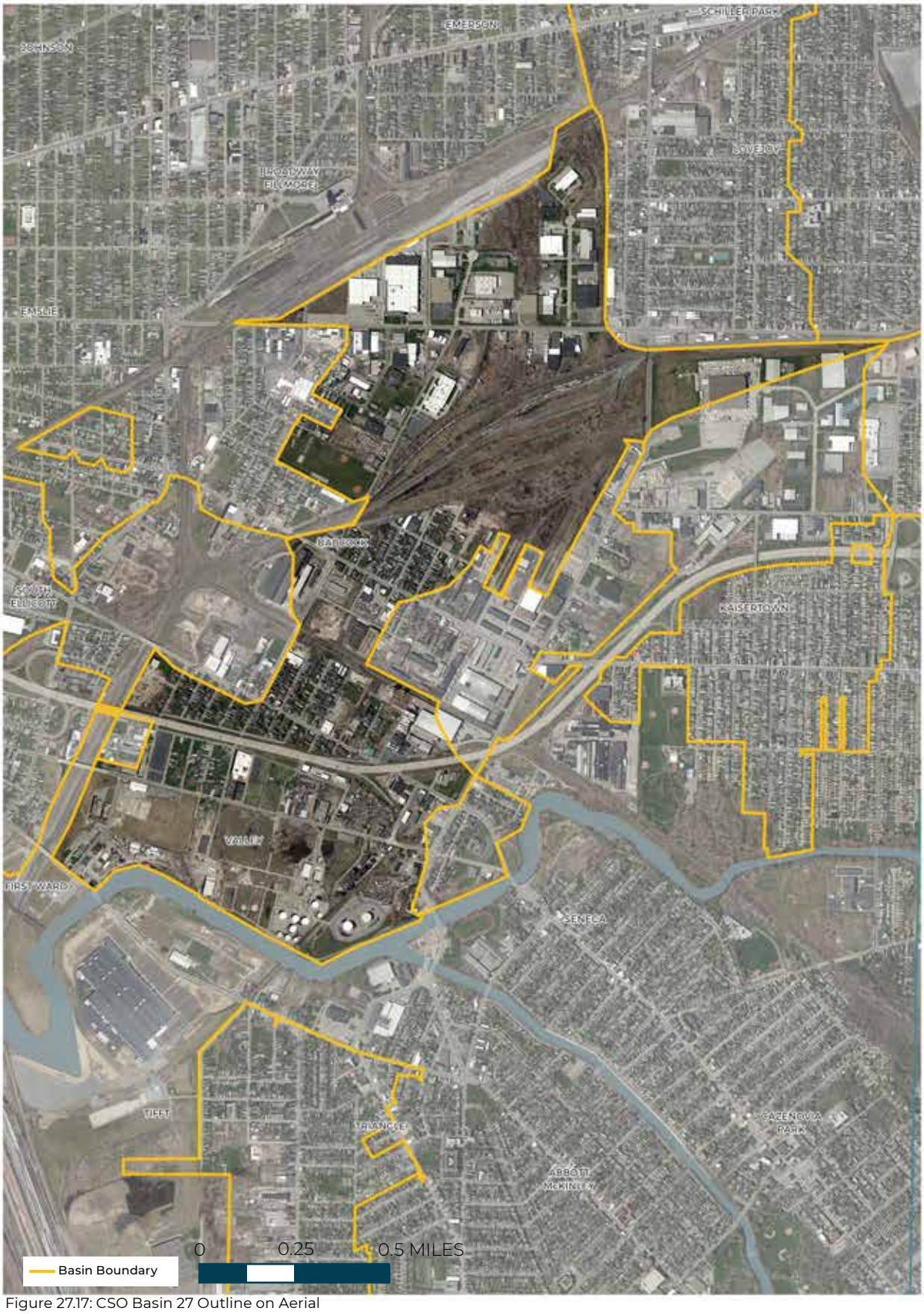


Figure 27.17: CSO Basin 27 Outline on Aerial

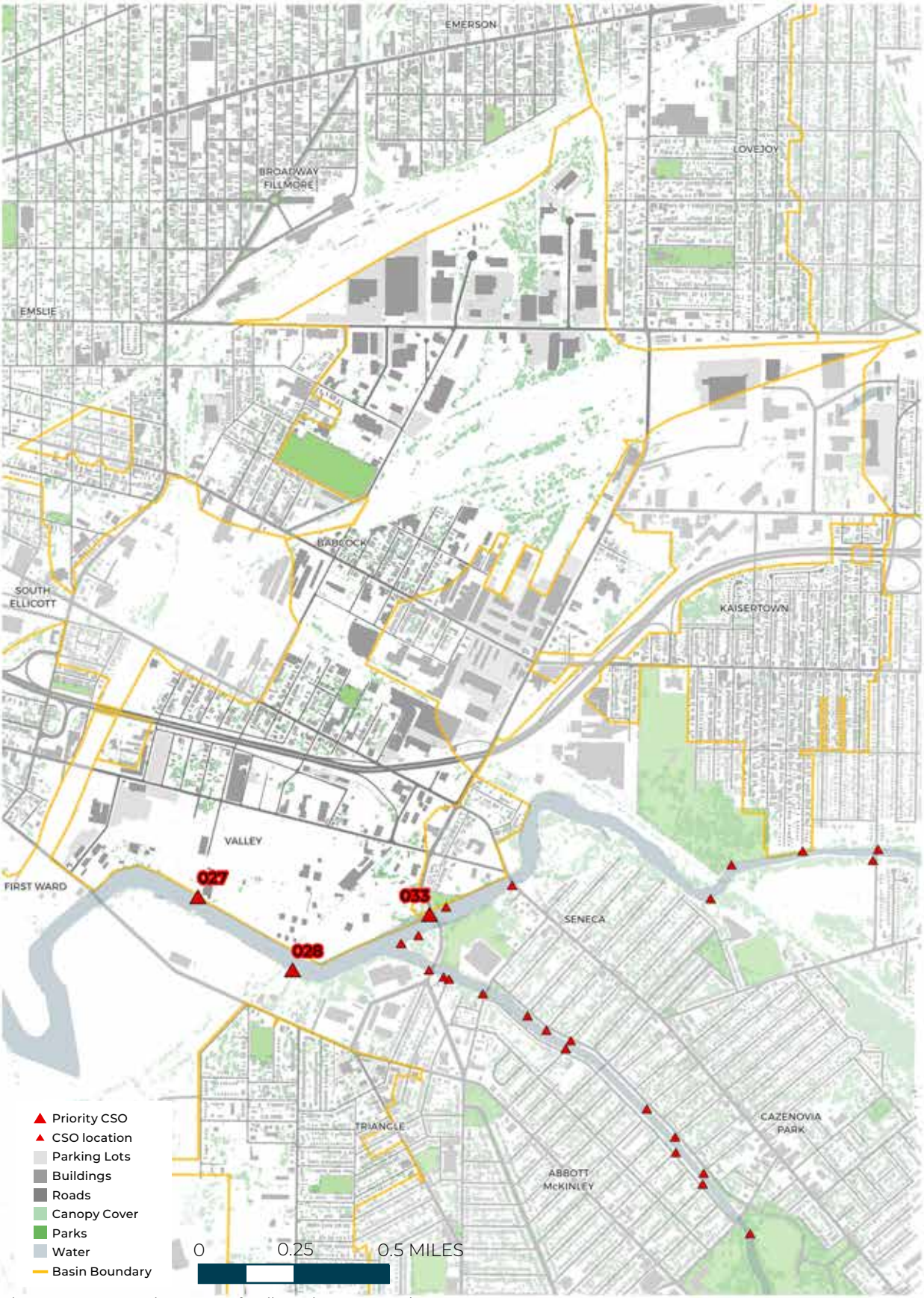


Figure 27.18 CSO Basin 27 Map of Built Environment and Tree Canopy

CSO28

When a drop of water lands at the intersection of Hopkins Street and South Park Avenue, it is joined by water from the neighborhoods of Abbott McKinley, South Abbott, South Park, Tifft, and Triangle. During heavy wet weather, the rainwater combines with sewage and overflows into the Buffalo River at Combined Sewer Overflow 28 (CSO 28).

Community benefits

- Tree planting programs
- Public parks and community amenities
- Improving the quality of the public realm
- Active commuting (biking or walking to work)
- Buffer between Industrial and residential uses.
- Walkability
- Expanded canopy cover
- Traffic calming
- Support for neighborhood revitalization efforts
- Downspout disconnection programs

CSO **Basin 28 at a glance...**

Green Infrastructure Opportunities

The goal for CSO Basin 28 is to manage stormwater from 27 acres of impervious surface. Based on the site analysis, this goal cannot be met in any one category, but will require a combination of commercial properties, parking lots and right of way improvements.

Urban Character

CSO Basin 28 is characterized by dense residential with adjacent open space and industrial uses.

Environmental Systems

The canopy cover in CSO Basin 28 is similar to the City average. Because the basin is more residential, there are more trees, many of which are street trees and older, larger trees. There are some large patches of habitat, but little connectivity. Enhancing the urban canopy, particularly along corridors, would create greater connectivity.

Equity Considerations

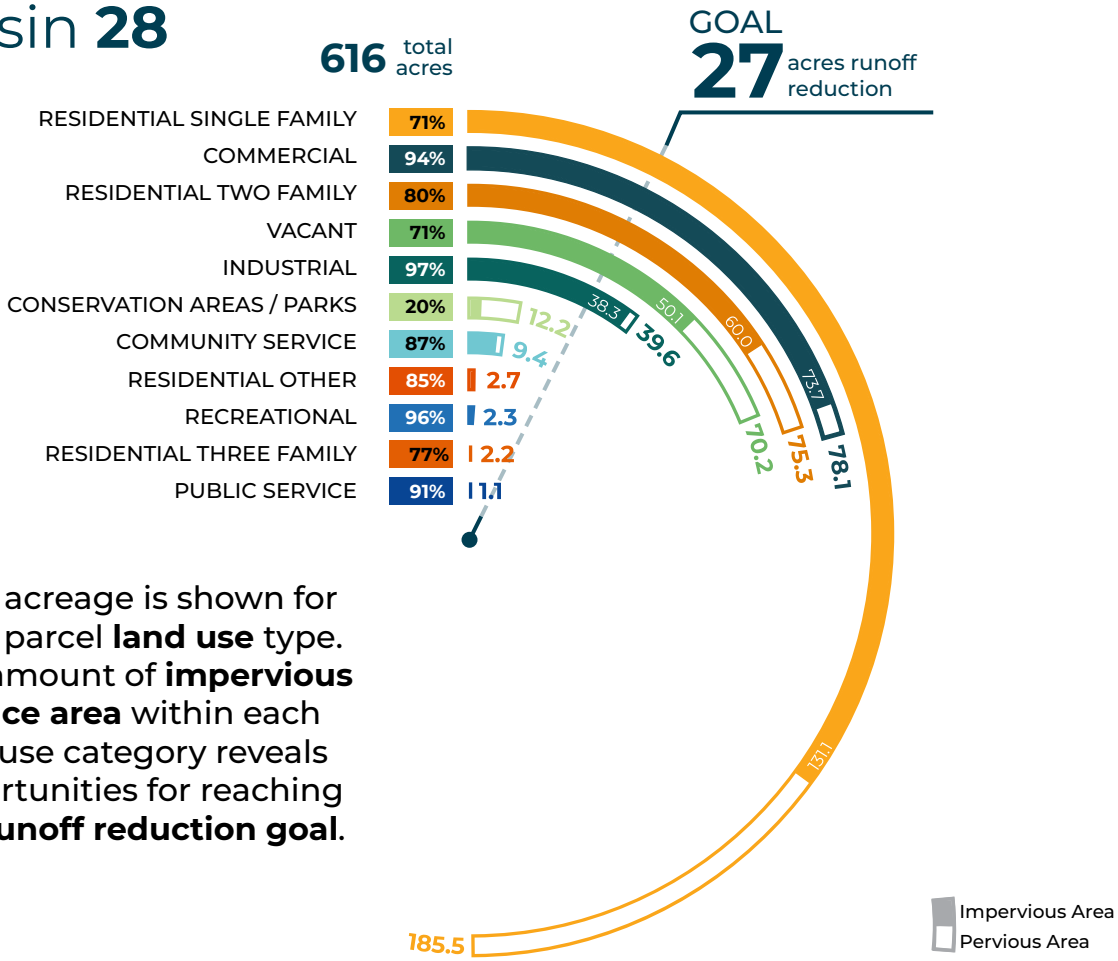
Green infrastructure improvements in the public realm—streets and sidewalks—could encourage more biking and walking by residents and provide buffers between residential and industrial zones, for example Hopkins street. Green infrastructure can be a tool for residents and other community stakeholders to connect to one another and with public officials about community priorities. Green infrastructure could enhance livability and promote physical activity of residential community surrounded by industrial uses.

Green infrastructure at public parks and community amenities could support creative placemaking at focal points and Buffalo Sewer might explore strategies and incentives to cultivate resident and community stewardship of projects.

For a number of reasons, CSO Basin 28 has the lowest overall need for green infrastructure investment as measured by the green infrastructure equity index.

BY THE NUMBERS...

Land Use Opportunity and Impervious Surfaces by Area



Total acreage is shown for each parcel **land use** type. The amount of **impervious surface area** within each land use category reveals opportunities for reaching the **runoff reduction goal**.

Basin Overview

616 acres
TOTAL BASIN AREA

16,369
RESIDENTS

$44,174
MEDIAN HOUSEHOLD INCOME

70 acres
OF CANOPY AREA

15 acres
OF PARK AREA

134 acres
OF RIGHT OF WAY

63 acres
OF ROAD AREA

106 acres
OF BUILDING AREA

13 acres
OF PARKING LOTS

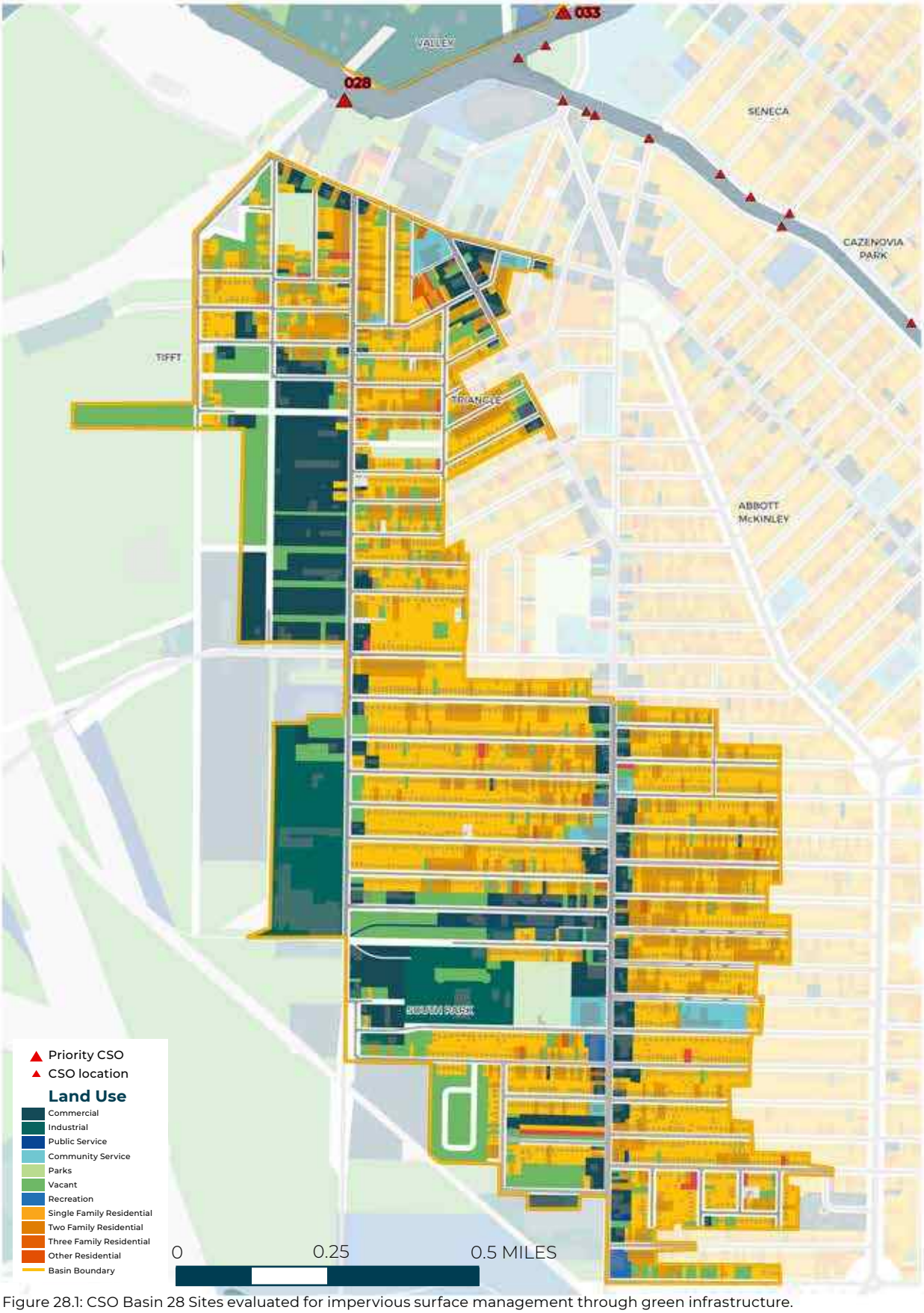
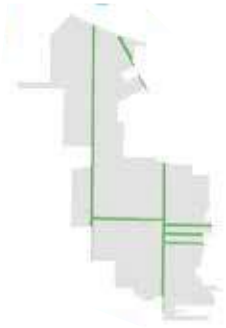


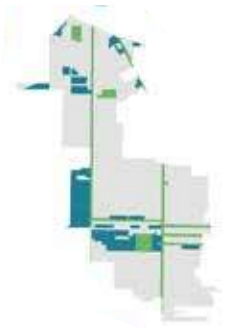
Figure 28.1: CSO Basin 28 Sites evaluated for impervious surface management through green infrastructure.

Opportunity Sites & Networks



Corridors

Hopkins Street and South Park Avenue provide the basis for a networked green infrastructure system and are also current or potential neighborhood centers. Existing medians at Harding, Culver and Ridgewood roads provide opportunities for local networks of green infrastructure that could tie in residential properties and connect to a larger neighborhood network along South Park Avenue.



Sites

The sites analyzed in CSO Basin 28 naturally organize along corridors. Small mid-block parks and open space in the basin and adjacent to it provide additional opportunities for green infrastructure both at their perimeter and below grade. Combining green infrastructure with open space and parks enhances the public realm and provides greater access to green space.

Clusters and Networks

The large cluster of primarily industrial properties surveyed can be combined with corridors into larger clusters or networks. These can be combined with institutions and parks in and adjacent to the basin. Such clusters are based on both physical proximity and programmatic synergies. Program synergies could include, for example, workforce development programs centered around schools or community centers that will assist with the implementation of green infrastructure city-wide.

Key Corridors

- Hopkins Street
- South Park Avenue
- Residential streets with existing medians (Harding, Culver, Ridgewood)

Key Institutions

1. South Park High School
2. South Buffalo Food Pantry
3. Buffalo Police Department
4. South Buffalo Irish Center
5. Holy Family Catholic Church
6. St. Ambrose Church

Industrial/Commercial

7. Niagara Fiberglass, Inc.
8. Mobile Mini
9. Price Trucking
10. Rite Aid

Key Parks

1. Boone Park
2. Heacock Park
3. Durant Street Playground
4. Mulroy Park
5. South Buffalo Charter School Playground
6. Buffalo and Erie County Botanical Gardens

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

Figure 28.2: CSO Basin 28 Green Infrastructure Opportunity Sites

Green Infrastructure Opportunity
South Park Avenue Green Network

CSO Basin 28 is the second smallest of the 6 priority CSO basins and has the highest number of overflows in the system. The predominant land use is residential. Meeting the goal in this basin will require working with homeowners as well as other types of property, including the public right-of-way. South Park Avenue is an important commercial corridor with several parks and public institutions along it. South Park Avenue provides the potential armature for a networked system of the green infrastructure that could incorporate a large percentage of the basin area.

The streets of Ridgewood, Culver, Harding, and Reading and their intersection with South Park Avenue provide an opportunity to showcase green infrastructure along these wider streets with existing landscaped medians. These streets in residential areas could be the basis for connecting disconnected residential downspouts into a larger green infrastructure network. Because they intersect with South Park Avenue they can be networked into a system of green infrastructure along South Park Avenue. These projects could demonstrate to residents the benefits of implementing green infrastructure on their own properties. These streets can also contribute to beautification and pollution reduction along South Park Avenue, which has a high volume of traffic and many businesses.

There are a number of small parks and public open spaces in CSO Basin 28 that are also adjacent to South Park Avenue. These spaces could be utilized for stormwater detention and infiltration from adjacent properties and roadways and could also be connected into a larger networked system. This could also include use of porous paving for alley ways and sidewalks.

Strategies

- **Green streets**
- **Commercial building green roof**
- **Residential downspout disconnections**
- **Parking lot bioswales**
- **Convey and detain in park**

Potential Partners

- **Department of Public Works**
- **Division of Parks and Recreation**

Figure 28.3: Mulroy Park in South Buffalo

Figure 28.4:Harding Road in South Buffalo

Placemaking Opportunity with Green Infrastructure

Creating a neighborhood scale green infrastructure network not only assists in managing stormwater, but is also an opportunity to make great places within a neighborhood and support broader neighborhood revitalization goals. In CSO basin 28 this could take the form of an enhanced public realm with vacant land used for stormwater and community amenities, improvements to public streets and parks, and increased tree planting, all of which provide environmental and health benefit and increase property values.

Figure 28.5: Rendering of South Park Avenue Green Network

ANALYSIS

Urban Character

CSO Basin 28 boundaries intersect with several City of Buffalo planning neighborhoods in South Buffalo, including Abbott McKinley, South Abbott, South Park, Tifft, and Triangle. CSO Basin 28 neighborhoods are predominantly residential communities bordered by industrial land uses to the west and Cazenovia Creek and the Buffalo River to the north. The area is home to several schools and churches, and a number of public parks and open spaces including Heacock Park, Mulroy Park, and South Park.

Investment in green infrastructure in CSO Basin 28 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. CSO Basin 28 borders neighborhood centers along Abbot Road and South Park Avenue and green infrastructure investment along these corridors can support the revitalization of these areas.

The Hopkins Street area is currently bordered by industrial uses on the west side, but is zoned mixed use under the green code. Investment in green infrastructure along Hopkins Street could both provide a buffer between industrial and residential uses in the short-term and support the growth of mixed use development along that corridor in the future.

Because this CSO basin is dominated by residential communities, downspout disconnection programs will likely play an important role here. The South Park area in CSO Basin 28 is seeing heavy residential development per square mile based on building permits.

Figure 28.6: Auto parts, scrap yards, and other outdoor industrial depots on the south end of Hopkins St in CSO Basin 28.

Figure 28.7: Dense single family detached housing comprises much of CSO Basin 28 seen here between Hopkins St and South Park Ave.

Figure 28.8: Industry, commercial, and brownfields line The Buffalo River along the north end of the CSO Basin.

Figure 28.9: Along Hopkins and Abby street light industry borders the residential community and creates a barrier to open space to the west.

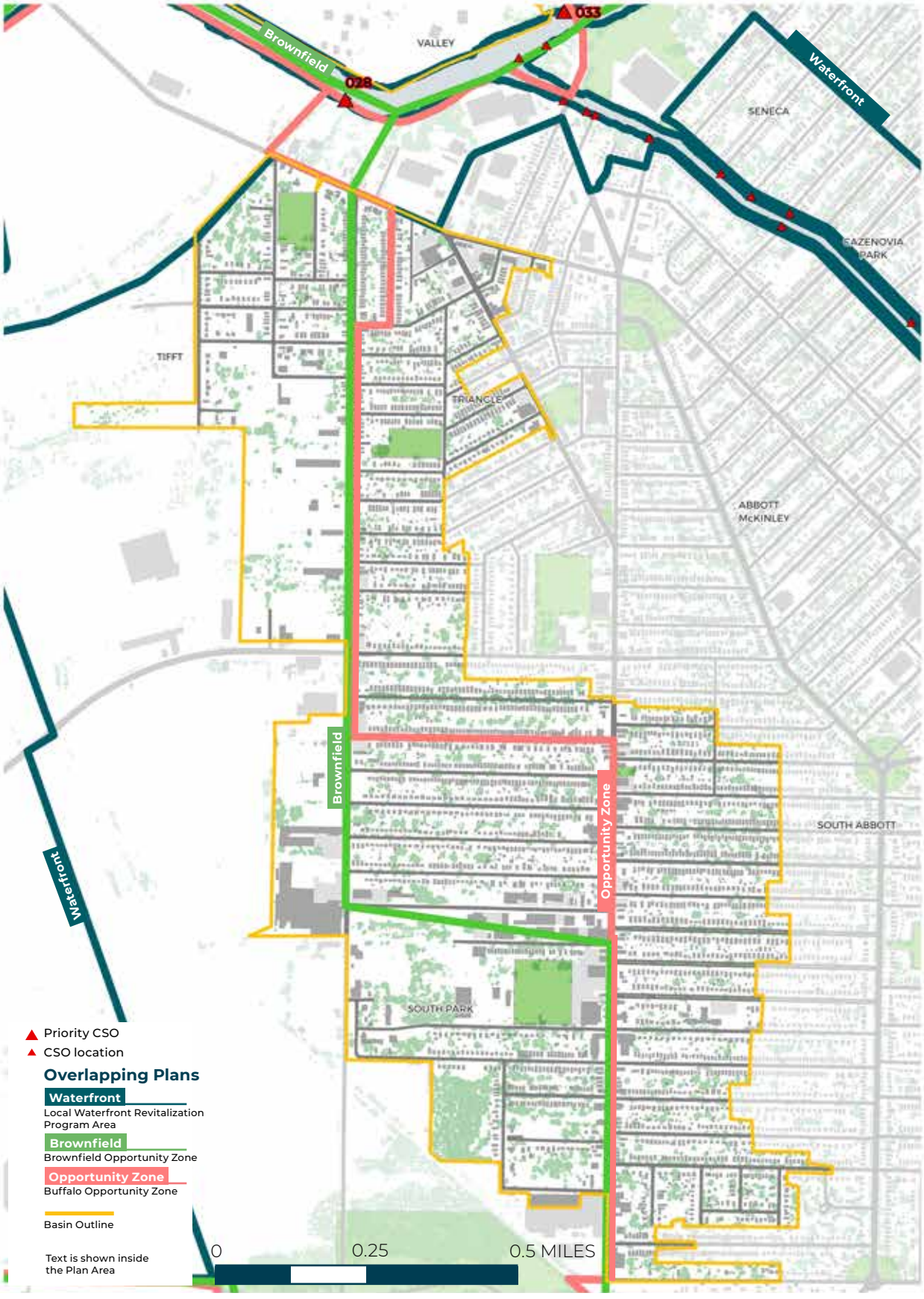


Figure 28.10: CSO Basin 28 intersecting Plans

ANALYSIS

Equity Analysis

The population of about 16,400 people is predominantly White and relatively better off than other priority areas and the City overall on measures of economic well-being and connectedness. The median household income for households in CSO Basin 28 neighborhoods is higher than the City overall, and unemployment and poverty rates for residents are lower compared to the City. CSO Basin 28 neighborhoods may offer good opportunities for targeting private property owners for engagement, installation, and maintenance of green infrastructure. Two thirds of housing units are owner occupied and only one quarter of households spend more than 30% of monthly income on housing costs.

CSO Basin 28 also ranks positively in terms of environmental concerns—it has the lowest impervious surface coverage (53%) and residential vacancy rate (5%) of all the targeted basins. It also has a relatively high tree canopy coverage (16%) and a low share of vacant land area (11%). Due to these advantages, CSO Basin 28 has the lowest overall need for green infrastructure investments as measured by the GI equity index (see Appendix A). Some opportunities for green infrastructure investments may be highly feasible in this area, such as strategies that engage residents, since neighborhoods here are well-intact with plenty of owner-occupied housing.

There may also be opportunities for green infrastructure practices to promote more active and healthy communities in CSO Basin 28 neighborhoods. Over 90% of households have access to a vehicle and 88% of workers commute via car. There could be potential for green infrastructure to improve the quality of the public realm, for example along roads and sidewalks to and from the many parks and open spaces in the area, to encourage more biking and walking among residents living in the area.

Neighborhood Profile Snapshot

16,369
RESIDENTS

$44,174
MEDIAN HOUSEHOLD INCOME

77.4%
ATTAIN LESS THAN A BACHELOR'S DEGREE

$76,369
MEDIAN VALUE OF OWNER-OCCUPIED HOMES

10%
OF HOUSEHOLDS DO NOT HAVE A VEHICLE

-9.7%
2000–2016
POPULATION CHANGE

20.6%
RESIDENTS LIVING IN POVERTY

27.9%
WORKING AGE NOT EMPLOYED*

19.5%
RESIDENTS ARE PEOPLE OF COLOR

34.8%
HOUSEHOLDS ARE RENTERS

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 28.11: CSO Basin 28 and GI Equity Index

ANALYSIS

Environmental Systems

Waterways

CSO Basin 28 is located south of Cazenovia Creek and the Buffalo River and discharges to the river. A band of industrial properties are located on the shore of the river, but are not in the CSO basin. These industrial properties prohibit access to the Buffalo River from the neighborhood, but have helped to bolster a riverside habitat corridor where vacant industry plots have been left fallow. The community has access to Cazenovia Creek through Cazenovia Park, but downstream the connection is less pleasant due to channelization and barrier fences.

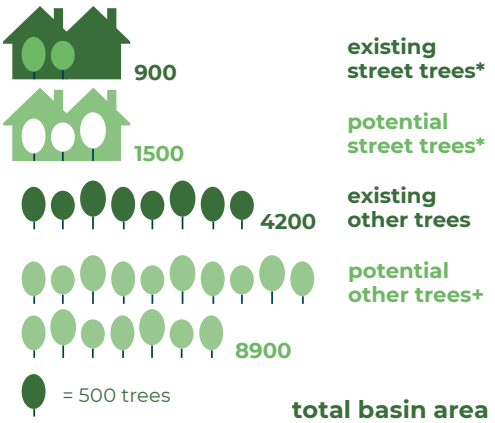
Tree Canopy Cover

The canopy cover in CSO Basin 28 is higher than the overall City. Because the basin is more residential, there are more trees, many of which are street trees and older, larger trees, which have high value for stormwater management and other environmental services.

Large planted parcel to the south could be sinks for stormwater. This CSO basin is adjacent to large open (green) spaces.

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

Habitat in this CSO basin consists primarily of isolated patches with larger areas of open space to the south, and east, the Buffalo River corridor to the north, and the Tifft Nature Preserve to the east. The biggest opportunity to improve upon the habitat network in this basin would be to stitch together the isolated patches. Establishing tree canopy within the right of way could help to improve interconnectivity. Often new connections would only need to span several blocks to integrate the isolated mid-size patches into the larger network.

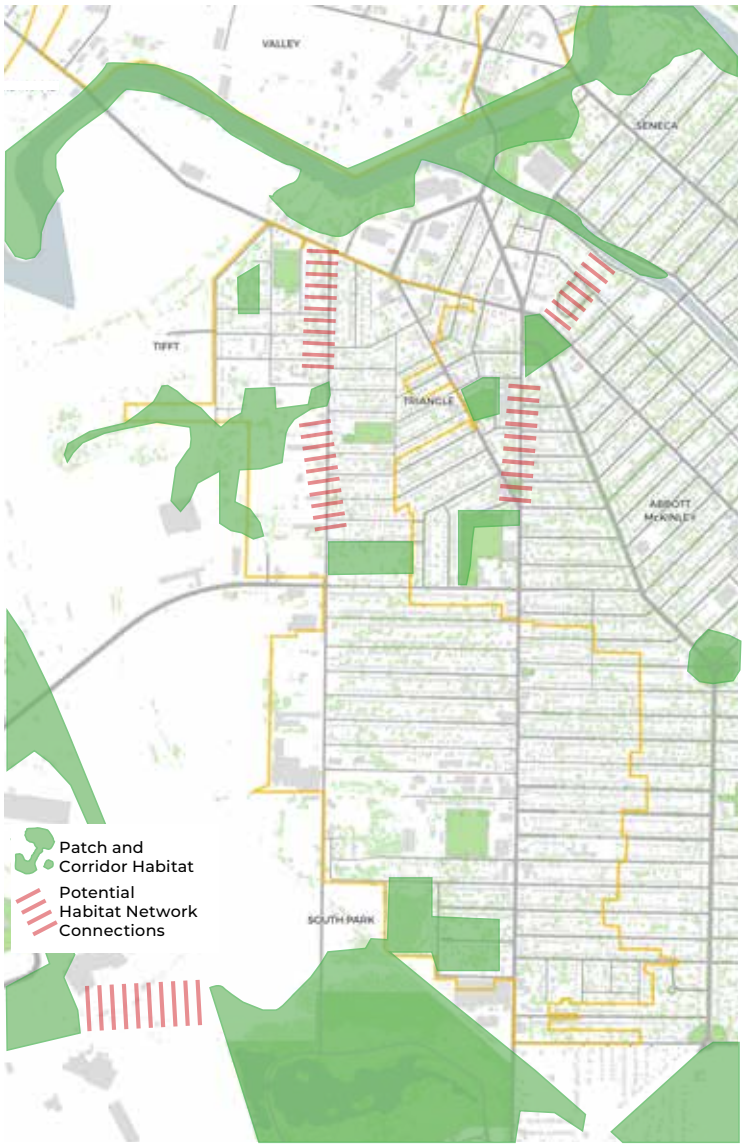


Figure 28.12: Potential for Habitat Connectivity in CSO Basin 28

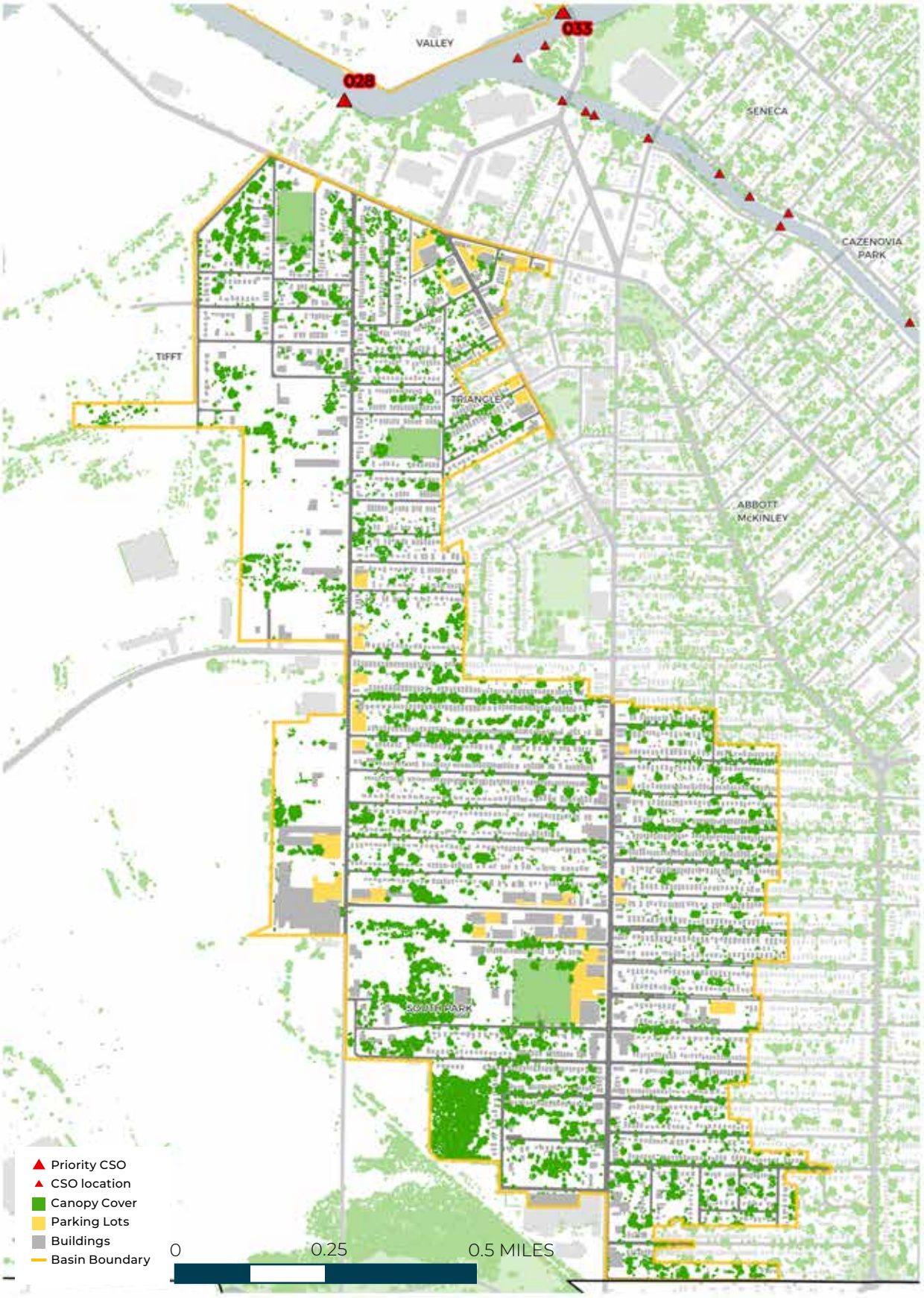


Figure 28.13: CSO Basin 28: Canopy Cover and Impervious Surfaces

ANALYSIS

Site Analysis

The CSO Basin 28 impervious surface reduction goal is 27 acres managed, which is about 4% of the CSO basin area. Because of the largely residential nature of this CSO basin, the few commercial parcels, mostly to the southeast, make up the majority of the sites selected for retrofit analysis. This analysis focused on sites that were highly impervious, such as commercial lots with large parking lots and roofs. Targeting these sites will be critical to meeting area objectives. However, these lots will also need to be combined with some residential and with green infrastructure in the right of way in order to meet the CSO basin goal.

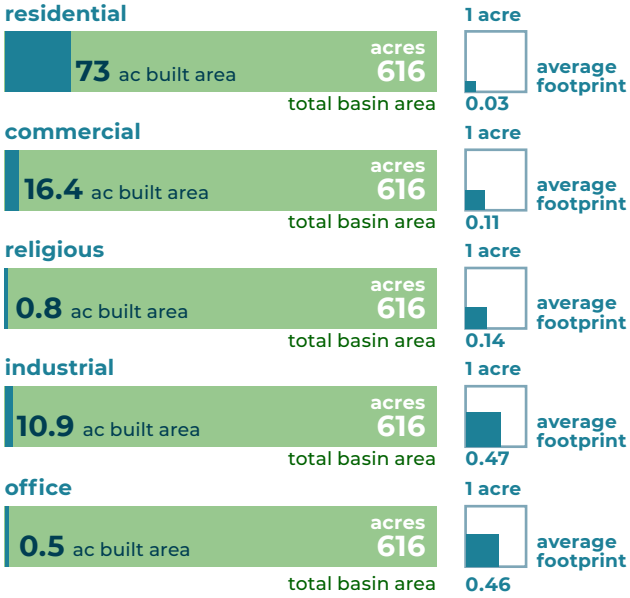
Residential properties comprise a significant area within this CSO, though none were surveyed given the uniformity of most residential parcels with regard to stormwater conditions. Conducting a mail in or online survey where residents may evaluate their own properties may be an effective way to promote residential stormwater reduction, or assess what potential green infrastructure practices are most suitable for this neighborhood.

Streets are also a significant portion of this CSO basin with 22% of land area in the right of way. Several streets were surveyed for green infrastructure opportunity, most notably the collection of Harding Rd, Culver Rd, and Ridgewood Rd, which all have potential for their green median to become stormwater retention areas.

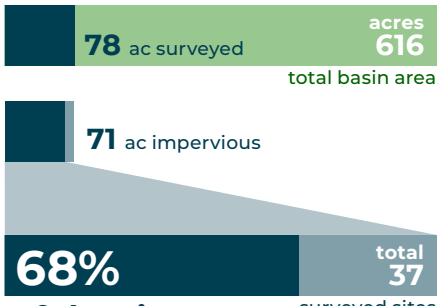
Several parks and institutions lay just outside the basin boundaries. They were not surveyed but could provide good demonstration projects and be a point of contact with the wider neighborhood in the promotion of green infrastructure.

Built Area by Land Use

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



The site analysis reviewed 13% of the basin and found 25.9 acres of potential drainage area.



of the sites were suitable for green infrastructure.

95% of sites are in full sun

35% of sites are highly visible

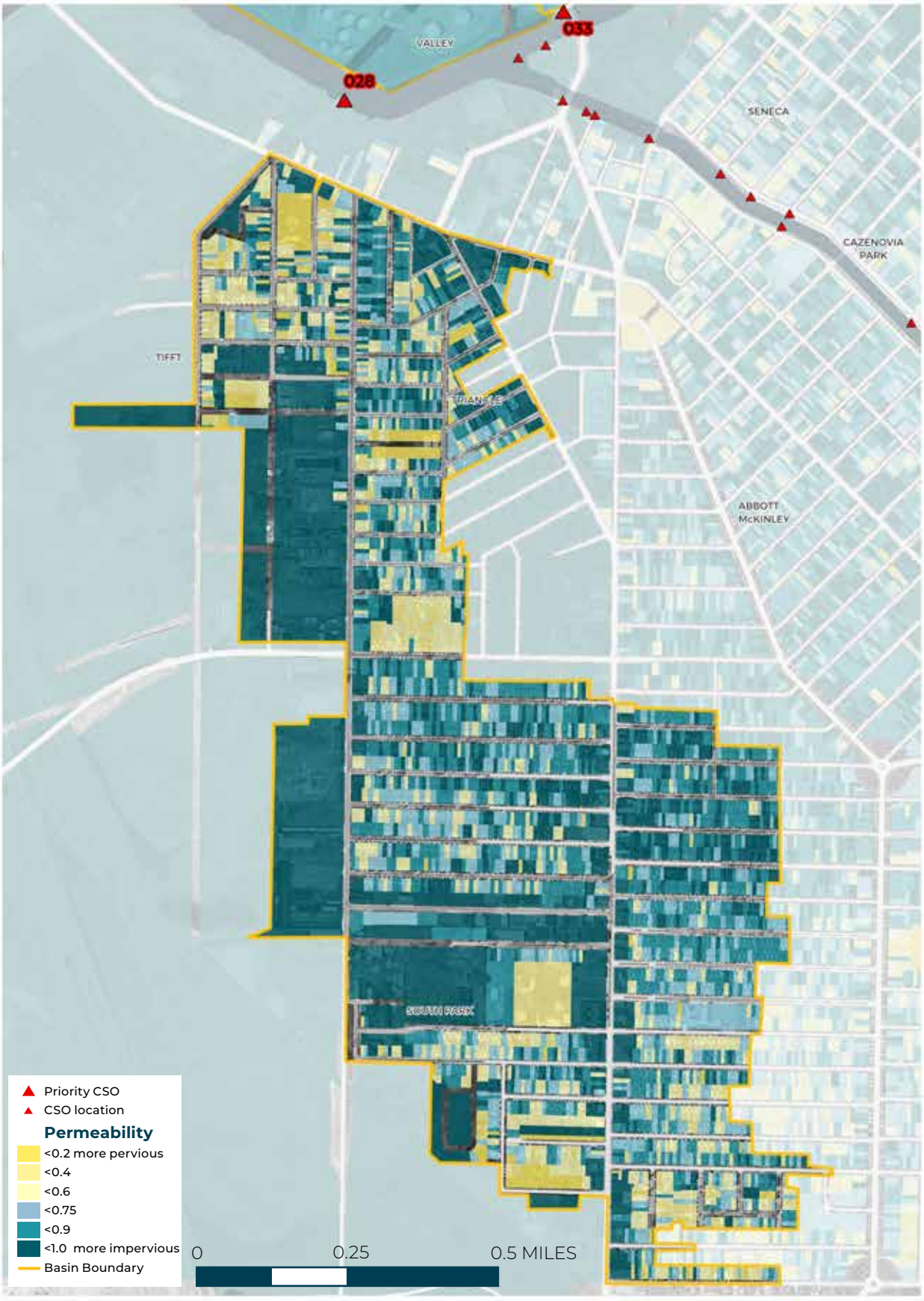


Figure 28.14: CSO Basin 28 Percent Impervious by Parcel

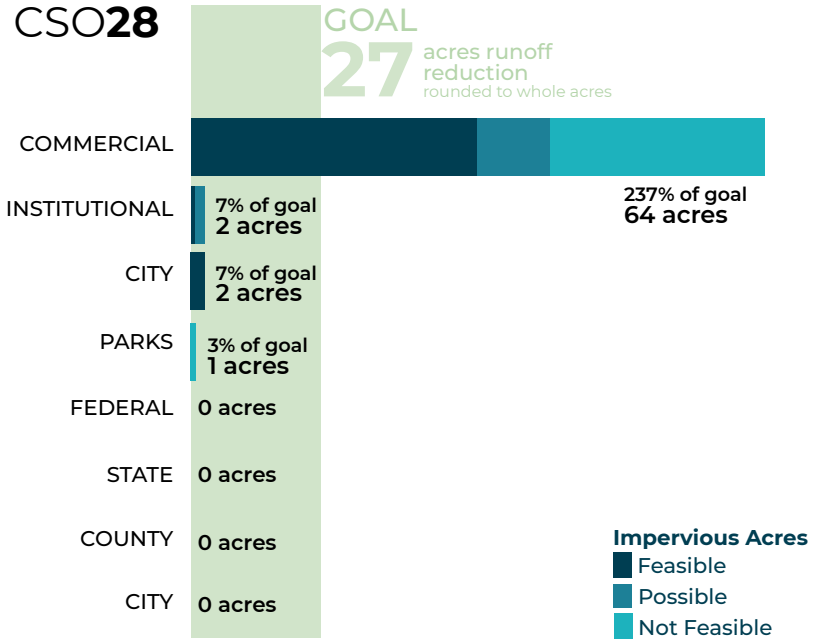
ANALYSIS

Site Analysis: Surveyed Properties

Figure 28.15: Image of sites where field work was conducted

Surveyed Properties by Land Use and Ownership

Data: Erie County GIS, Buffalo Sewer Authority GIS, field survey



LARGEST PROPERTY OWNERS BY LAND USE AND OWNERSHIP

COMMUNITY PARTNERS

Okell Park
South Park High School
St. Agatha RC Church

COMMERCIAL

Niagara Fiberglass Inc.
7.4 Imperv. acres

Mobile Mini
4.1 Imperv. acres

ServiceMaster Restoration
3.0 Imperv. acres

Price Trucking
2.6 Imperv. acres

Rite Aid
1.9 Imperv. acres

Commercial corridors flanked by retail and industrial properties are strong areas of opportunity in CSO Basin 28.

Most of the light industrial properties in CSO Basin 28 have large impervious areas. From the survey, the team determined that many properties slope to internal portions of the site and may have significant vehicular traffic that constrains the use of green infrastructure. Additional investigation is needed to better understand pavement requirements, traffic patterns, and possible sources of pollution.

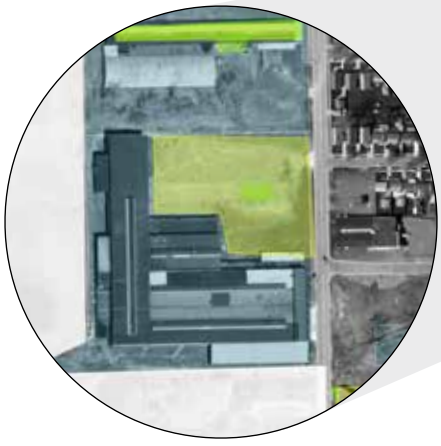


Figure 28.16: CSO Basin 28 Map of Built Environment and Tree Canopy

Figure 28.17: CSO Basin 28 Aerial Map

Figure 28.18: CSO Basin 28 Map of Built Environment and Tree Canopy

CSO33

When a drop of water lands at the intersection of Bailey Avenue and William Street, it is joined by water from the neighborhoods of Babcock, Emerson, Kaisertown, Lovejoy, Schiller Park, and Seneca. During heavy wet weather, the rainwater combines with sewage and overflows into the Buffalo River at Combined Sewer Overflow 33 (CSO 33).

Community Benefits

- Buffer zones between residential uses and industrial uses and large roadways
- Greater walkability & Pedestrian safety
- Traffic calming
- Support neighborhood revitalization
- Workforce development
- Green jobs
- Tree planting programs
- Expanded canopy cover
- Improved access to green space
- Cleanup and revitalization of vacant land

CSO **Basin 33 at a glance...**

Green Infrastructure Opportunities

The goal for this CSO basin is to reduce the number of impervious acres by 94 Acres. Based on the site analysis, the most feasible sites are located on large commercial properties and parking lots. Sidewalks and roadways also provide many feasible opportunities for green infrastructure retrofits.

Urban Character

Key corridors pass through this CSO basin and intersections on East-West corridors could be highly visible pilot locations for green infrastructure.

Environmental Systems

Urban tree canopy cover in CSO Basin 33 is lower than the City average. Large gaps in the urban canopy should be addressed. Focusing on complete streets and right of way improvements can help to grow the urban forest canopy, create habitat connectivity as well as the opportunity to network green infrastructures systems within the CSO basin.

Equity Considerations

Limited walkability and the presence of larger road corridors makes a focus on complete streets and corridor improvements a priority for improving walkability and access to parks and green space.

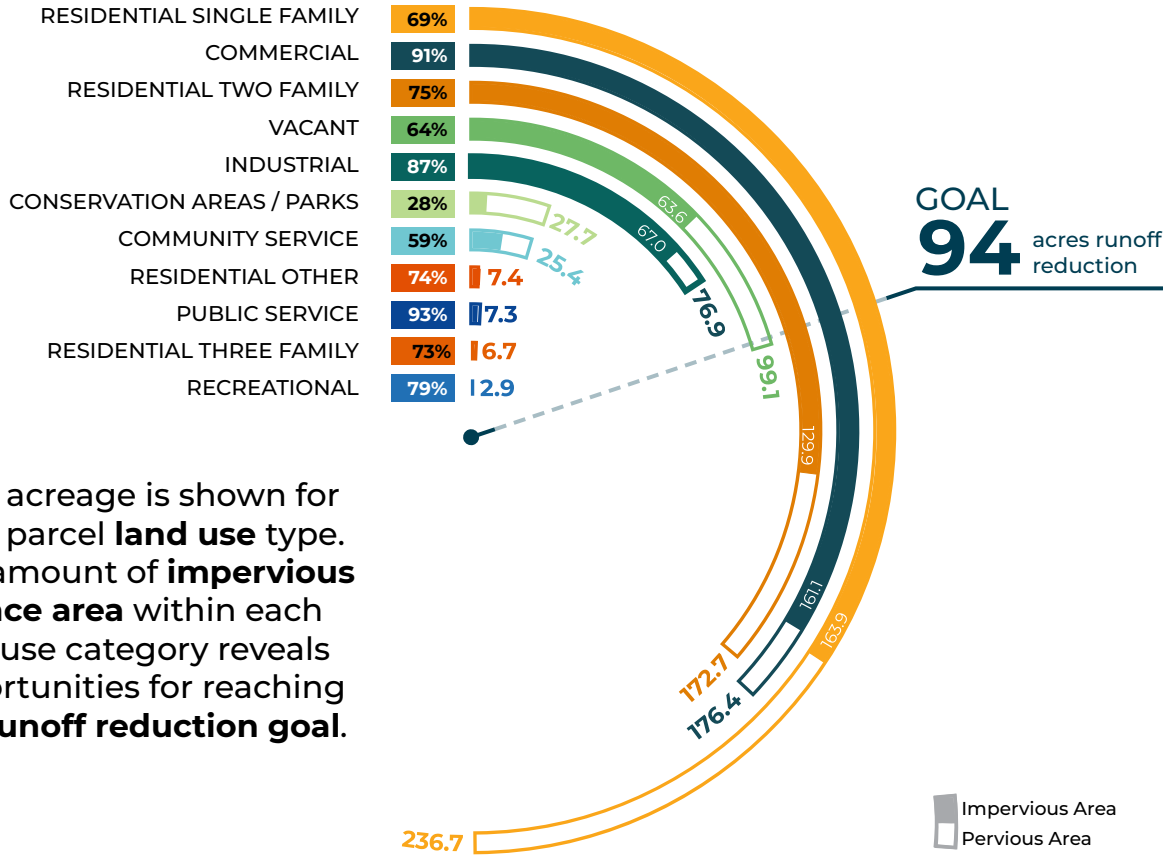
The CSO basin contains regional destinations, such as the Clinton-Bailey Farmer's Market and Niagara Frontier Food Terminal. These could be projects that highlight green infrastructure and foster economic revitalization.

BY THE NUMBERS...

Land Use Opportunity and Impervious Surfaces by Area

Basin **33**

1268 total acres



Total acreage is shown for each parcel **land use** type. The amount of **impervious surface area** within each land use category reveals opportunities for reaching the **runoff reduction goal**.

Basin Overview

1268 acres
TOTAL BASIN AREA

22,569
RESIDENTS

$29,927
MEDIAN HOUSEHOLD INCOME

162 acres
OF CANOPY AREA

31 acres
OF PARK AREA

310 acres
OF RIGHT OF WAY

121 acres
OF ROAD AREA

251 acres
OF BUILDING AREA

54 acres
OF PARKING LOTS

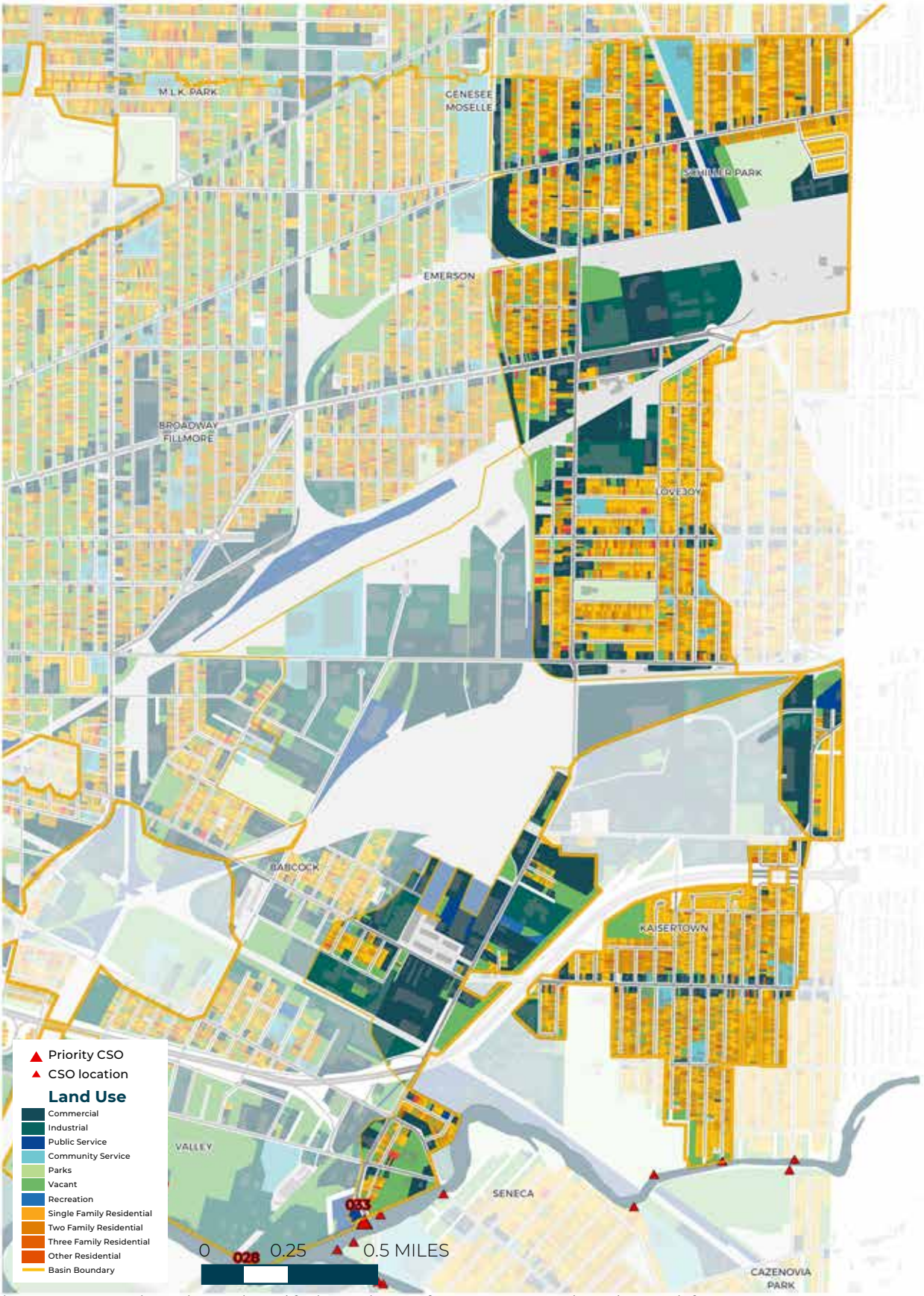


Figure 33.1: CSO Basin 33 Sites evaluated for impervious surface management through green infrastructure.

Opportunity Sites & Networks

Corridors

Bailey Avenue is the major north-south corridor running through the CSO. It's intersection with east-west corridors of Clinton, Broadway, William, and Walden form important neighborhood centers. Green infrastructure along these major corridors provides opportunities for creating networks of green infrastructure that connect adjacent properties. It would also provide greater access to green space in neighborhoods with minimal access.

Key Corridors

- Bailey Avenue
- Clinton Street
- Broadway
- William Street
- Kaisertown Central Business District

Sites

Many of the sites surveyed in CSO Basin 33 were large commercial properties with large parking lots along the corridors. Retrofitting these large impervious sites with green infrastructure makes a major contribution to meeting the impervious acre management goal in this basin. Even opportunistic sites, such as Big Lots! are still good green infrastructure candidates because of their large impervious area. The key parks identified in this basin were also evaluated for the potential for green infrastructure retrofit and the possibility to bring stormwater from the street into some of the parks. Key institutions have large impervious areas that could be retrofit with green infrastructure and could be partners in workforce development.

Key Parking Lots

1. Big Lots! parking lot
2. Walden Park parking lot
3. School bus and commercial vehicle

Key Institutions

4. Catholic Charities
5. Dominican Nuns
6. Kaisertown Business Community
7. Clinton-Bailey Farmers Market
8. Niagara Food Terminal

Clusters and Networks

The large clusters of primarily commercial properties adjacent to major corridors provides the opportunity to create clusters or network of green infrastructure around neighborhood centers. Such clusters are based both on physical proximity as well as programmatic synergies, such as between Clinton-Bailey Farmers Market and Niagara Food Terminal.

Key Parks

1. Houghton Park
2. Hennepin Park
3. Walden Park

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

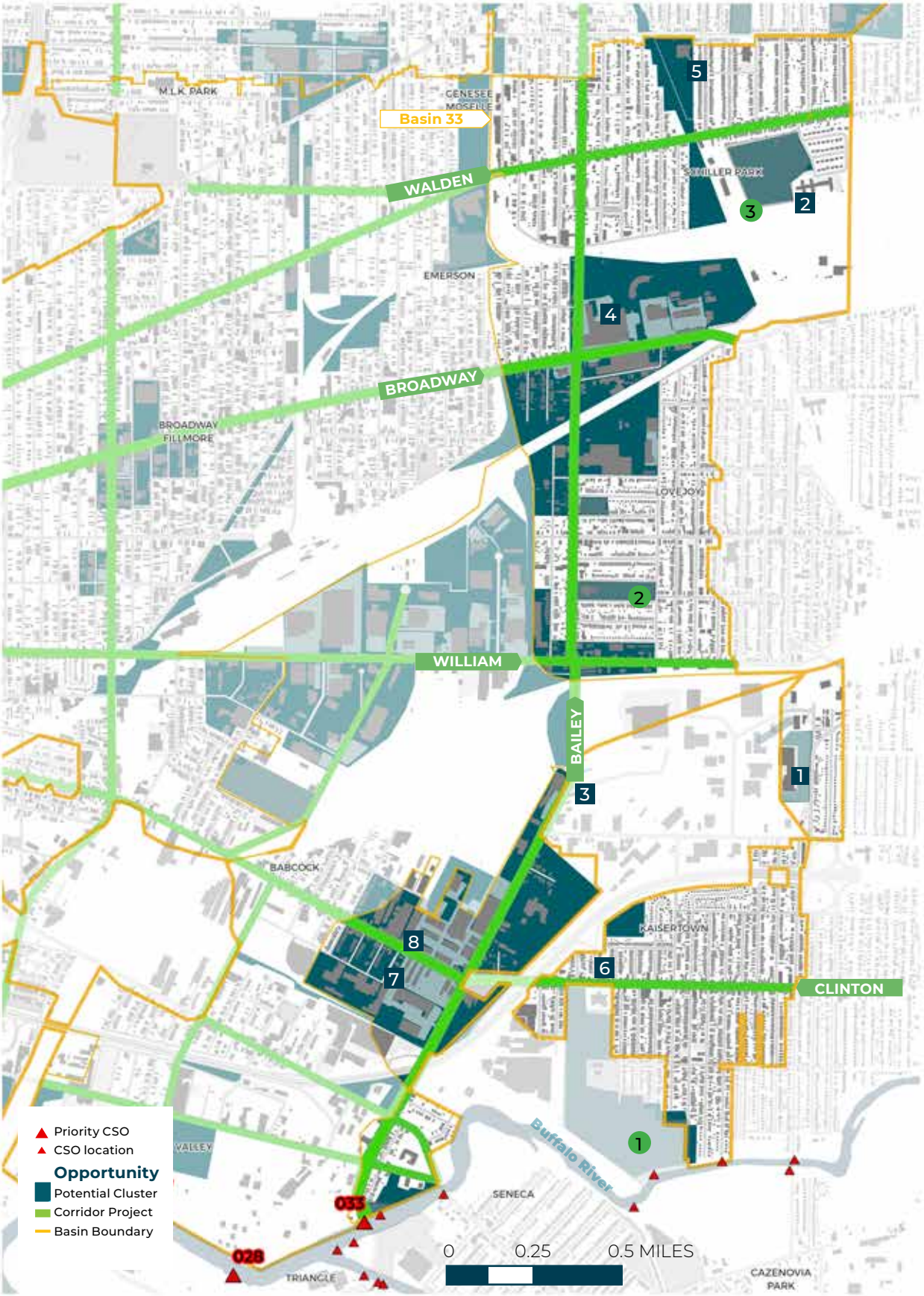


Figure 33.2: CSO Basin 33 Green Infrastructure Opportunity Sites

Green Infrastructure Opportunity
Niagara Food Terminal Green Infrastructure Node

The cluster of the Niagara Food Terminal and Clinton-Bailey Farmers' Market is an excellent candidate for green infrastructure investment because it couples historic public space and community resources with new investment and beautification. The Niagara Food Terminal is an industrial and market district on the eastern edge of CSO Basin 33 and shares many conditions similar to other urban industrial areas with heavy vehicular traffic. In addition, the terminal is a significant cultural center for Buffalo and the East Side.

This cluster has significant impervious surface area that is a major contributer to stormwater runoff to the sewer system. The Terminal is situated at the intersection of two significant corridors: Bailey and Clinton, which can also benefit from green infrastructure and traffic calming to creating a more walkable district. Tree planting and roadside bioswales would expand canopy cover and improve walkability in the neighborhood. Conducting a street tree campaign would help to connect important habitat corridors, and limit dust pollution from high traffic streets. Porous paving could be used in parking lots and market stalls, allowing stormwater to infiltrate and creating visual interest. There are many large, flat roofs in this area, which are significant contributers of stormwater runoff. Roof runoff could be addressed through the addition of green roofs, where this is feasible, or by disconnecting roof downspouts and directing them to bioretention areas or collecting the water for reuse in cisterns. Vacant land adjacent to rail lines could be retrofitted to handle stormwater from this cluster as well. Furthermore, by adding green space to this neighborhood center, access to green space for residents can be increased.

Strategies

- **Porous paving**
- **Green roofs**
- **Downspout disconnection**
- **Bioretention**

Potential Partners

- **Niagara Frontier Food Terminal**
- **Clinton-Bailey Farmers Market**
- **Cornell Cooperative Extension**
- **Babcock Boys and Girls Club**
- **Seneca Babcock Community Center**
- **NY State / Bailey Avenue Projects**

Figure 33.3: Historic image of Buffalo Food Terminal

Figure 33.4: Historic image of The Niagara Frontier Growers Co-operative Market

Placemaking Opportunity with Green Infrastructure

Creating a cluster of green infrastructure around Clinton and Bailey not only reduces stormwater runoff entering the sewers, but is also an opportunity to support the revitalization of these important community assets. The addition of street trees creates more walkable streets, contributes to traffic calming, and helps reduce the urban heat island effect, all of which provide environmental and health benefits as well as contributing to neighborhood revitalization.

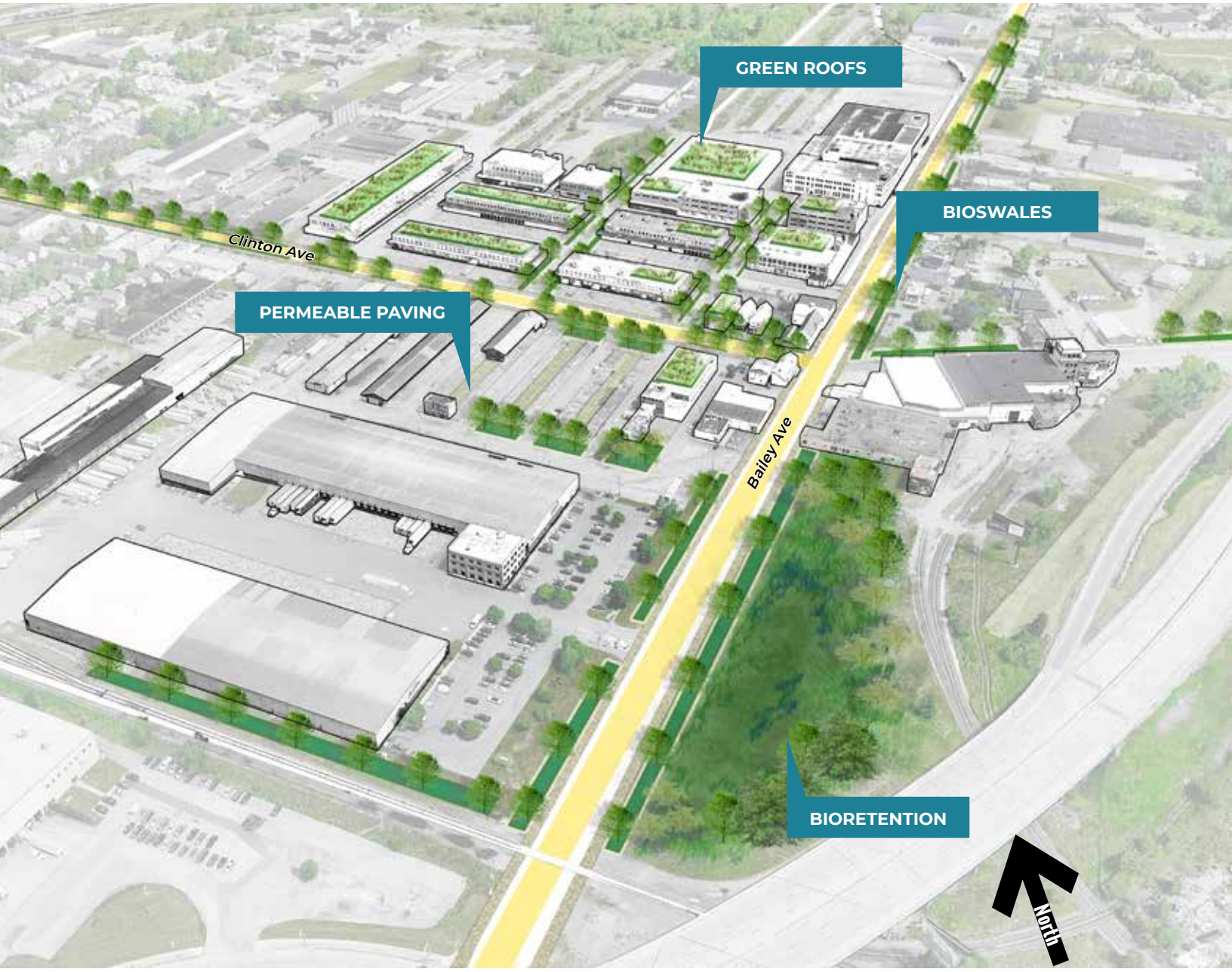


Figure 33.5: Rendering of Possible green infrastructure opportunity node at Niagara Foods

ANALYSIS

Urban Character

The urban character of CSO Basin 33 is diverse and contains residential, commercial, industrial, and open spaces. This diversity will likely lead to a wide range of green infrastructure technologies being deployed in this CSO basin. The CSO basin has a population of 22,569 people. There are two dominant residential typologies present, the first is dense single family detached housing. The second type is single and multifamily detached housing in areas with medium to high parcel vacancy from block to block.

There are 583 commercial or industrial buildings in CSO Basin 33. Commercial properties are present along the important east-west City corridors of Clinton St, William Ave, and Broadway, as well as in a continuous Industrial District that cuts north-south through Emerson, Lovejoy, Babcock, Kaisertown, and the Valley. These properties are most large flat-roofed buildings with large parking lots or working yards that are paved or heavily compacted. There are significant physical divisions in this CSO basin created by multiple rail lines, train yards, and Interstate I-190.

Investment in green infrastructure in CSO Basin 33 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. Bailey Avenue runs through this CSO, which has several neighborhood centers along it. Neighborhood centers along Clinton Street are also within CSO Basin 33, as well as neighborhood centers at Broadway and Bailey, Walden and Bailey, and Clinton and Bailey, including the Clinton-Bailey Farmers Market and Niagara Food Terminal.

The Kaisertown neighborhood, which is partially located in CSO Basin 33, has one of the highest projected increases in home values according to Zillow. Also the Seneca-Babcock neighborhood, which is also partially located in this CSO basin, is seeing a high level of industrial development per square mile.

Figure 33.6: CSO Basin 33 contains pockets of dense single family detached housing, seen here between Casimir St and Clinton Ave in Kaisertown.

Figure 33.7: Box store commercial lining the western edge of residential blocks along South Ogden St.

Figure 33.8: CSO Basin 33 has a number of large corridors that are flanked by larger commercial or industrial land uses and example is seen here at the intersection of Bailey Ave and Broadway

Figure 33.9: Mixed rates of vacancy between streets are visible here in the contrasting Burgard Pl with both Brinkman Ave and Goembel Ave.

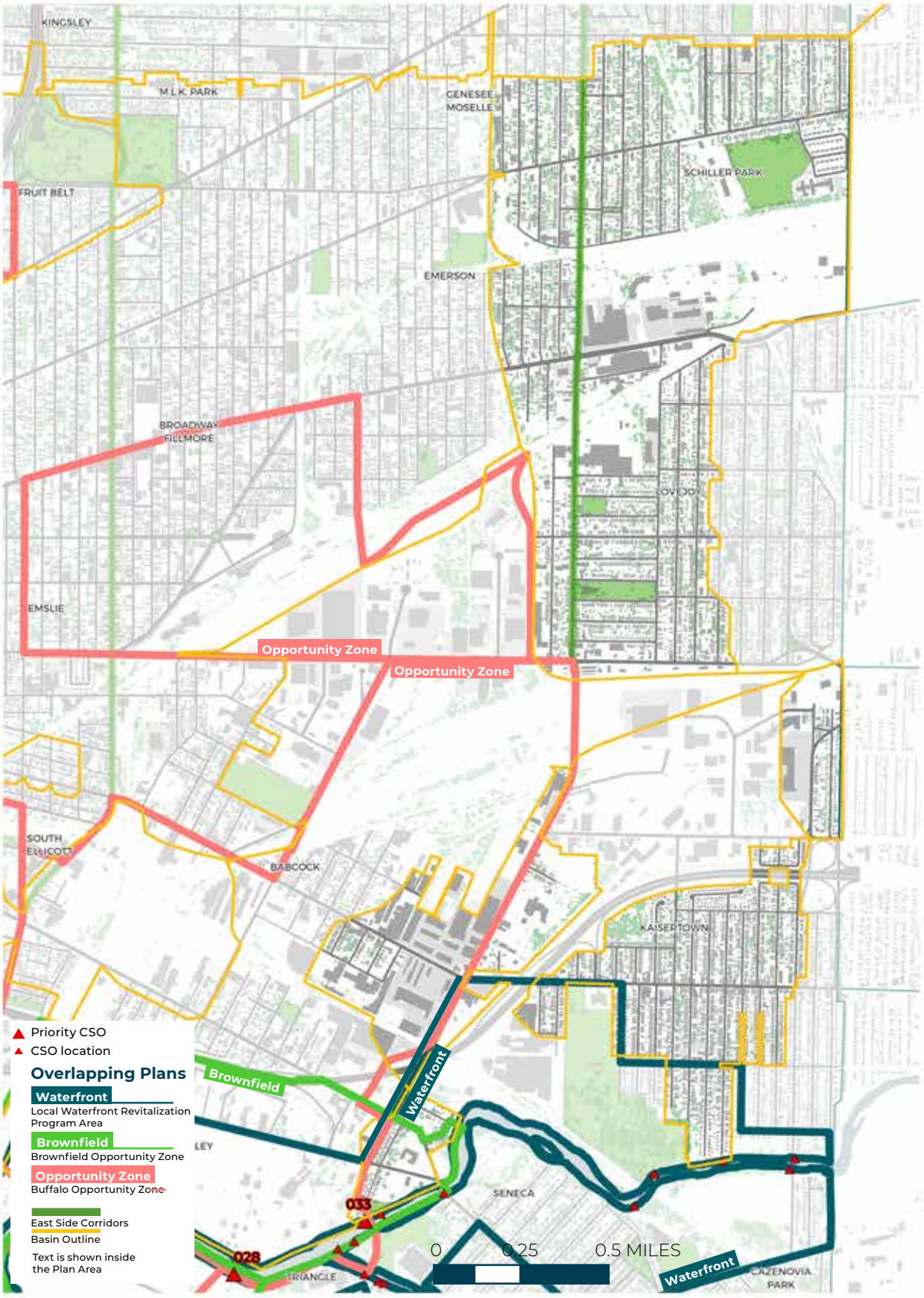


Figure 33.10: CSO Basin 33 Land Use

ANALYSIS

Equity Analysis

The boundaries of CSO Basin 33 intersect with several neighborhoods in Southeast Buffalo, including Babcock, Emerson, Kaisertown, Lovejoy, Schiller Park, and Seneca. The area is also home to several regional destinations like the Clinton-Bailey Farmers Market and the Niagara Frontier Food Terminal. The area is a mixture of residential, commercial, institutional and industrial uses, including neighborhood business districts and community amenities.

Similar to CSO Basin 27, the presence of wide roads, highways, and large lots can make the area seem somewhat geographically isolated, limit walkability, and pose safety issues for pedestrians and transit users. There could be opportunities for green infrastructure to break up large areas such as parking lots, create buffer zones between roads and sidewalks, and enhance walkability and public safety, especially around crosswalks and transit stops.

Across many demographic and economic indicators, residents in this area largely reflect the City overall. The median household income, poverty rate, and unemployment rate are mostly on par with the City overall. The majority of households are renters and cost burdened, which may limit the feasibility of green infrastructure on private property. Given this reality, neighborhood businesses and neighborhood commercial corridors might be good priorities for stakeholder engagement and investment in residential areas.

Additionally, CSO Basin 33 neighborhoods are home to a number of active community centers, service agencies, and public schools that could be good partners for community engagement and project implementation. An evaluation of the community capacity for the neighborhood area and these specific organizations to accept, plan for, promote, and maintain green infrastructure practices is critical. As CSO Basin 33's population is largely representative of the City overall, it may provide a good model for piloting new education and outreach efforts to gain insight into challenges and opportunities for Rain Check 2.0.

Neighborhood Profile Snapshot

22,569
RESIDENTS

$29,927
MEDIAN HOUSEHOLD INCOME

87.3%
ATTAIN LESS THAN A BACHELOR'S DEGREE

$57,865
MEDIAN VALUE OF OWNER-OCCUPIED HOMES

31.5%
OF HOUSEHOLDS DO NOT HAVE A VEHICLE

-20.1%
2000–2016
POPULATION CHANGE

32.8%
RESIDENTS LIVING IN POVERTY

41.3%
WORKING AGE NOT EMPLOYED*

37.7%
RESIDENTS ARE PEOPLE OF COLOR

49.8%
HOUSEHOLDS ARE RENTERS

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.

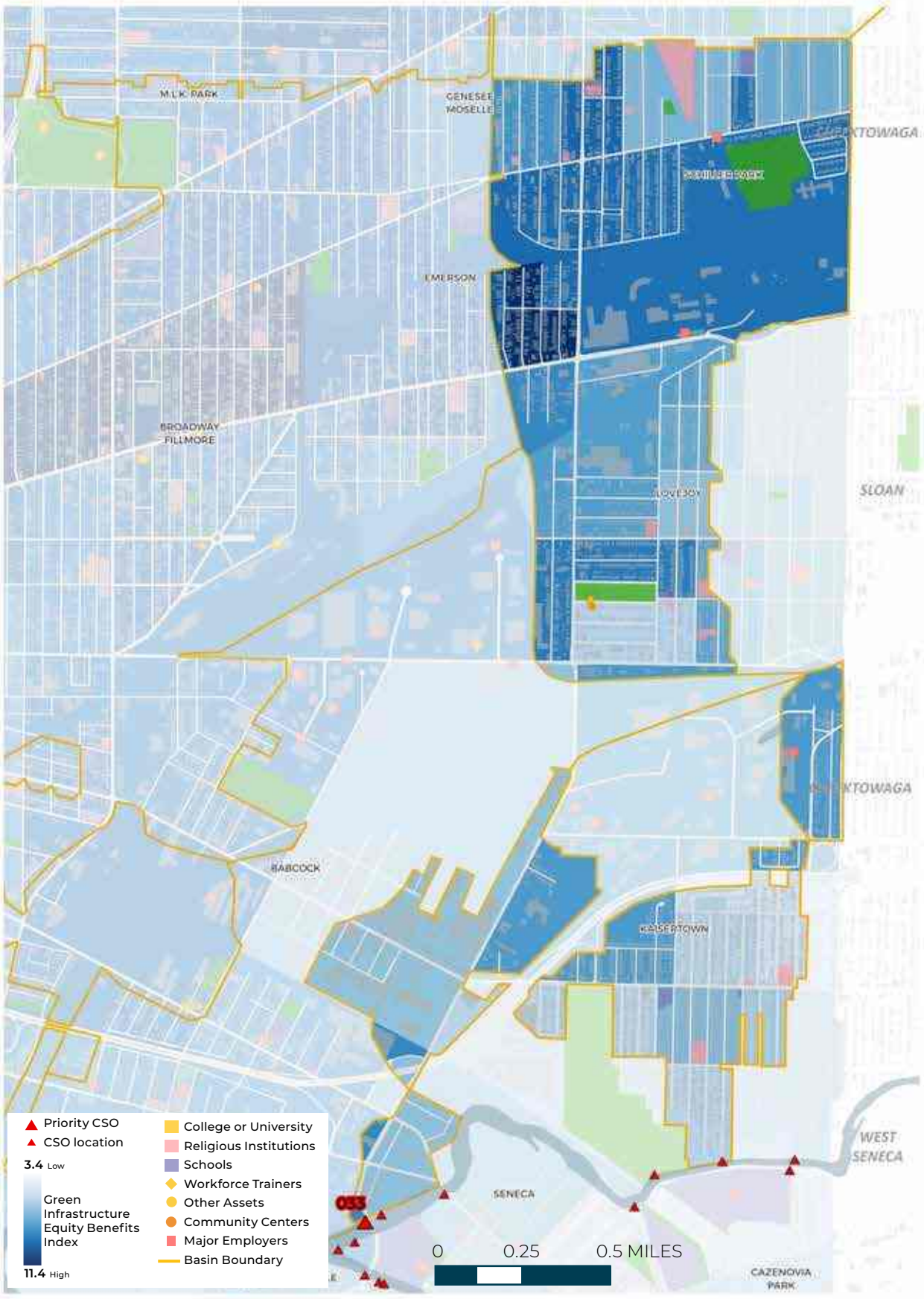


Figure 33.11 CSO Basin 33 and GI Equity Index

ANALYSIS

Environmental Systems

Waterways

CSO Basin 33 sits on the Buffalo River in a stretch that is less industrial and has wider riparian zones compared to the lower stretches where the river meanders toward the Buffalo Harbor. This basin has some of the best access to the river compared to other regions by way of Houghton Park and dead end residential roads.

Tree Canopy Cover

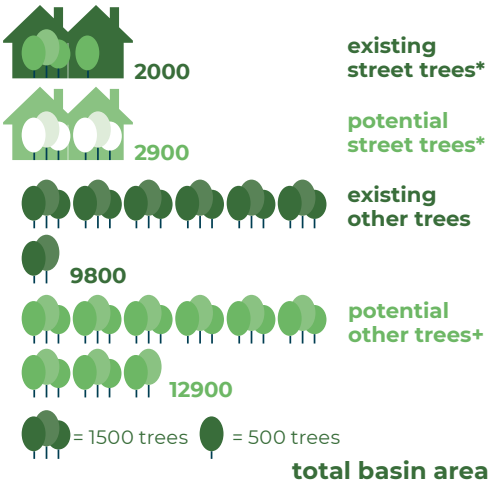
CSO Basin 33 has a deficit of canopy cover compared to the rest of the City. There are a number of densely vegetated pockets throughout or adjacent to the CSO basin along old rail corridors and the interstate, as well as along parks and cemeteries. These moments of concentrated habitat are offset by the large commercial and industrial parcels, commercial corridors, and some residential neighborhoods, which are almost completely devoid of trees. The commercial corridors in particular would benefit from increased tree planting. Expanding canopy corridors from both the Buffalo River and between rail corridors could significantly improve the habitat network in this area without needing to span large distances.

Habitat Connectivity

CSO Basin 33 is attached to and a part of several major habitat corridors and patches within the City, including the Buffalo River and the old rail network and rail yards. The latter provide significant open-space continuity within the Buffalo green space system. Future work could be done to help augment the habitat network's integrity.

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

Figure 33.12: Potential for Habitat Connectivity in CSO Basin 33

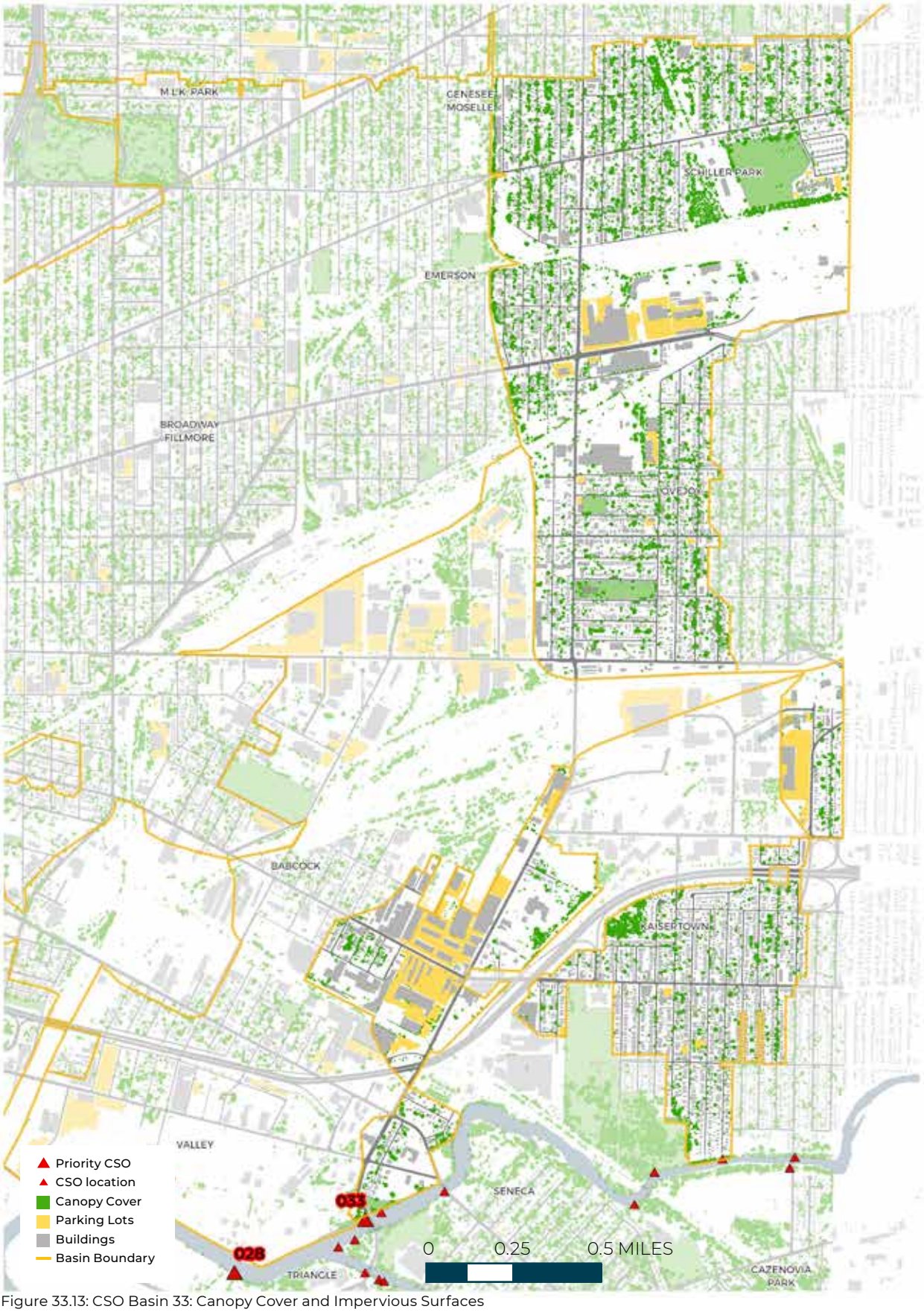


Figure 33.13: CSO Basin 33: Canopy Cover and Impervious Surfaces

ANALYSIS

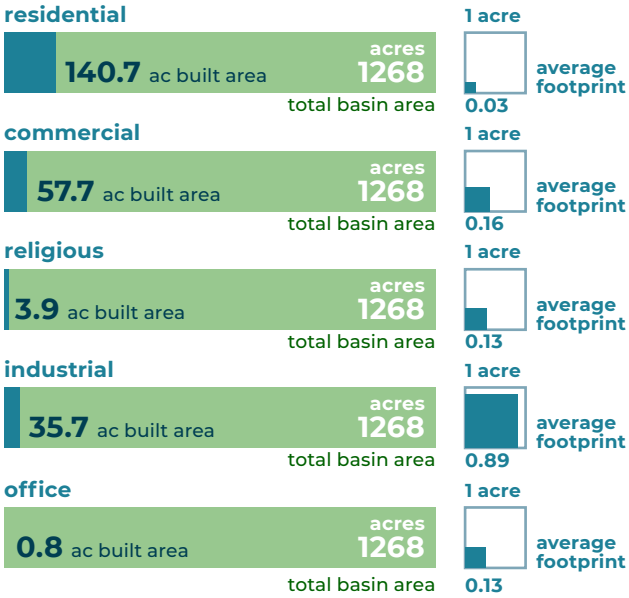
Site Analysis

Site analysis for CSO Basin 33 consisted predominantly of commercial properties. These sites included several businesses along Broadway and Bailey that shared common parking areas, often located in the front of the parcel. Drainage at these locations generally slopes toward the street and landscaping near entrances have deteriorated. These adjacent, commercial locations present opportunities to aggregate drainage capture from multiple properties with a single green infrastructure technology. Commercial properties that relied upon trucking services were often removed from consideration during site analysis in favor of more accessible locations. Frequent truck traffic presents several challenges for implementation of green infrastructure. It limits visibility of the green infrastructure and complicates construction mobilization. Existing drainage patterns are also not always ideal for green infrastructure retrofit.

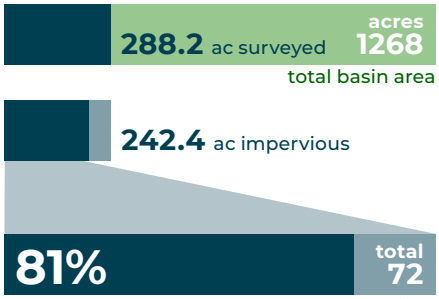
Parks and churches were also evaluated. These locations were often surrounded by residential properties and distinct from the large, commercial sites. The site analysis focused on green infrastructure retrofits that maximized drainage capture from both the parcel and adjacent street flow. Multiple retrofits were proposed on sites where drainage patterns from compacted space varied.

Built Area by Land Use

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



The site analysis reviewed 23% of the basin and found 38.2 acres of potential drainage area.



of the sites were suitable for green infrastructure.

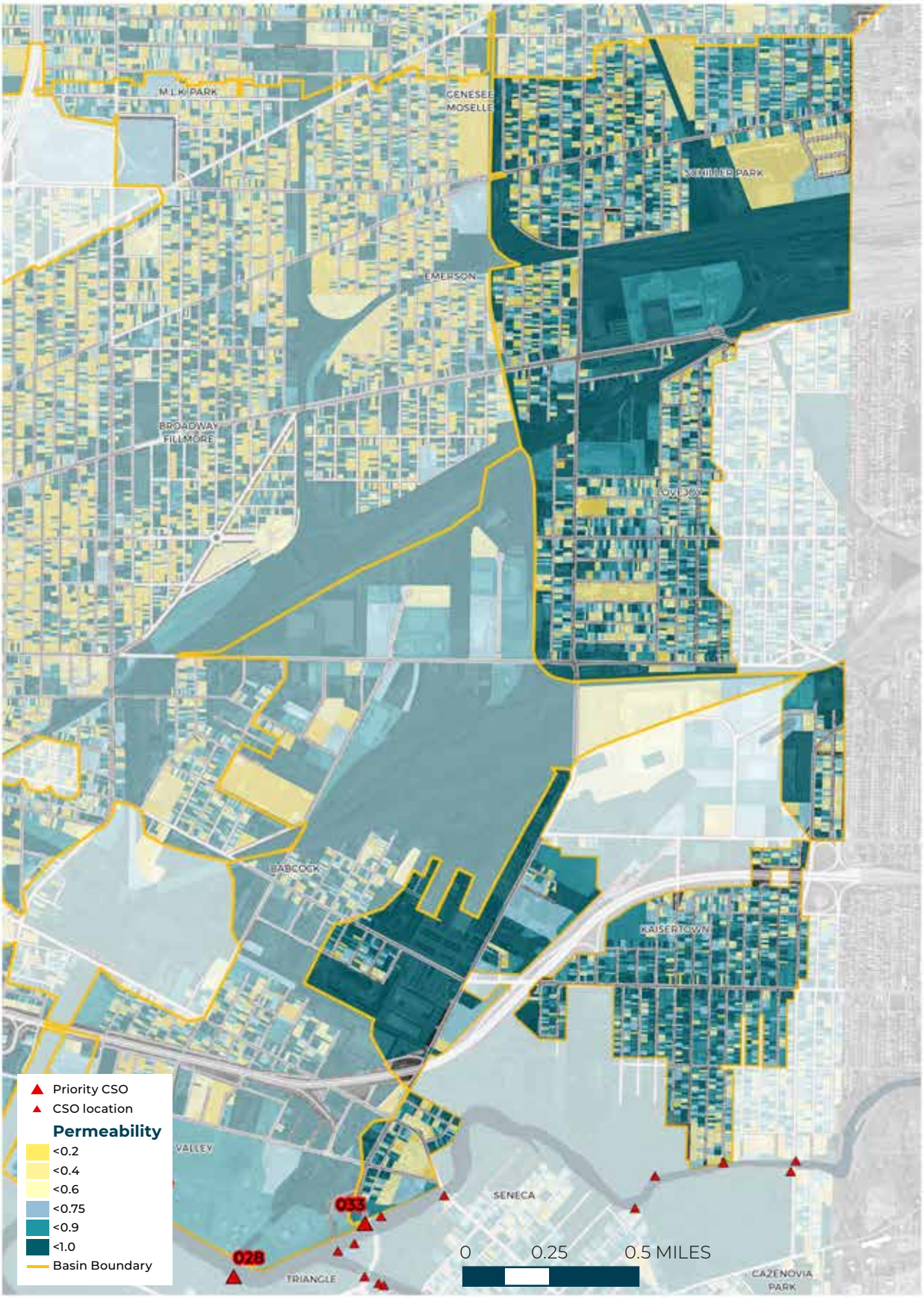


Figure 33.14: CSO Basin 33 Percent Impervious by Parcel

ANALYSIS

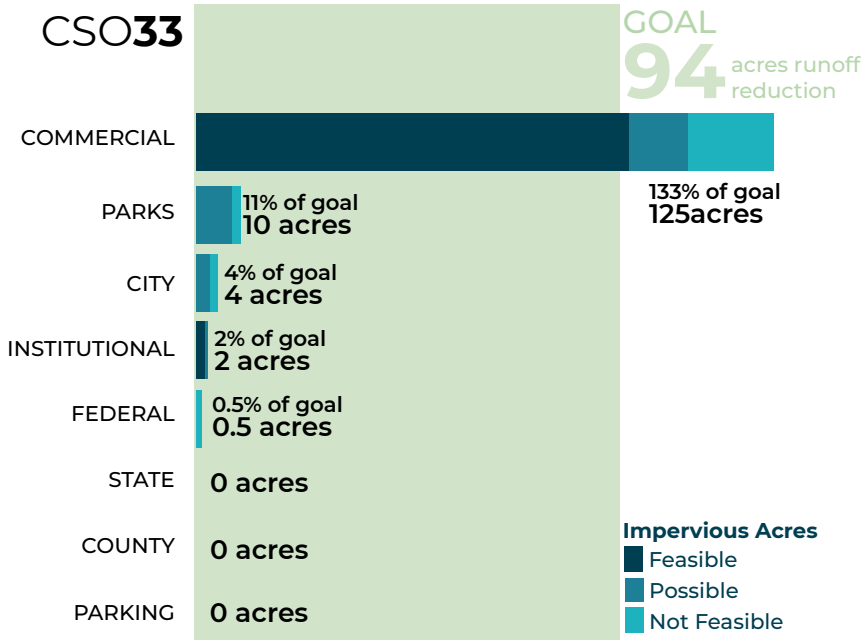
Site Analysis: Surveyed Properties

Figure 33.14: Examples of sites surveyed.

Commercial corridors flanked by commercial properties are strong areas of opportunity in CSO Basin 33.

Surveyed Properties by Land Use and Ownership

GIS sources: Erie County data, Buffalo Sewer Authority data



LARGEST PROPERTY OWNERS BY LAND USE AND OWNERSHIP

COMMERCIAL

Center One LLC
9.8 Imperv. acres

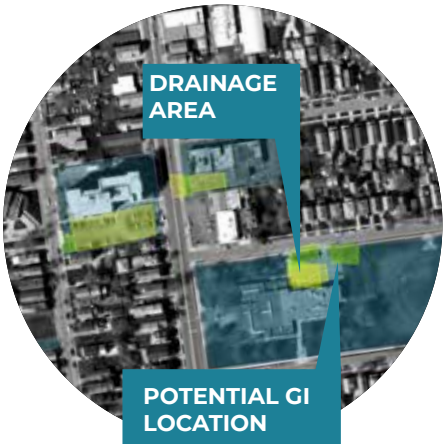
ACME Building
7.7 Imperv. acres

Aim Transportation Solutions
7.5 Imperv. acres

Clinton Bailey Farmers Market
7.4 Imperv. acres

Commercial and institutional properties along key corridors in CSO Basin 33, like Bailey Avenue, were surveyed.

From this, the team was able to determine that many of these properties can retain stormwater on site. This could become part of a perimeter buffer, or could be networked in corridor improvements to take a complete streets approach.



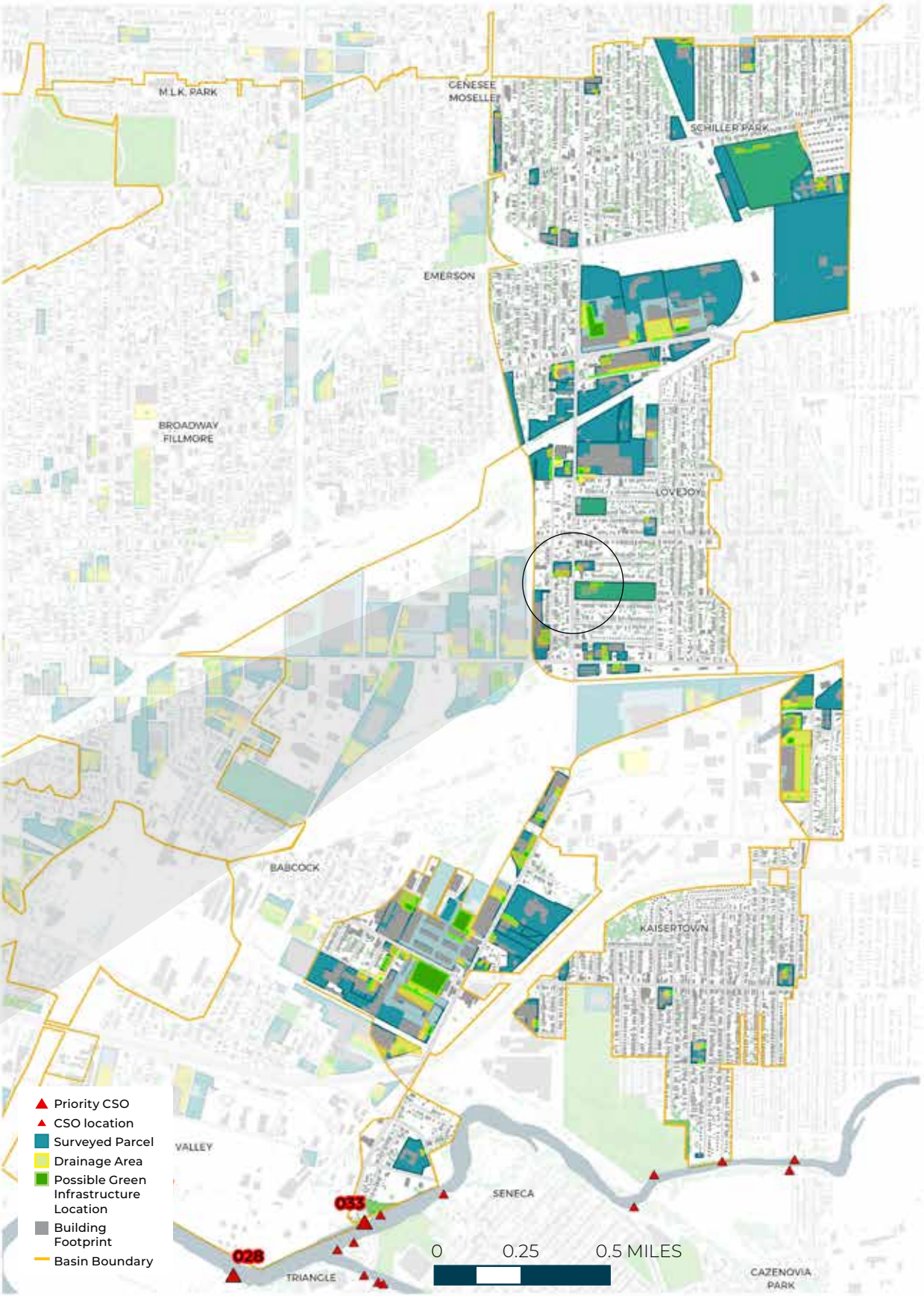


Figure 33.16: CSO Basin 33: Sites analyzed showing parcels, drainage areas and potential green infrastructure.

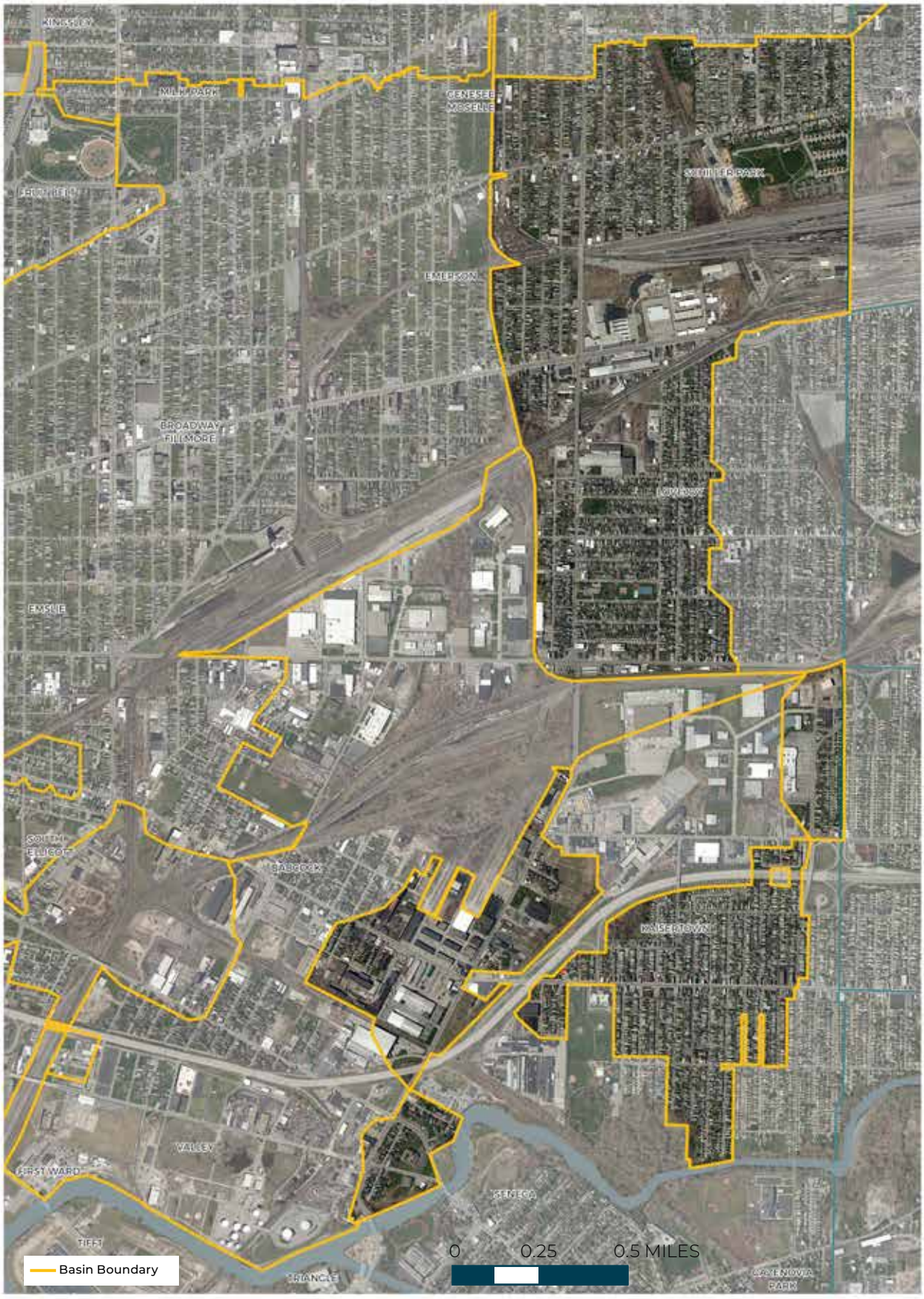


Figure 33.17: CSO Basin 33 Boundary on Aerial.

Figure 33.18: CSO Basin 33 Map of Built Environment and Tree Canopy

CSO53

When a drop of water lands at the intersection of Fillmore Avenue and Delavan Avenue, it is joined by water from the neighborhoods of Parkside, Leroy, Kensington, Kenfield, Schiller Park, Genesee Moselle, Grider, MLK Park, Hamlin Park, Cold Spring, Masten Park, Kingsley, and the Fruit Belt. During heavy wet weather, the rainwater combines with sewage and overflows into Scajaquada Creek at Combined Sewer Overflow 53 (CSO 53).

CSO **Basin 53 at a glance...**

Green Infrastructure Opportunities

CSO Basin 53 is the largest of the priority CSO Basins in terms of both area and population and it also has the largest goal at 299 impervious acres managed. Given the magnitude of the goal, it cannot be met in any one land use. Achieving the goal will require a combination of commercial, parking lots, institutional and city owned property, including the public rights-of-way.

Urban Character

Because of its size, CSO Basin 53 has a diversity of land uses, including commercial corridors, highways, large parking lots and medium density detached housing. There are both high levels of vacant land and high levels of vacancy.

Environmental Systems

Tree canopy overall for CSO Basin 53 is higher than the City average. Much of the tree canopy is located on the interior of blocks, rather than street trees. Given the size and diversity of the basin, the tree canopy is highly variable and targeted investments in increasing canopy cover, particularly street trees, may still be appropriate in this CSO basin.

Equity Considerations

Nearly a quarter of the population of Buffalo lives in the neighborhoods located within and around CSO Basin 53 and it contains the largest share of people of color of any targeted CSO basin. Based on the GI equity index (see Appendix A) this area has a high need for green infrastructure investment. This area includes anchor institutions and major employers that draw many workers and visitors, as well as residential communities. Funding support for green infrastructure, especially to community partners, will enable a range of community stakeholders to participate in the program. Schools, workforce trainers, and employers in this area are good partners for green infrastructure workforce development programs. Green infrastructure could be a unique opportunity to foster increased collaboration and partnerships among the range of educational and workforce institutions located in this area toward green economy solutions for the City's future.

Community Benefits

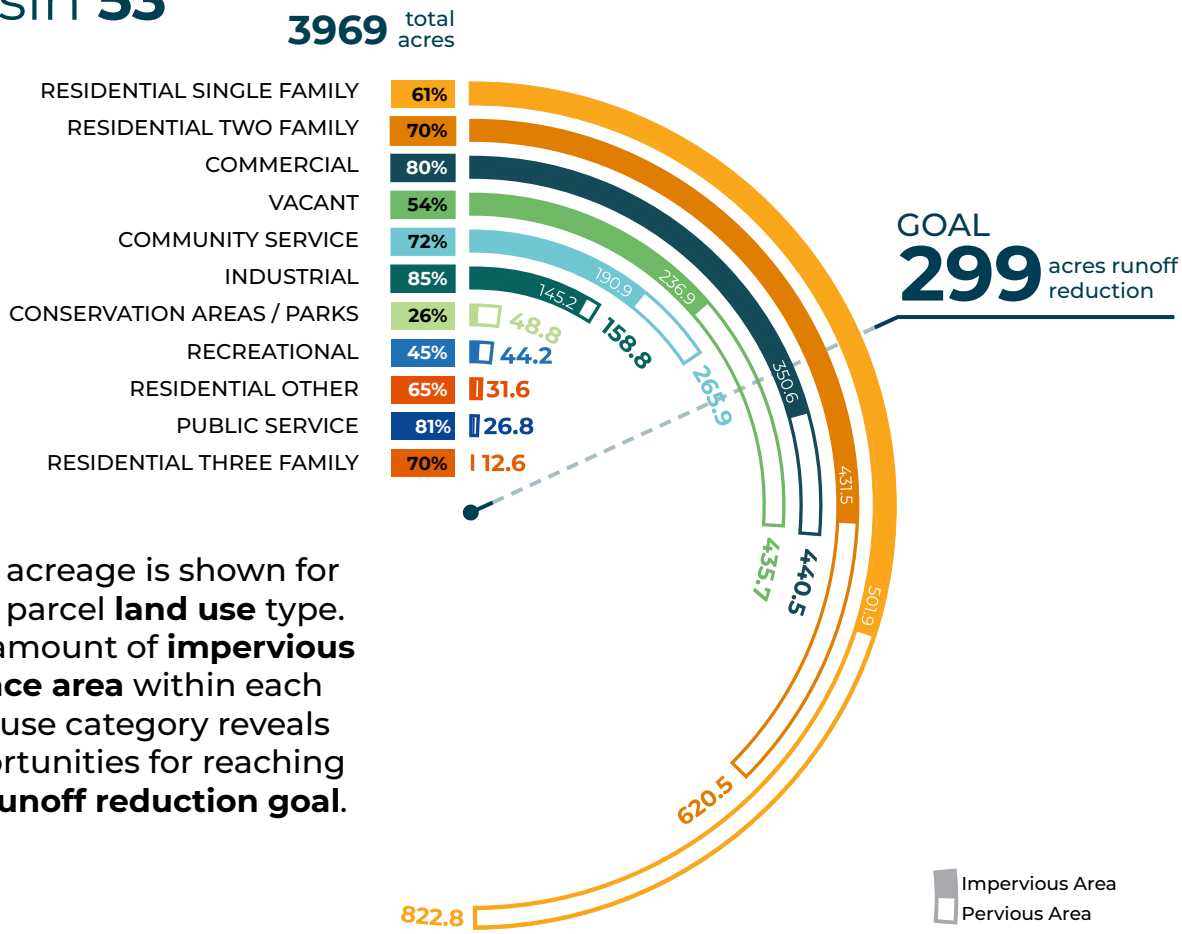
- Reconnect neighborhoods by creating a deck park over the Scajaquada expressway
- Workforce development
- Green Jobs
- Tree planting programs
- Improving the public realm
- Walkability
- Traffic Calming
- Expanded canopy cover
- Support for neighborhood revitalization efforts
- Reduced urban heat island effect
- Cleanup and revitalization of vacant land

BY THE NUMBERS...

Land Use Opportunity and Impervious Surfaces by Area

Basin **53**

3969 total acres



Total acreage is shown for each parcel **land use** type. The amount of **impervious surface area** within each land use category reveals opportunities for reaching the **runoff reduction goal**.

Basin Overview

3969 acres
TOTAL BASIN AREA

64,289
RESIDENTS

$26,777
MEDIAN HOUSEHOLD INCOME

481 acres
OF CANOPY AREA

93 acres
OF PARK AREA

980 acres
OF RIGHT OF WAY

485 acres
OF ROAD AREA

791 acres
OF BUILDING AREA

172 acres
OF PARKING LOTS

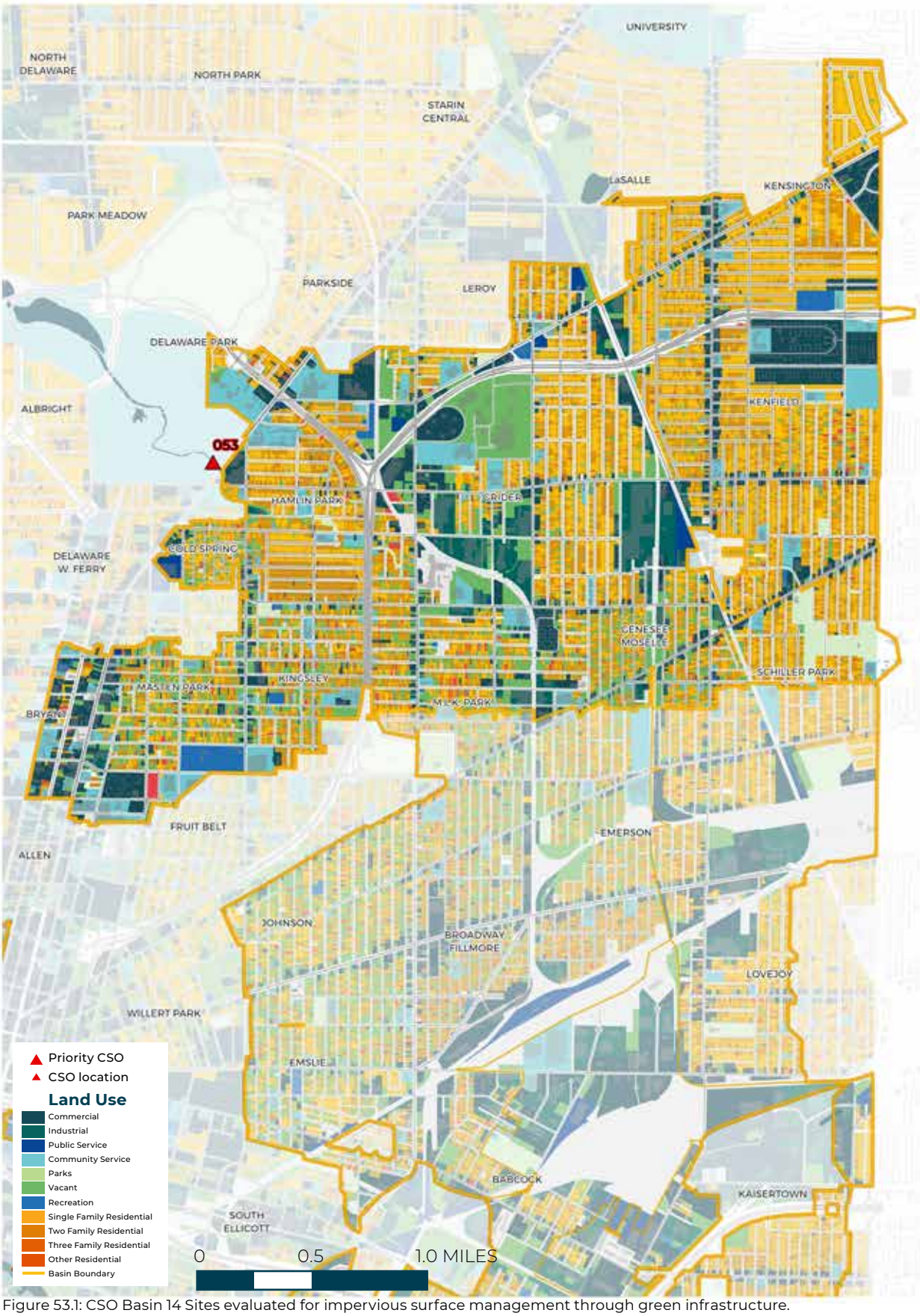


Figure 53.1: CSO Basin 14 Sites evaluated for impervious surface management through green infrastructure.

Opportunity Sites & Networks

Corridors

In CSO Basin 53, corridor green infrastructure will be critical to meeting the stormwater goal. The predominance of large corridors in this basin allows for the organization of green infrastructure into larger networked system, increasing the overall potential effectiveness of green infrastructure in the basin. The Scajaquada Creek corridor also presents the opportunity to incorporate Buffalo's water history into green infrastructure and make underground infrastructure visible. Adding a cap park to the Scajaquada expressway would provide an opportunity for both green infrastructure and neighborhood connectivity.

Sites

The sites inventoried for green infrastructure retrofit in CSO Basin 53 focused on businesses and large institutional campuses as well as community partners institutions. These sites are organized along many key corridors or grouped in industrial or commercial areas.

Clusters and Networks

Combining feasible retrofit sites, important institutional sites, and corridors reveals the existence of key clusters within CSO Basin 53. In addition to physical proximity, the presence of community institutions provides the opportunity for clusters to have a programmatic focus, such as workforce development, community health, or economic development.

Key Corridors

- Kensington Avenue
- Michigan Avenue
- Jefferson Avenue
- Northland Avenue
- Fillmore Avenue
- Genesee Street
- Main Street
- Grider Street
- Ferry Street
- Delavan Avenue
- 33 Expressway

Key Businesses

1. OSC Manufacturing and Equipment Services
2. Buflovak LLC
3. Milk-Bone Plant
4. Indigo Productions

Key Institutions

5. BUDC Redevelopment
6. Erie County Medical Center (ECMC)
7. Sisters of Charity Hospital
8. Medaille College
9. Canisius College
10. St. Stanislaus Church
11. True Bethel Baptist Church
12. City Honors School
13. Seneca Vocational High School
14. Northland Workforce Training Center

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

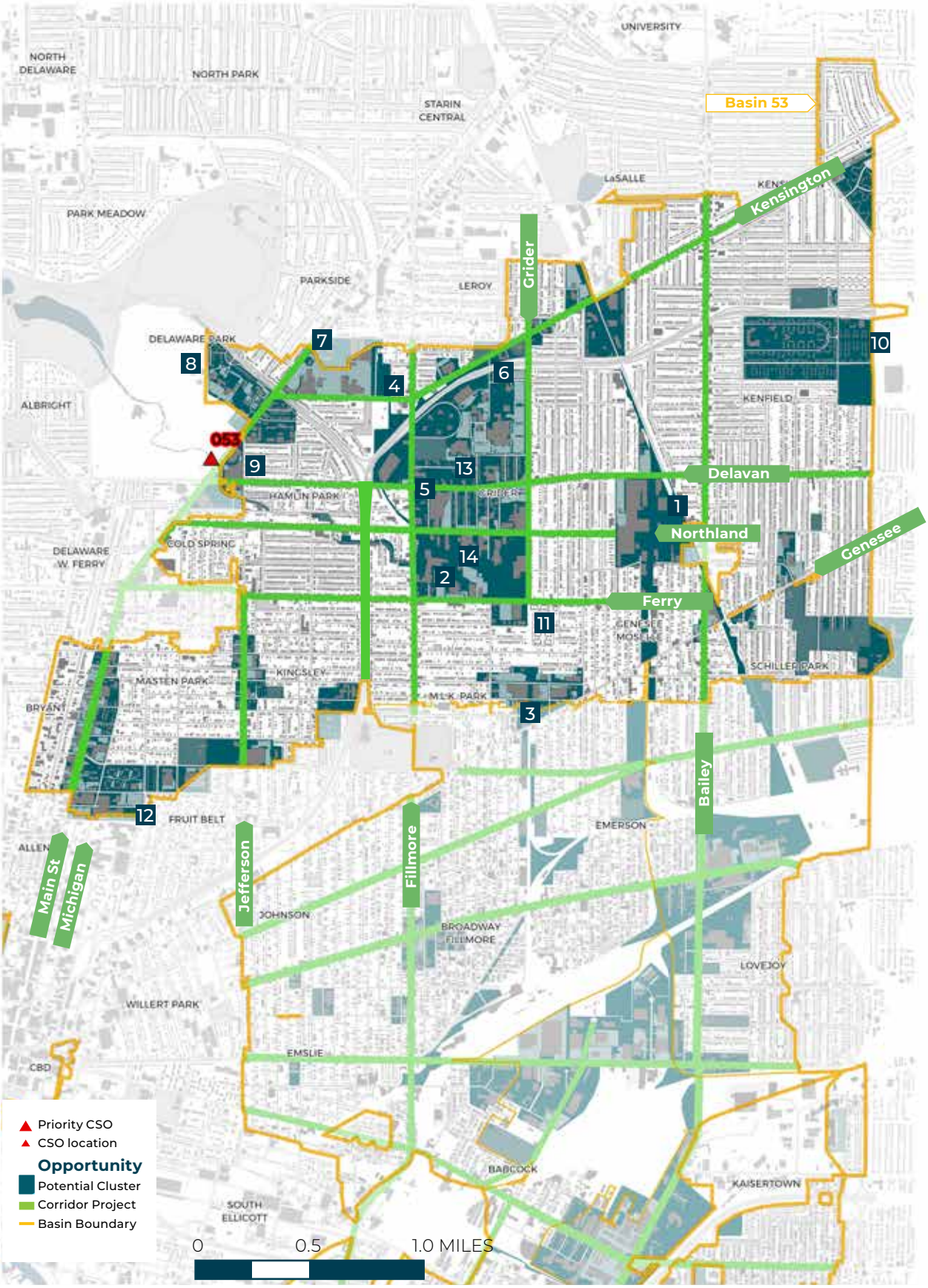


Figure 53.2: CSO Basin 53 Green Infrastructure Opportunity Sites

Green Infrastructure Opportunity
Commercial Building Clusters

Many of CSO Basin 53's large buildings are clustered together with parking lots for commuters. CSO Basin 53 presents an opportunity to showcase how green infrastructure can be integrated into the parking lots and campus areas.

Green infrastructure can help buffer the community from large parking lots and improve the appearance of commercial properties. Working with community groups can broaden the participation of stakeholders. Green infrastructure combined with complete streets can link together neighborhoods and enhance pedestrian experience and safety. Incorporating green infrastructure onto vacant land—putting it to more productive use - supports neighborhood revitalization.

The section of Northland Ave that passes between Fillmore and Grider is a good example of a green infrastructure cluster project for CSO 53. It engages community partners focused on workforce development, makes use of vacant parcels, beautifies important city corridors, and intersects with the underground course of Scajaquada Creek.

Partnerships with groups like Buffalo Urban Development Corporation (BUDC) can help showcase networked green infrastructure techniques while also adding attractive landscaping to the institution.

Strategies

- **Park improvements**
- **Detention ponds**
- **Parking lot planting**
- **Street trees**
- **Complete streets**
- **Curb bump outs**
- **Urban farming**
- **Green roofs**
- **Downspout disconnects**

Potential Partners

- **Sisters of Charity Hospital**
- **Medaille College**
- **Canisius College**
- **City Honors School**
- **Seneca Vocational High**
- **Erie County Medical Center**
- **BUDC**

Figure 53.3: "undated photograph shows the Houdaille Manufacturing Co." (BuffaloNews.com)

Figure 53.4: BUDC Redevelopment prior to demolition.

14
26
27
28
33
53

Placemaking Opportunity with Green Infrastructure

The development of green infrastructure around the cluster centered on the Northland Workforce Development Center demonstrates the many potential benefits of green infrastructure, incorporating elements of corridor improvements, urban agriculture and greening of parking lots. In addition to more effectively managing stormwater, this breadth of green infrastructure supports neighborhood development and revitalization goals, improves environmental quality and access to green space and improves public health and environmental quality as well as creates memorable neighborhood places.

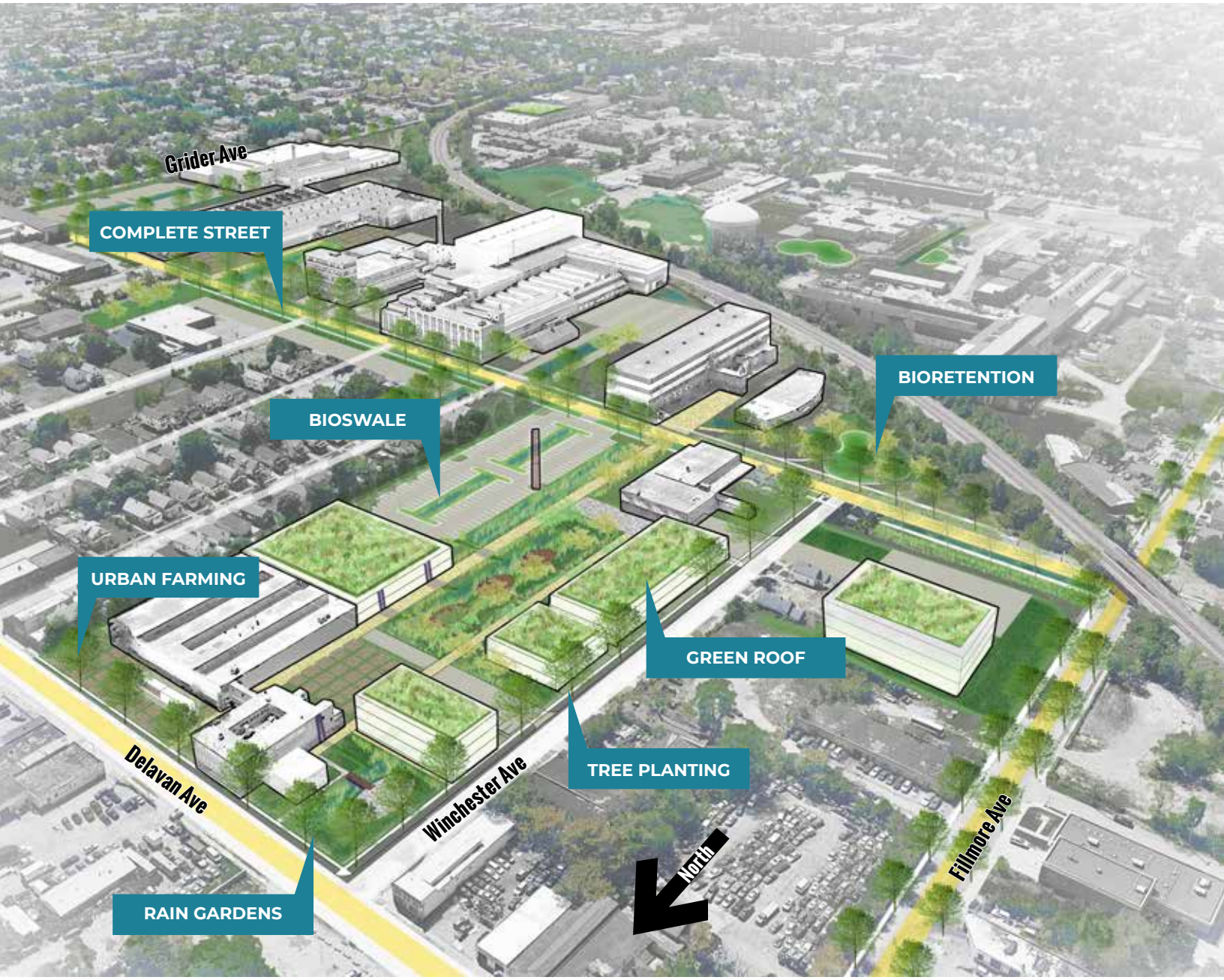


Figure 53.5: Northland Avenue new development cluster

ANALYSIS

Urban Character

Spanning the northeast section of the city, planning neighborhoods intersecting CSO Basin 53 include: Parkside, Leroy, Kensington, Kenfield, Schiller Park, Genesee Moselle, Grider, MLK Park, Hamlin Park, Cold Spring, Masten Park, Kingsley, and the Fruit Belt. CSO Basin 53 includes office buildings, ECMC, other large institutions, dense residential, less dense residential, and a few commercial corridors. There are several main clusters and corridors.

- Masten Park residential with commercial corridors. Characterized by high levels of vacancy and few street trees.
- Fillmore/Grider/East Ferry area with residential and manufacturing, which is divided by the railroad.
- Residential cluster in the north-east corner of the CSO basin and adjacent to the Buffalo Promise neighborhood.
- Residential Cluster in the south-east corner of the CSO basin.
- An institutional cluster around Canisius College, Medaille, and Sister's hospital.
- Erie County Medical Center (ECMC) Campus.
- Potential rails to trails at the edge of the CSO basin, which creates the potential to extend and create a continuity of green space.

Investment in green infrastructure in CSO Basin 53 will support a number of broader planning efforts, including the Local Waterfront Revitalization Program, which includes Scajaquada Creek, and the Buffalo Green Code. The CSO basin includes neighborhood centers along Main, Fillmore, Delavan, and Genesee. The institutional clusters around Canisius College, Medaille College, and Sisters Hospital are important anchors along Buffalo's knowledge corridor as laid out in the Green Code. Northland is also located within CSO Basin 53 and is an industrial redevelopment target in the Green Code.

Several neighborhoods partially located within CSO Basin 53 are experiencing notable residential development, including Hamlin Park, Elmwood-Bryant, and Kensington-Bailey. Elmwood-Bryant is also seeing notable levels of commercial development.

Figure 53.6: Kensington Expressway and a CSX rail line are examples of how infrastructure isolates neighborhoods and reduces walkability

Figure 53.7: ECMC between Grider St and the Kensington Expressway is an example of the large institutions that dominate parts of the CSO basin.

Figure 53.8: Dense single family detached housing comprises large pockets of CSO Basin 53 seen here in the eastern neighborhood of Kenfield.

Figure 53.9: Main St along Masten Park is an example of the strong commercial corridors that are driving growth in this basin

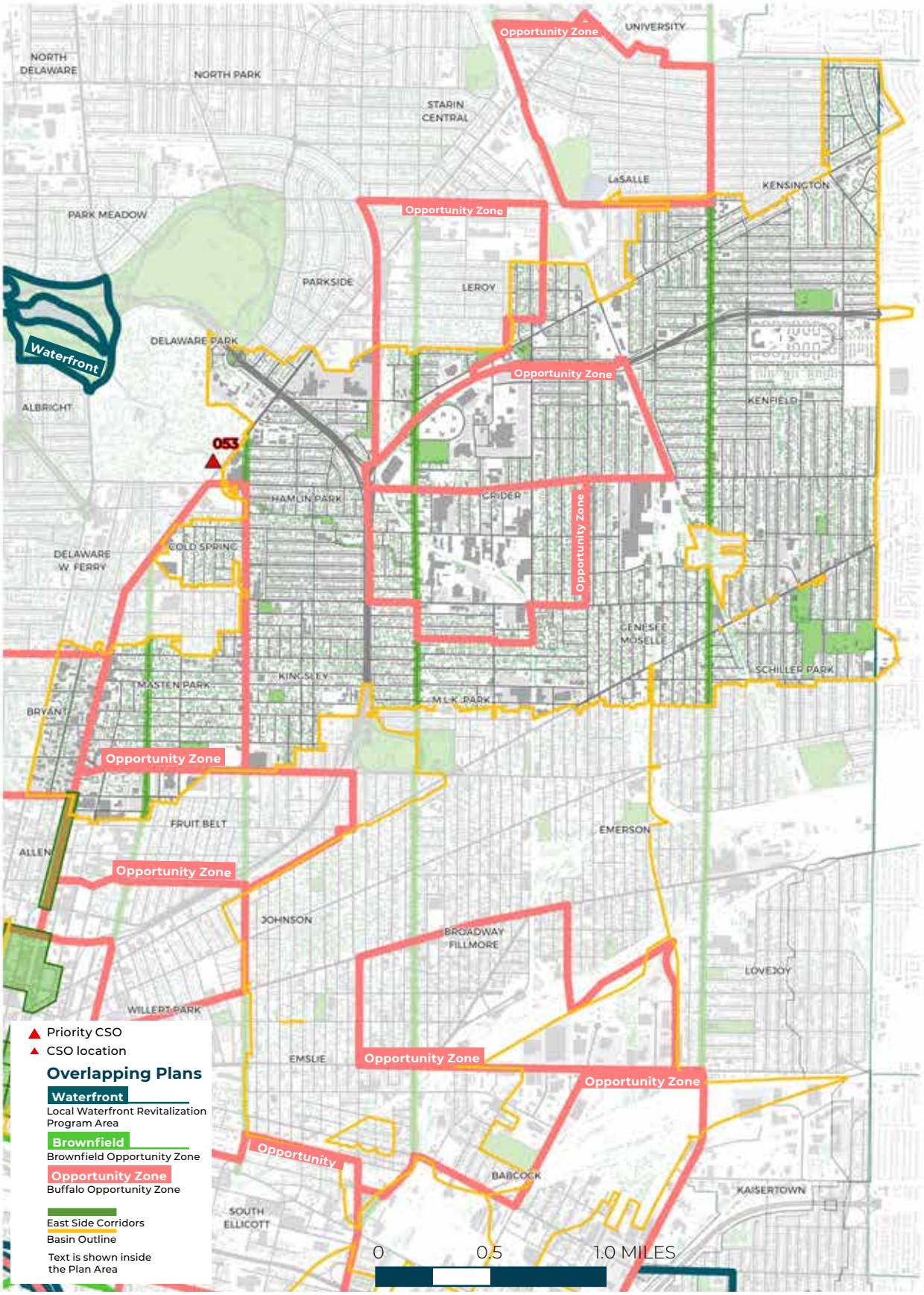


Figure 53.10: CSO Basin 33 Land Use

ANALYSIS

Equity Analysis

The most extensive basin with a population that makes up nearly a quarter of Buffalo, CSO Basin 53 has an elevated need for green infrastructure investments due to a number of interrelated factors. Covering much of the East Side, CSO Basin 53 has the largest share of people of color (86%) of any targeted investment area. The area also has lower rates of workforce participation and owner-occupancy, and higher poverty levels than the City overall. From an environmental perspective, the basin is marked by a relatively large share of vacant land (16%) and high vacancy rates, but also has the highest tree canopy coverage (16%) of any target basin.

There are a wide range of land uses represented in this basin given the broad cross-section of the City that it touches, including major institutions, employers, and recreational areas in the City of Buffalo. Major institutions and employers located in the area include Buffalo General Hospital, Sister's Hospital, Erie County Medical Center (ECMC) Hospital, Canisius College, and Harmac Medical Products. The area is also home to community amenities, including a large number of public schools, religious institutions, and neighborhood parks. The basin is also adjacent to Forest Lawn Cemetery, where a buried Scajaquada Creek that flows underneath many of these neighborhoods is uncovered and serves as a water feature in the landscape.

A wide range of typologies and strategies might be appropriate for just this one CSO basin, and the decision-making framework and approach to green infrastructure in this area could be a combination of approaches from other priority areas. In particular, it might be important to develop different strategies for major institutions located in the area and residential areas with commercial corridors, community amenities, and often high rates of vacancy. There are also many reasons to consider prioritizing workforce development in this area—it is the largest priority area and it is home to many major educational and workforce institutions including Canisius College, multiple hospitals, and the Northland Workforce Training Center. Furthermore, people living in these areas have lower rates of educational attainment and higher rates of poverty compared to the City overall, and the majority of workers are employed in service industries. Ensuring that residents and workers in these neighborhoods have opportunities to participate in the installation and maintenance of green infrastructure projects in the priority area could further equity considerations.

Neighborhood Profile Snapshot

64,289
RESIDENTS

$26,777
MEDIAN HOUSEHOLD INCOME

81.6%
ATTAIN LESS THAN A BACHELOR'S DEGREE

$51,196
MEDIAN VALUE OF OWNER-OCCUPIED HOMES

35.1%
OF HOUSEHOLDS DO NOT HAVE A VEHICLE

-14.2%
2000–2016
POPULATION CHANGE

35.4%
RESIDENTS LIVING IN POVERTY

45%
WORKING AGE NOT EMPLOYED*

85.6%
RESIDENTS ARE PEOPLE OF COLOR

62.7%
HOUSEHOLDS ARE RENTERS

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.

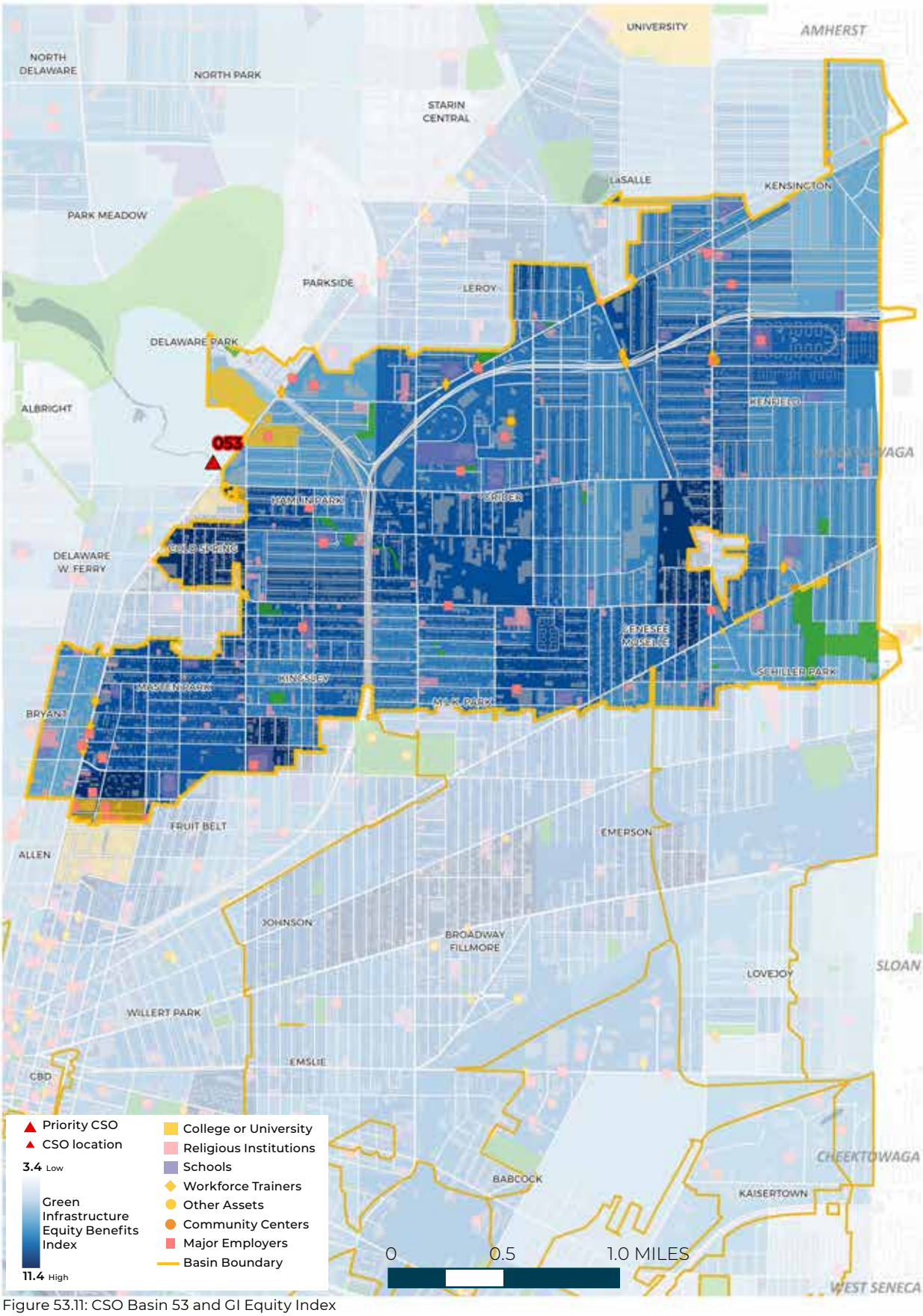


Figure 53.11: CSO Basin 53 and GI Equity Index

Environmental Systems

Waterways

CSO Basin 53 discharges to Scajaquada Creek in Delaware Park. Scajaquada Creek is below ground throughout the CSO basin. The CSO basin outfall occurs at the point where Scajaquada Creek emerges from underground. Parallel to the underground portion of Scajaquada is the primary sewer main that collects all stormwater from this basin.

Tree Canopy Cover

CSO Basin 53 has the highest canopy cover of any of the priority CSO Basins. However, the canopy cover varies considerably because of diverse land use and the large size of the basin. In some areas the canopy is higher than the average and in some areas it is absent. Also the canopy is predominantly in the interior of blocks and does not include many street trees. The CSO has available plantable acres almost equal to the amount of existing canopy acres and over 9,000 vacant tree spaces. Thus, despite its relatively high canopy cover rate, investment in canopy expansion is still appropriate in CSO Basin 53.

Habitat Connectivity

CSO Basin 53 has a number of rail corridors that provided primary habitat corridors between City and the surrounding region. These corridors are interrupted by several significant commercial corridors and expressways that reduce habitat continuity. The basin has no larger habitat patches but is adjacent significant open space, including a contiguous group of cemeteries to the east and the Grover Cleveland Golf Course to the north-east. These open spaces could be expanded or networked with new green infrastructure installations. To expand habitat, large barriers should be bridged and interior block patches integrated into networks connected to periphery patches.

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

Figure 53.12: Potential for Habitat Connectivity in CSO Basin 53

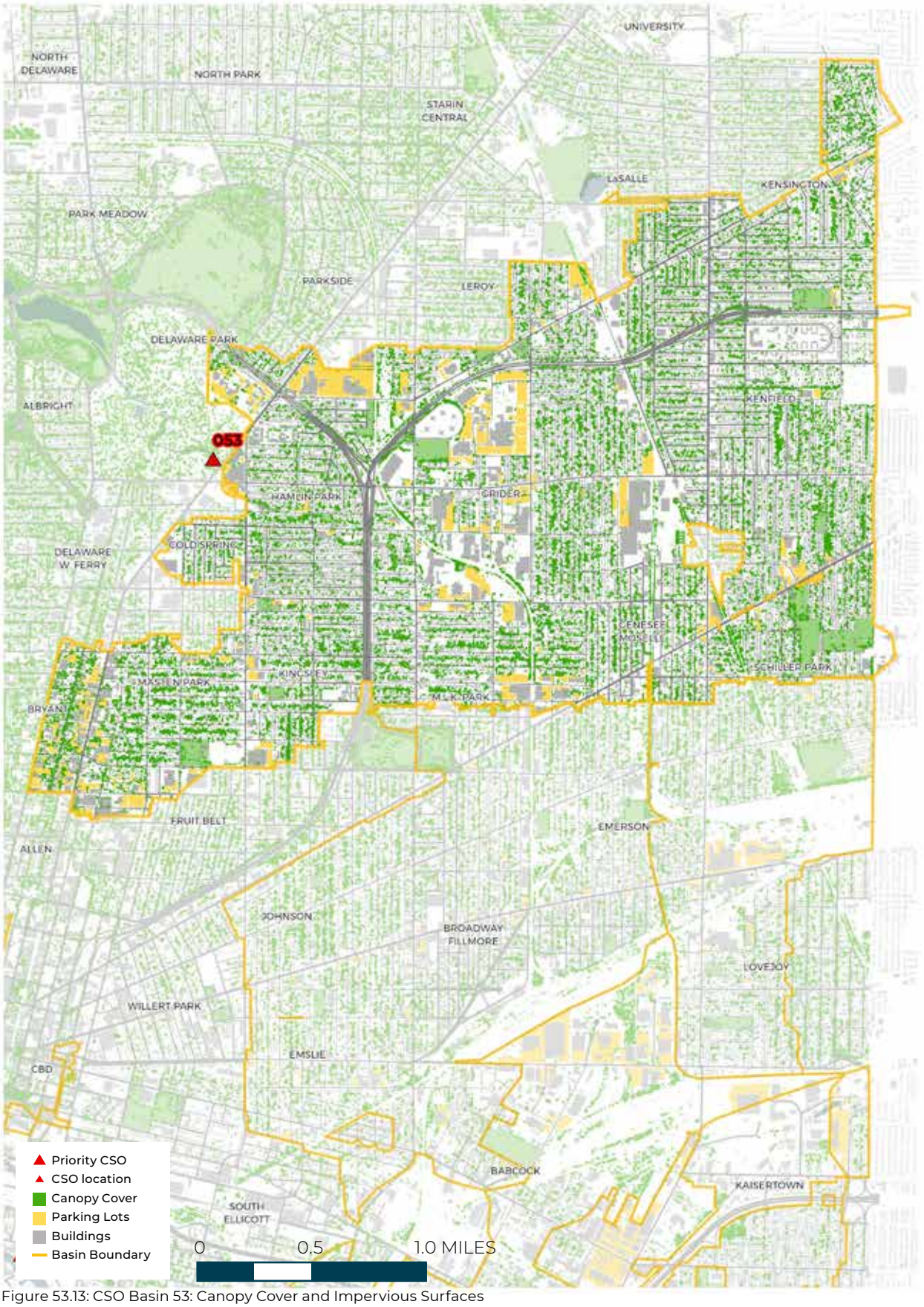


Figure 53.13: CSO Basin 53: Canopy Cover and Impervious Surfaces

ANALYSIS

Site Analysis

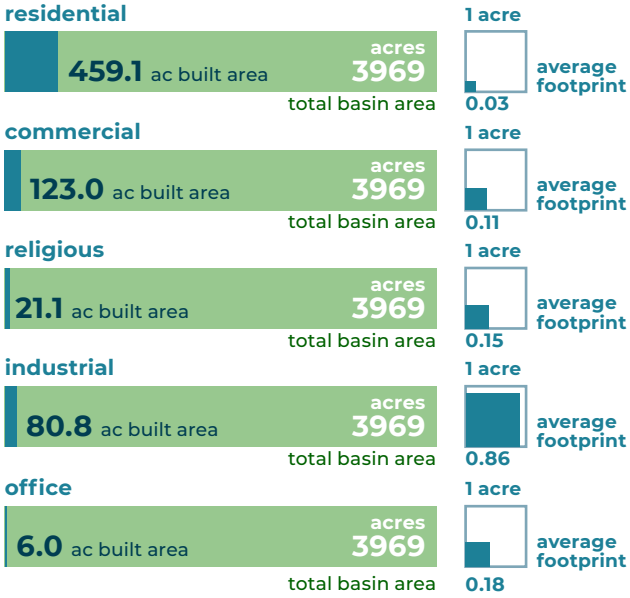
CSO Basin 53 is a very large land area spanning many neighborhoods. This is because the underground course of Scajaquada Creek, which traverses the whole of the basin, operates parallel to a large trunk line that drains this region. The management goal of 299 acres cannot be met by any one land use evaluated through the site analysis process. However, when compared to the large area of CSO Basin 53, the goal is just 10% of the total area.

Most of the land use is residential and roads, but there is a wide range of other uses, such as commercial and institutional. Public land use, including state, county, and City together, are the highest in this zone compared to the other target CSO basins, making up over 10% of the total area surveyed as part of the site analysis process. This opens up the possibility of managing all of the stormwater on public land to meet the goal. Partnerships with institutions such as hospitals may also be hugely beneficial given that the area of institutional property ownership is almost 30% of the goal.

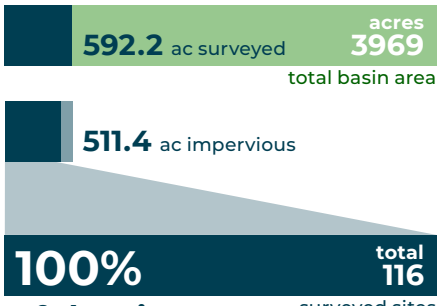
Many of the sites surveyed in this CSO basin focused on sites with large flat roofs or large parking lots because they represent the most efficient means of meeting stormwater goals. These sites also represent significant contributers to urban heat island effect and disrupt neighborhood walkability making them desirable green infrastructure improvement sites. Public rights-of-way comprise 25% of the land area in this basin. Future site analysis for green infrastructure retrofits should include streets as they provide a significant opportunity for stormwater reduction.

Built Area by Land Use

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



The site analysis reviewed 15% of the basin and found 113.6 acres of potential drainage area.



of the sites were suitable for green infrastructure.

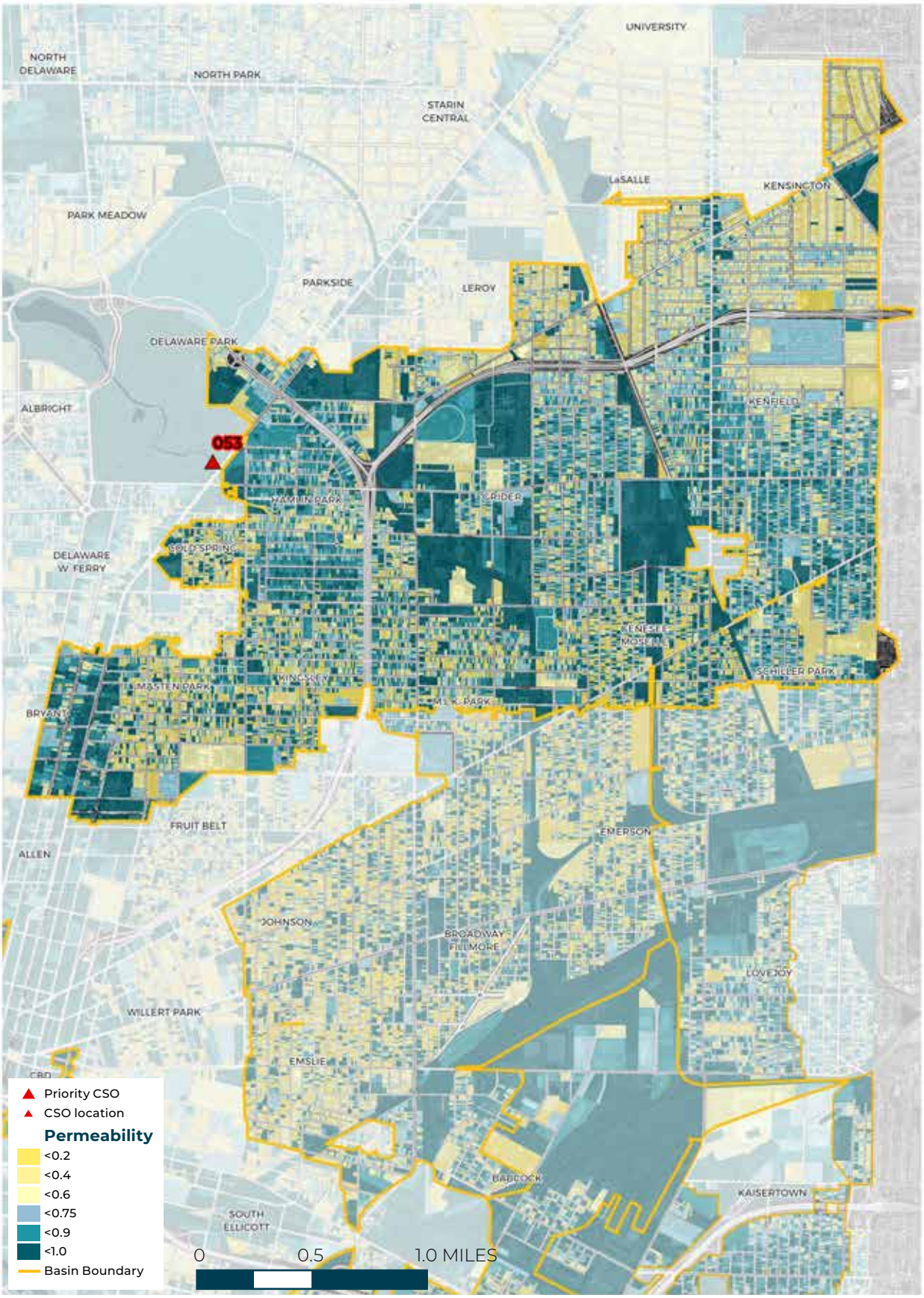


Figure 53.14: CSO Basin 53 Percent Impervious by Parcel

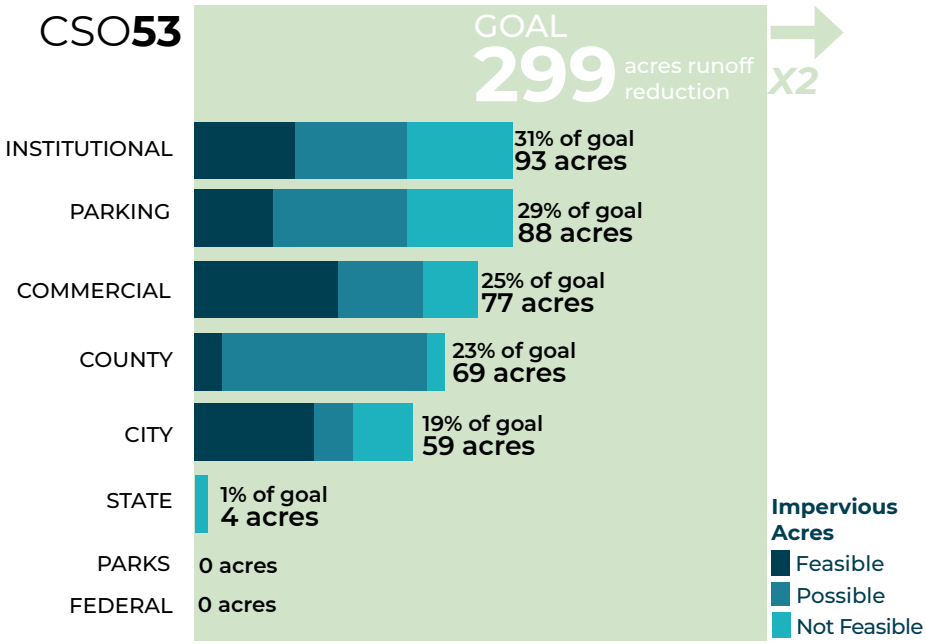
ANALYSIS

Site Analysis: Surveyed Properties

Figure 53.15: Examples of sites surveyed.

Surveyed Properties by Land Use and Ownership

GIS sources: Erie County data, Buffalo Sewer Authority data



LARGEST PROPERTY OWNERS BY LAND USE AND OWNERSHIP

INSTITUTIONAL

Sisters of Charity Hospital
15.8 Imperv. acres

Medaille College
13 Imperv. acres

Canisius College
9.7 Imperv. acres

ECMC
58.4 Imperv. acres

True Bethel Baptist Church
4.5 Imperv. acres

COMMERCIAL

National Grid
19.2 Imperv. acres

First Student
7.2 Imperv. acres

Rosalie and Healthy Chef
5.6 Imperv. acres

PARKING

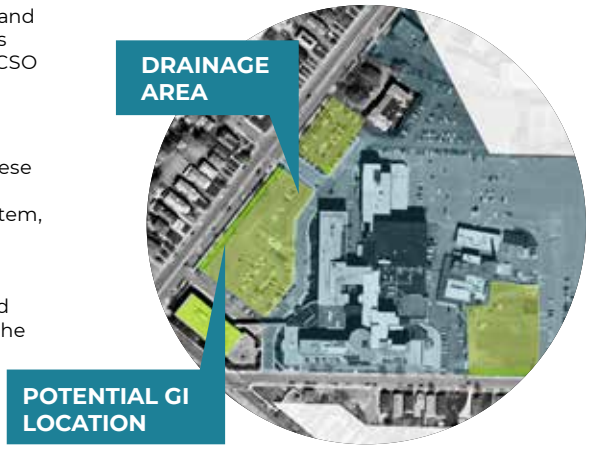
OSC
33.0 Imperv. acres

Buflovak LLC
14.7 Imperv. acres

BUDC Redevelopment
10.5 Imperv. acres

Large institutions and campus properties were surveyed in CSO Basin 53.

From this, the team was able to determine that these sites may best be managed as a system, especially if there is an institutional masterplan that guides growth and development for the site.



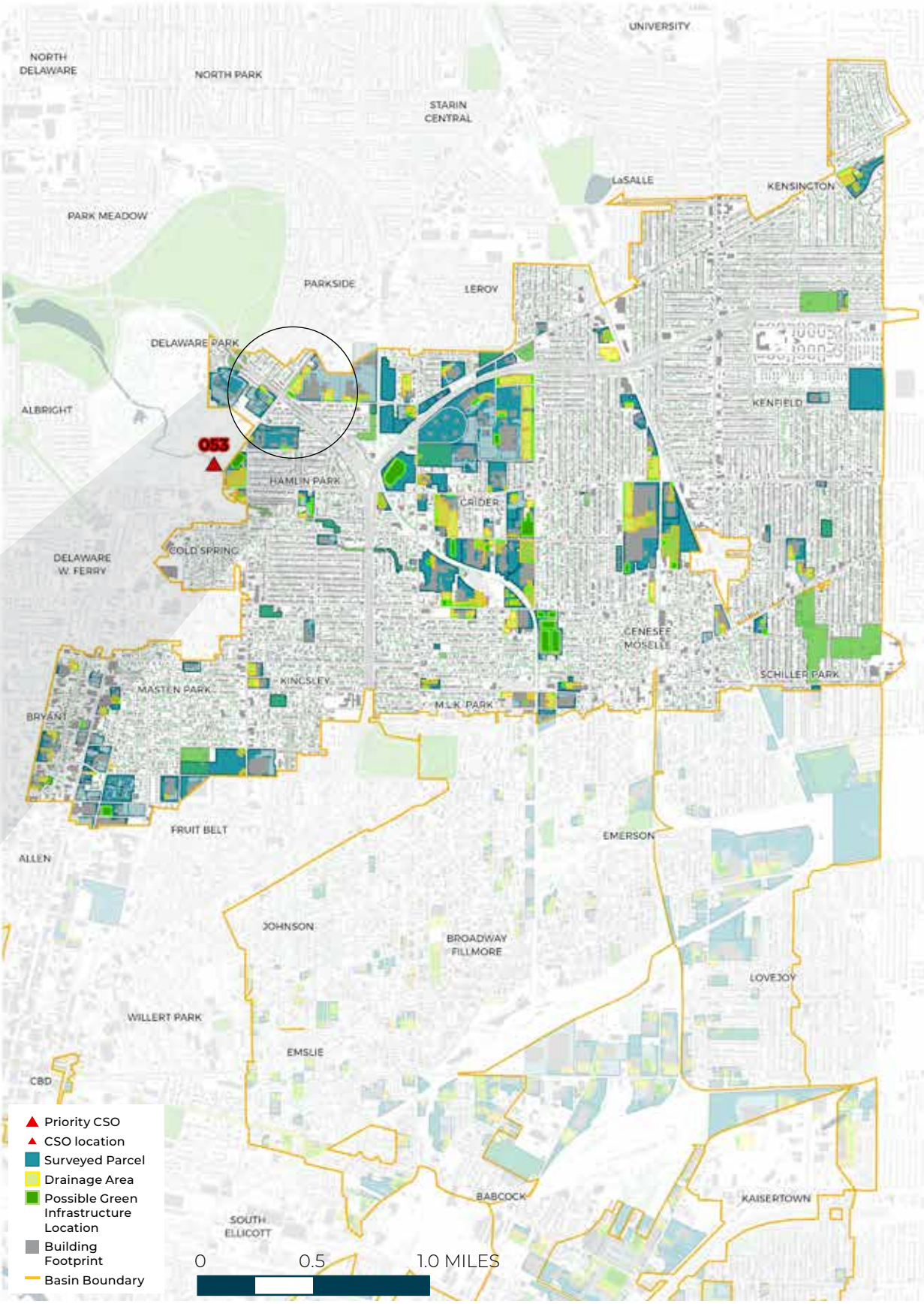


Figure 51.16: CSO Basin 53: Sites analyzed showing parcels, drainage areas and potential green infrastructure.

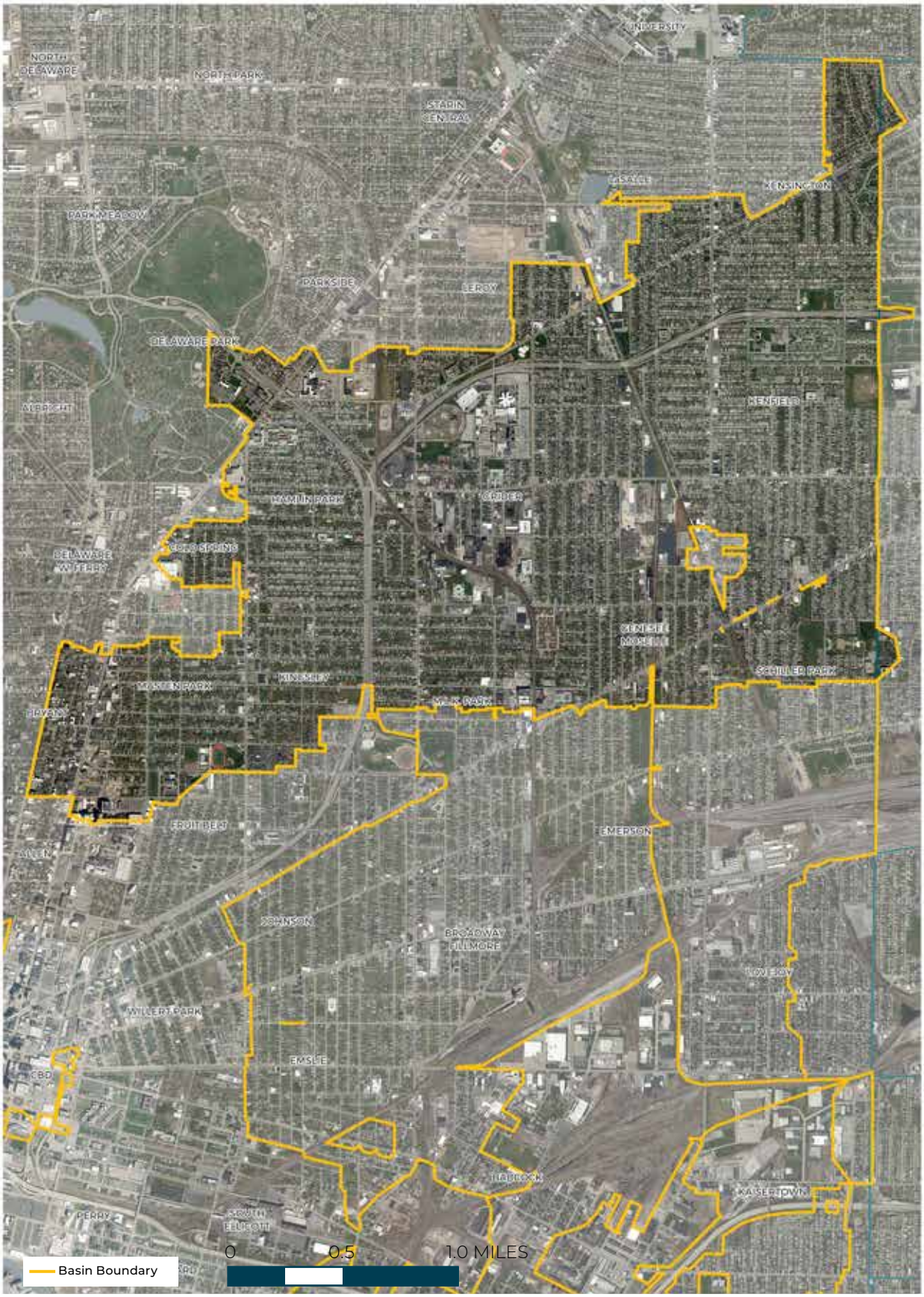


Figure 53.17 CSO Basin 53 Percent Impervious by Parcel

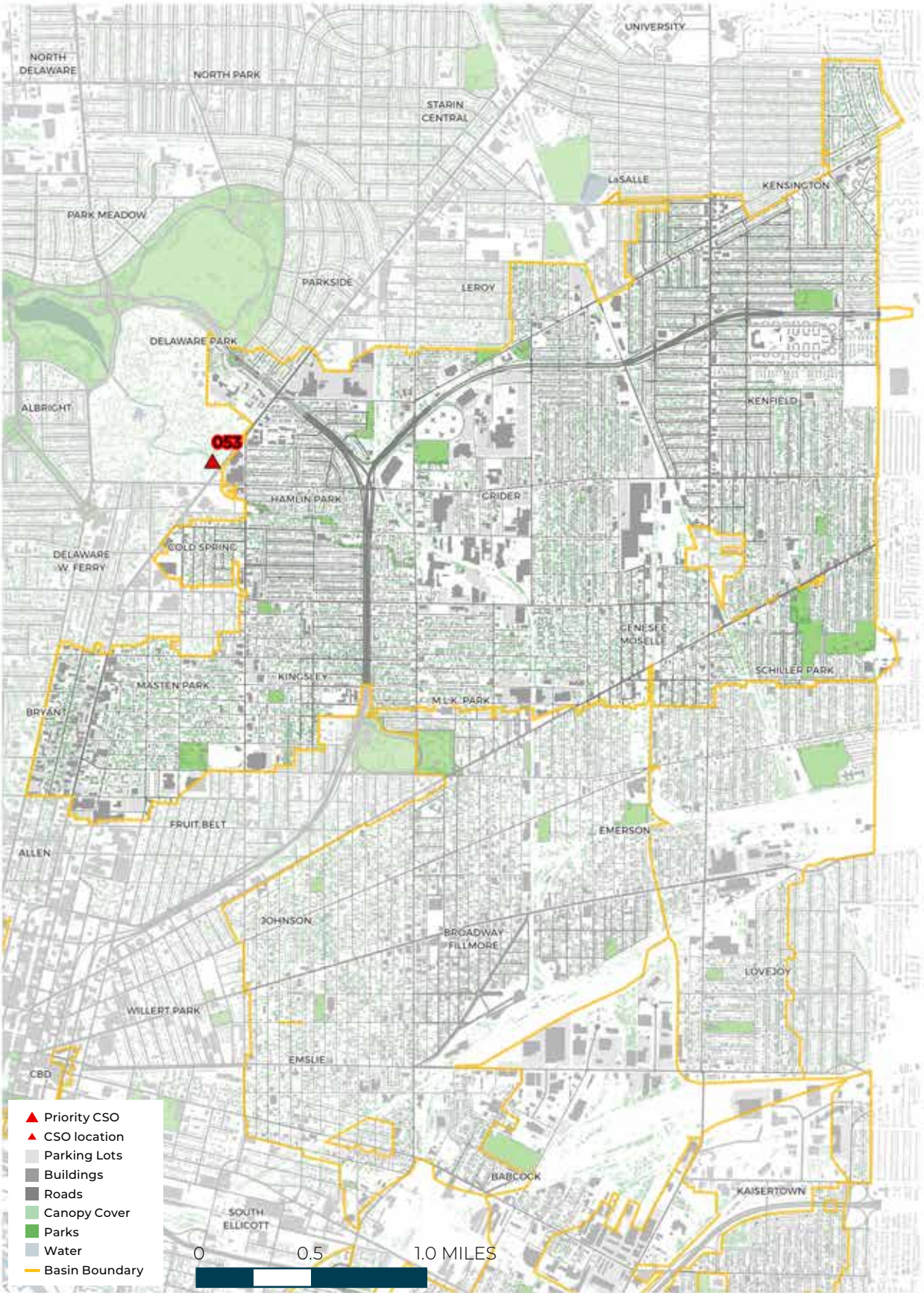


Figure 53.18: CSO Basin 53 Map of Built Environment and Tree Canopy

TWO

PLACE

Green infrastructure can solve stormwater challenges while improving public spaces, streets, and parks and create places that make Buffalo's neighborhoods unique and livable.

This chapter presents the types of green infrastructure and how they function within a green stormwater network.

164 **Buffalo Sewer System and Green Infrastructure**

167 **Green Infrastructure: Solutions & Networks**
Practices and Technologies
Vegetated Practices
Non-Vegetated Practices
Sources & Configuration

176 **Green Infrastructure: Planning & Implementation**
Planning and Decision-making
Programmatic Co-Benefits
Implementation Programs

The Buffalo Sewer System and Green Infrastructure

Buffalo's sewer system is a combined sewer system (CSS) — combining sanitary sewage and stormwater in the same pipe. The CSS was constructed with 65 permitted combined sewer overflow (CSOs) outfalls to relieve the system during wet weather events in order to protect downstream treatment facilities and prevent basement flooding. Buffalo Sewer has completed numerous improvement projects resulting in the reduction of CSO outfalls. Currently, the system consists of 52 permitted CSO outfalls. The United States Environmental Protection Agency (USEPA) issued a national CSO Control Policy in 1994, requiring communities with CSSs to develop Long Term Control Plans (LTCPs) that comply with the requirements of the Clean Water Act, including attainment of current or revised water quality standards to reflect wet weather in-stream conditions.

While this LTCP program focuses primarily on the collection system, the Bird Island Wastewater Treatment Plant (WWTP) is also an integral part of the CSS. Immediately after the establishment of Buffalo Sewer in 1935, a primary wastewater treatment plant, focused on disinfection and removal of solids from wastewater, was constructed and began operation on July 1, 1938. Secondary treatment facilities, which provided for additional treatment and disinfection of wastewater, were added at the plant between 1975 and 1979.

Completed and current upgrades to the facility will allow for improved treatment for up to 320 million gallons per day (MGD) of flow through the secondary treatment system and following completion of the additional future upgrades, up to 400 MGD through the secondary treatment system. All treated flows are discharged to the Niagara River via two permitted outfalls. The WWTP is also equipped with a third emergency outfall which is used to protect the WWTP in the event of extreme wet weather or equipment malfunction to prevent the plant influent flow from exceeding the plant's treatment capacity.

LTCP Development Process

Buffalo Sewer originally submitted its LTCP for CSO abatement to the New York State Department of Environmental Conservation (NYSDEC) in July 2004 (2004 LTCP). Buffalo Sewer began additional work in 2008 to update the LTCP based on comments received from NYSDEC and additional evaluations conducted at the request of NYSDEC and USEPA (the Agencies).

From 2008 through early 2012, Buffalo Sewer and the Agencies discussed revisions to the LTCP. On March 15, 2012, the USEPA ordered Buffalo Sewer to submit an updated LTCP to the Agencies no later than April 30, 2012. Following submission of the April 2012 LTCP, the Agencies provided comments. A major effort in addressing this set of comments was the development of a Green Infrastructure Master Plan (GI Master Plan). Based on the comments provided by the Agencies, the LTCP has been revised to incorporate the findings of the GI Master Plan.

In addition to developing this LTCP update, Buffalo Sewer has continued to work diligently to reduce CSO overflow volumes and frequencies. Along the way, Buffalo Sewer has invested tens of millions of dollars in capital improvements both at the WWTP and in the collection system.

Green Infrastructure Master Plan

In determining how best to address the CSO overflow challenge and respond to the Agencies' comments, Buffalo Sewer looked at implementing real time controls (RTC) to maximize the efficient use of the existing infrastructure, in conjunction with green infrastructure to reduce the amount of stormwater entering the sewer system. In response to Agencies' comments on the April 2012 LTCP, Buffalo Sewer provided additional detail on their green infrastructure program by developing a GI Master Plan.

The GI Master Plan includes further refinement of the green infrastructure impervious surface control targets presented in the April 2012 LTCP to

Figure 2.1: Buffalo's Wastewater Treatment Plant on Bird Island.

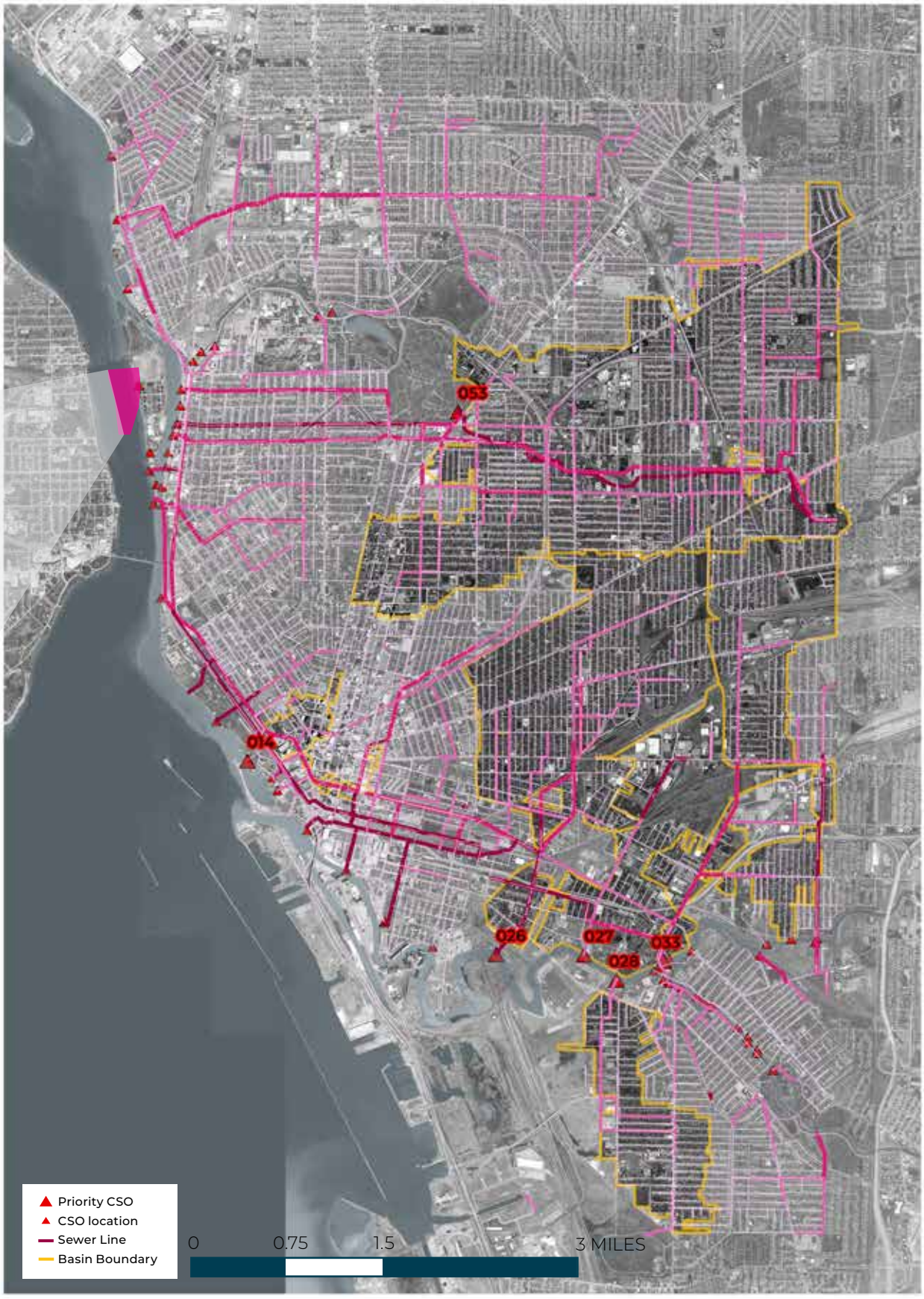


Figure 2.2: Map of Buffalo's Sewer System with the priority CSO basins outlined.

determine, on a more localized level, where the system would most benefit from green infrastructure technologies. It also provides requested detail on the Phase 1 green infrastructure projects to be implemented over the first five-year period. It does this by further dividing CSO basins into sub-basins. By focusing on the sub-basin level, the GI Master Plan could closely identify which portions of the larger CSO basins were contributing the most to the CSO challenge and where green infrastructure would provide the greatest benefit.

Refining the impervious control acreage to the sub-basin level allowed for better identification of CSO basins (and by extension CSO outfalls) that would benefit most from implementing green infrastructure technologies, and also for determining which basins would not benefit because they were already at or below the recommended level of control or do not discharge directly to receiving waters. Recommended acreages increased in the Black Rock Canal and Erie Basin, and decreased in the Cazenovia Creek, Buffalo River, Niagara River, and Scajaquada Creek Basins. Because the sub-basin-level green infrastructure allocation provides a more refined and cost-effective approach, Buffalo Sewer is working towards a 1,315-acre total green infrastructure program effort.

Buffalo Sewer remains committed to evaluating opportunities to maximize the use of cost-effective green infrastructure approaches. The target acreage above is a minimum program commitment. Additional green infrastructure acreage may go beyond this minimum and can be used in conjunction with the optimization of gray projects. This approach allows Buffalo Sewer to adaptively manage the green infrastructure program to incorporate lessons learned and take advantage of land use and infrastructure investments to deliver the maximum public benefits at the lowest cost.

Green Infrastructure Planning Efforts History

Figure 2.3: Key Buffalo stormwater planning documents. Top to bottom: Long-Term Control Plan and GI Master Plan; Buffalo Green Code and LWRP; Rain Check 1.0 Report; Rain Check 2.0 Opportunity Report.

Citywide Statistics

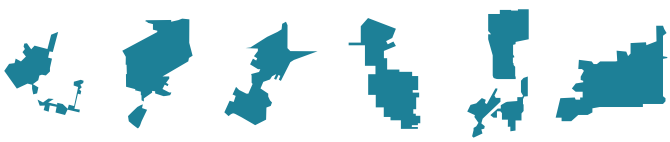
The maximum daily capacity of the WWTP is **560** million gallons, of which usually **144** million gallons are treated each day.

The length of sewer main pipes in the system is **854** miles—long enough to reach from Buffalo to NYC and back.

110 SQUARE MILES OF COLLECTION SYSTEM

92% OF BUFFALO'S SEWER SYSTEM IS COMBINED

CSO Statistics



6 TARGET CSO OUTFALLS

52 PERMITTED CSO OUTFALLS

GREEN INFRASTRUCTURE: SOLUTIONS AND NETWORKS

Practices and Technologies

Green infrastructure practices keep the stormwater challenge in check by reducing and managing the impervious surfaces of the City that produce stormwater runoff, particularly runoff from streets, buildings, and parking lots. While traditional gray infrastructure and other "smart" approaches are still needed, especially in extreme events, green infrastructure is a powerful, cost-effective way to reduce sewer overflows. This section identifies the green infrastructure practices and technologies that Buffalo Sewer has identified as the most appropriate for Buffalo and includes maintenance considerations.

As discussed in **Chapter 1 | Opportunity**, green infrastructure has the capacity to provide co-benefits in addition to reducing the amount of stormwater entering the sewer system. This section will discuss how different network configurations can contribute to increasing these co-benefits, helping to address equity and environmental goals.

Finally, planning and implementation will be key to a successful green infrastructure program, including the ability to provide larger, more networked systems. This chapter also discusses programs that create incentives for implementing green infrastructure and the planning process.

Green infrastructure captures stormwater before it goes into the combined sewer system and reduces combined sewer overflows.

Green Infrastructure Practices, Configuration, and Planning

There are many types of green infrastructure. The basic goal of all green infrastructure is to remove stormwater from the sewer system by storing, diverting, or infiltrating it on site. Green infrastructure mimics the way water moves in a natural system by allowing stormwater to be absorbed by soil and plants. Green Infrastructure is a way to let the landscape do the work of managing stormwater, rather than relying solely on the sewer system and treatment plant to do this work.

Green Infrastructure practices can be considered on one end of a sliding scale of stormwater technologies with the most 'green' consisting of vegetation and living systems and the other end being more traditional gray infrastructure technologies utilizing underground storage without living systems. Green infrastructure is also implemented in a decentralized and distributed network of stormwater management where stormwater does not travel to a central facility for treatment.

In addition to the green infrastructure itself, the way that green infrastructure is placed on the site and its relationship to other green infrastructure interventions also impact how effectively green infrastructure reduces the quantity of stormwater entering the combined sewer system. Green infrastructure practices that are networked can provide additional stormwater benefits and opportunities for shared costs and streamlined maintenance.

Figure 2.4: Rain Garden on Penn Avenue in Pittsburgh, PA.

Vegetated Practices

Vegetated practices provide many important benefits in addition to stormwater management. Stormwater planters, tree pits, rain gardens, bioswales and green roofs have the potential to increase property values, reduce urban heat island effect, and mitigate pollution.

Stormwater Planters and Tree Pits

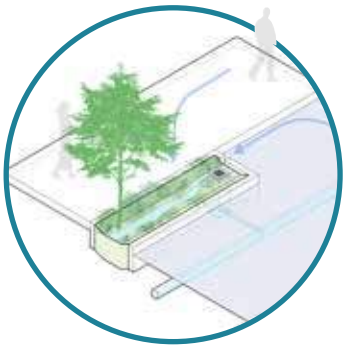
Tree pits and sidewalk planters can be used to capture stormwater in urban areas. These small landscaped installations can infiltrate or filter water and can also convey or store water if designed with the appropriate infrastructure. Stormwater planters and tree pits are usually structured and may have curbs, sidewalks, inflow, and overflow devices. According the New York State Stormwater Management Design Manual, the soil in a stormwater planter uses biogeochemical processes and soil infiltration to decrease stormwater quantity and improve water quality. Soil for urban planters and pits should be carefully selected to deal with the structural conditions and salt or contaminant inflow.

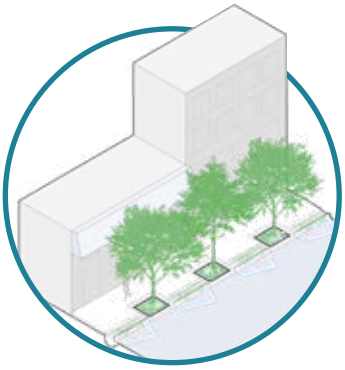
Rain Gardens

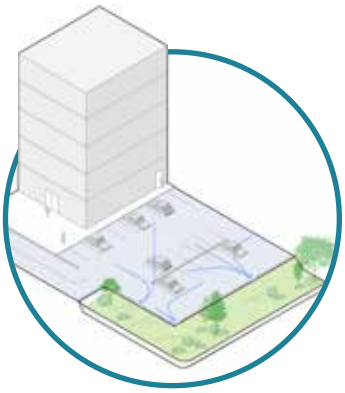
Rain gardens (sometimes called bioretention) are depressed landscape features. They contain plants that tolerate alternating wet and dry periods. They are designed to hold stormwater and allow it to infiltrate into the soil. The size of rain gardens can vary depending on how much water they will receive. A small rain garden at a private home may be able to receive water from a disconnected downspout while a rain garden that captures run off from a large parking area will be significantly larger. Rain gardens usually use a special, highly porous planting soil to promote infiltration. Rain gardens are typically sized to handle runoff from a small event and have an overflow mechanism to convey water from a large event. Depending on the porosity of the underlying soils, rain gardens may also be equipped with an underdrain.

Bioswales

Bioswales (sometimes called vegetated swales) are gently sloped and vegetated landscape features. Bioswales reduce the quantity of stormwater by promoting infiltration and help to improve water quality by slowing and filtering stormwater, allowing sediment and some pollutants to settle out. They are often used along roadways, driveways, and parking lots. They will typically use a specialized, very porous planting soil.







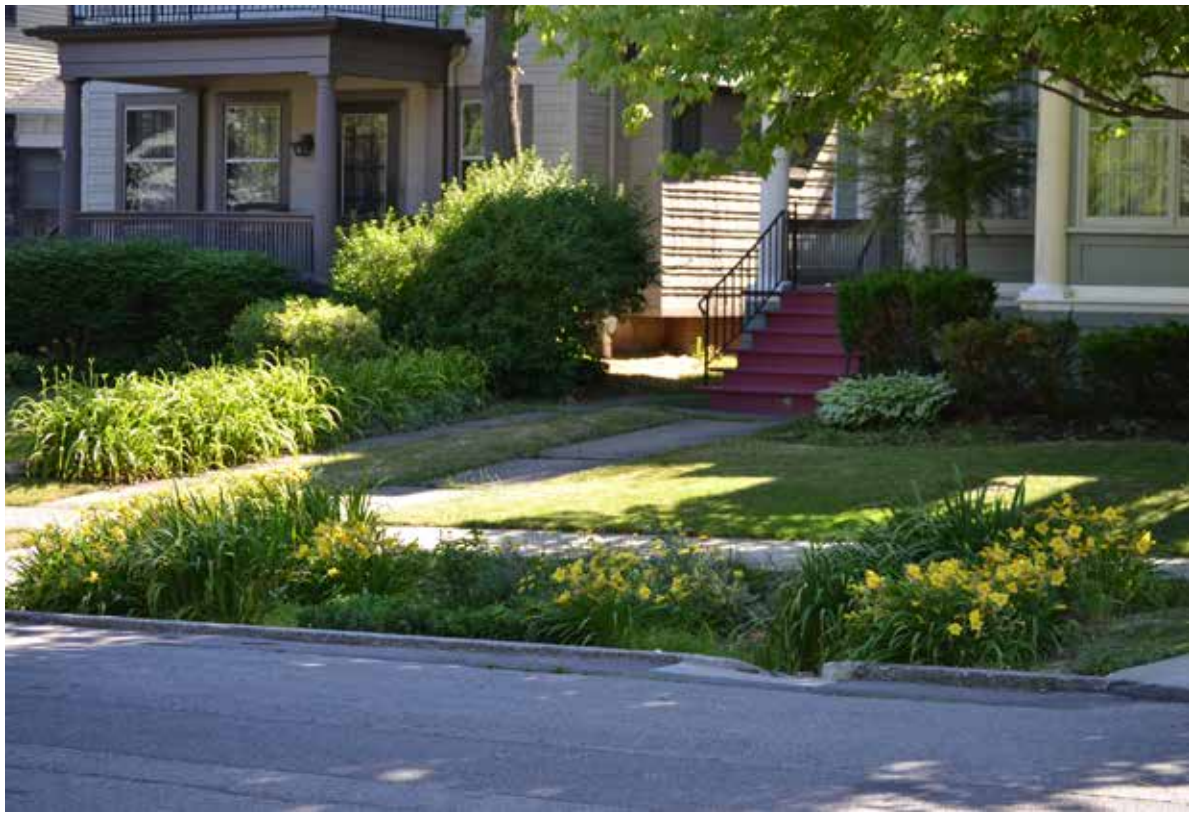


Figure 2.5: Buffalo Sewer Rain Garden on Windsor Avenue.

Considerations

For all these practices, plants should be selected for the planter or pit size, location and exposure to light, and their salt and pollutant tolerance.

- Weeding and regular maintenance will be required.
- Trash will need to be removed, especially after large events or where planters and pits are receiving water from streets or parking lots.
- Plants will need to be regularly pruned and may need to be periodically replaced.
- Soil should be selected to maximize infiltration, storage, or other site-specific and plant-specific requirements.

Pollution Mitigation Benefits

Rain gardens, bioswales, and wetlands remove pollutants from air and water. The pollution removal increases if tree area is added at a density of 5 trees per 1,000 square feet.

Benefit	No Trees	Trees
Carbon Dioxide sequestered	581 lbs/year	728 lbs/year
Ozone Removed	0.49 lbs/year	1.1 lbs/year
Particulates Removed	0.43 lbs/year	0.84 lbs/year
Nitrogen Dioxide Removed	0.39 lbs/year	0.81 lbs/year
Sulfur Dioxide Removed	0.23 lbs/year	0.46 lbs/year
Carbon Monoxide Removed	0.12 lbs/year	0.2 lbs/year

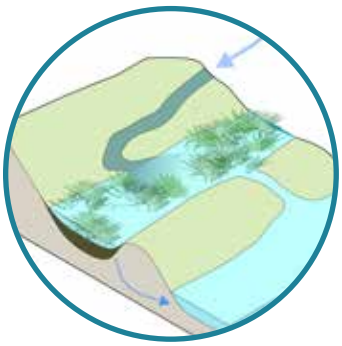
Numbers are for 1,000 s.f. installation and are based on NYC Green Infrastructure Co-Benefits Calculator.

Wetlands

Both natural and constructed wetlands provide significant stormwater quality improvement. Constructed wetlands are designed to maximize pollutant removal by settling out sediment and through uptake and filtering of pollutants by wetland vegetation. To function properly, constructed wetlands must have a sufficient drainage area and receive enough water during dry weather, in order to maintain a minimum pool level. Wetlands can also reduce urban heat island effect, increase property values, and sequester carbon dioxide.

In-stream Restoration

In addition to working inland on point source practices and prevention strategies, implementing projects within waterways addresses water quality more directly. Floating wetlands reduce nitrogen and phosphorus nutrient concentrations; root wads, pools and riffles provide habitat enhancements; and flow deflectors recreate natural stream meanders. In-stream restoration practices provide an excellent opportunity to improve water quality continuously throughout the year and not just in preventing pollution during wet weather events.



Riparian Restoration

Recreating the natural vegetated edge—or buffer—along streams and rivers assists with slowing, filtering, and infiltrating stormwater runoff before it reaches those water bodies. Combining it with a level spreader, which distributes the stormwater as sheet flow, rather than in a concentrated stream, helps to minimize erosion and increases the effectiveness of riparian buffers at filtering and infiltrating stormwater.

Tree Planting / Preservation

Trees are important allies in managing stormwater. Adding trees increases the absorption of stormwater into the soil (infiltration). Trees use stormwater (evapotranspiration), which reduces the amount of stormwater runoff. Tree canopies also intercept water, slowing stormwater flows. Trees can reduce urban heat island effect, increase property values, and sequester carbon dioxide.

Open Space Preservation

Open space—such as a park—is an important component of permeable, vegetated space, particularly in urban areas. Preserving open space and, in some cases enhancing it with the addition of planting, especially trees, reduces the amount of stormwater runoff that eventually enters the storm system. In some cases open space also provides an opportunity for incorporating other green infrastructure practices, such as riparian buffer restoration, rain gardens, tree planting, and bioswales. Open spaces can also be important nodes in a networked system of green infrastructure.

Tree Benefits

Buffalo's 3,830 acres of tree canopy provides the following benefits on an annual basis

Benefit	Buffalo Canopy
Carbon dioxide sequestered	2,523,374 lbs
Water Saved	40,882,251 gallons
Energy Saved	271 Kwh
Energy Saved	80 Therms

Based on City of Buffalo Open Data Portal

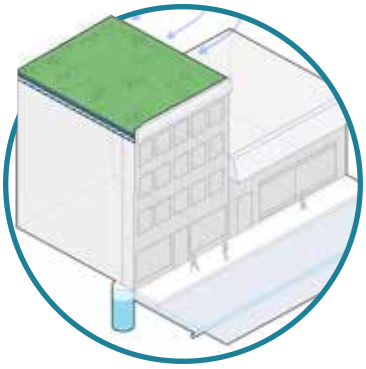
Focus on
Green Roofs

Green roofs are planted areas on building roofs that use a special lightweight planting soil and plants to store and use (evapotranspire) stormwater. Green roofs can add value to large buildings with flat roofs, such as offices and apartment buildings, by decreasing temperature swings in the buildings, extending the life of roofing, and by providing an amenity for occupants. Studies have shown that people prefer views of living habitat, and green roofs bring plants, birds, and insects into the urban environment.

Green Roofs may require significant structural support which may increase cost. Existing buildings may be difficult to retrofit. Depending on the location and height of the building, getting planting media and plants onto the roof can be a logistical challenge. Egress and access that complies with the Americans with Disabilities Act is required for occupiable green roofs.

Nearly 7,000 acres of Buffalo's impervious surface is rooftop!

Figure 2.6: Green roof at Kensington High School in Philadelphia, PA (image ROOFMEADOW).



Pollution Mitigation Benefits

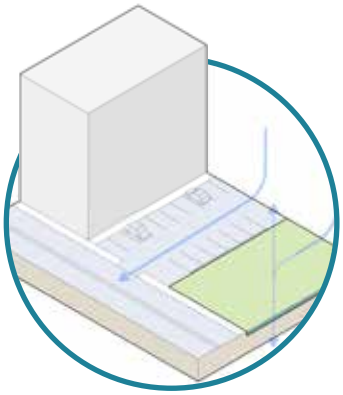
Green roofs help remove pollutants from air and water.

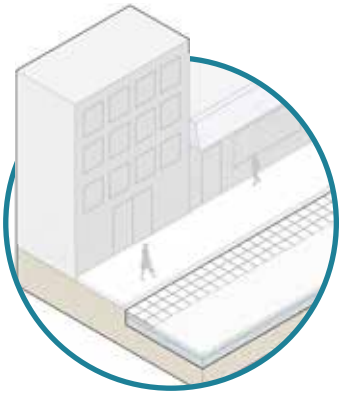
Benefit	Green Roof
Carbon Dioxide sequestered	244 lbs/year
Ozone Removed	0.55 lbs/year
Particulates Removed	0.21 lbs/year
Nitrogen Dioxide Removed	0.08 lbs/year
Sulfur Dioxide Removed	0.54 lbs/year
Carbon Monoxide Removed	0.21 lbs/year

For a 1,000 s.f. green roof with 3" of planting medium and 2" drainage layer. Based on NYC Green Infrastructure Co-Benefits Calculator

Non-Vegetated Practices

Non-vegetated practices, such as porous paving and rain barrels or cisterns, are essential in urban areas where space is constrained or where water can be captured for reuse.





Impervious Surface Reduction

Impervious surface reduction is a key strategy for managing stormwater. Impervious surfaces - such as parking lots, driveways, roadways and sidewalks - generate a much higher level of stormwater runoff than landscaped areas. Rainfall on or snowmelt from impervious surfaces runs off more quickly and carries more pollutants. By reducing the amount of impervious surface - for example using porous pavement in parking lots, incorporating landscaped areas into parking lots, putting green roofs on buildings, or simply making impervious components of the lot as small as possible - the amount of stormwater runoff is reduced.

Porous Paving

Porous or permeable pavement can include pavers with small gravel in the joints, or special concrete or asphalt with pore spaces that allow stormwater to move through the pavement into a gravel bed below, where it is held while it infiltrates into the soil. Depending on the permeability of the underlying soil, the gravel bed may be equipped with a perforated pipe to convey overflow.

The effectiveness of porous paving is reduced if the pore spaces become clogged with dirt or debris. Regular maintenance is required to vacuum out pore spaces. Consideration should be given to the type of runoff that will be reaching the porous paving. If an area receives silty runoff, for example, it may not be a suitable location for porous paving. Porous paving is appropriate for driveways, parking lanes, parking lots, sidewalks, and other low traffic applications.

Winter maintenance is important and while deicing materials such as road salt can be used, materials to reduce slipperiness, such as sand, will clog porous paving. Proper installation of the pavement is required to avoid damage from plows and porous paving should not be used in areas that require heavy duty pavement.

Sand Filtration

Sand filters are designed to remove pollutants from stormwater. Stormwater is directed to a sand bed with an underdrain. As stormwater moves through the filter, pollutants are treated by settling and absorbing into the sand bed. Sand filters are particularly effective at removing nutrients and total suspended solids, which are significant pollutants in stormwater.

Rain Barrels

Rain Barrels capture water from roofs. The water is stored and can be used by homeowners for gardening or other nonpotable uses. Rainwater should be used before the barrel overflows to ensure that the rain barrel is empty and ready to receive runoff from the next storm. Homeowners use rainwater instead of drinking water, reducing their water use and cost.

Rain barrels are low maintenance, however, they work best when owners are committed to maintaining them. Rain barrels have an overflow and need a place to divert overflow, such as a lawn or a rain garden, that is away from house foundations. Leaves and debris needs to be cleaned and rain barrels must be disconnected in winter.

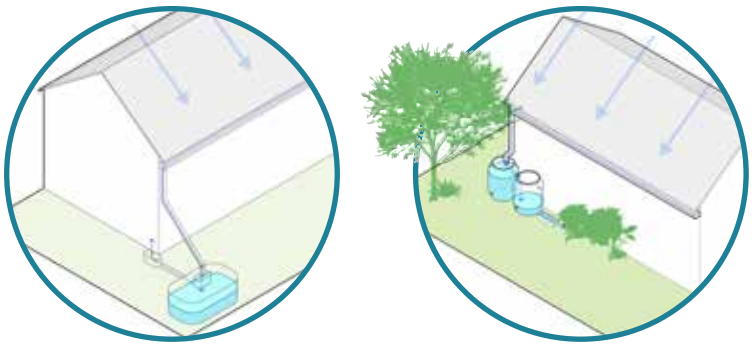
Cisterns

Rainwater cisterns are larger storage tanks for holding stormwater. These tanks can be either above or below grade. They collect stormwater from impervious surfaces, such as roofs and pavement, and store the water either for reuse for non-potable uses, such as irrigation or toilet flushing, or for slow release after wet weather has passed.

Downspout Disconnection

Roof downspouts are typically connected to the sewer system, contributing significantly to the volume of stormwater entering the system. Downspout disconnection is the process of separating roof downspouts from the sewer and redirecting roof runoff away from impervious surfaces to landscaped areas, most commonly a lawn, reducing the volume of stormwater entering the sewer system during wet weather. Directing stormwater to a vegetated area also helps to remove sediment and pollutants.

Figure 2.7: Porous paving next to bioswale along Living Place in Pittsburgh PA.

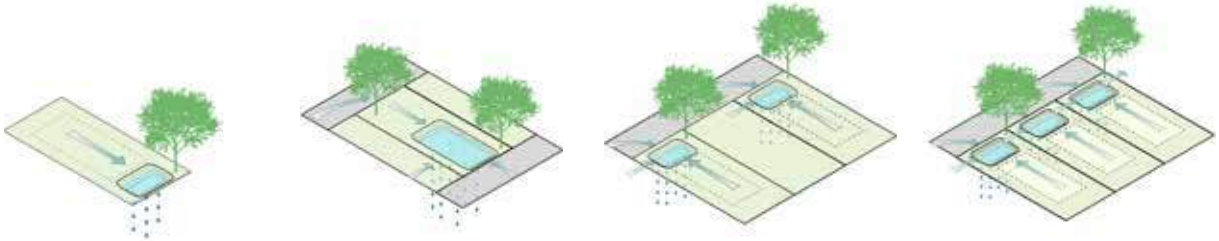


Source & Configuration

Source & Configuration describes how a system works. Planning & Decision-Making describes how it is implemented at scale.

Green infrastructure can either be stand alone or combined into systems at scale. These systems are arrayed along a continuum from the individual parcel to a network encompassing an entire CSO basin. The larger the scale of the system, the greater the quantity of stormwater that is managed, and the more effective it is at achieving green infrastructure compliance goals under the Long-Term Control Plan. Larger systems also have a greater ability to provide a broader array of benefits in addition to reducing stormwater, including equity, economic and environmental benefits, sometimes referred to as the triple bottom line. The triple bottom line benefits are discussed more later in this chapter.

Green Infrastructure Scale Continuum



PARCEL | AGGREGATED | DISTRIBUTED | NETWORKED

Figure 2.8: Stormwater planter in Buffalo.

Figure 2.9: Rain garden along Windsor Avenue.

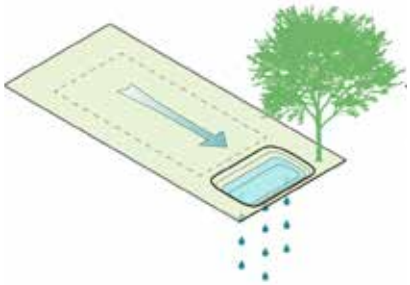
Figure 2.10: Porous paving alongside a bioswale.

Figure 2.11: Rain garden along Elmwood Avenue.

The configuration on any given parcel and how it connects into a larger green infrastructure system depends on factors such as available land, land use, and the cooperation of the property owner.

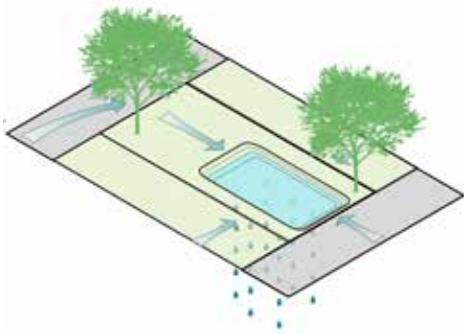
Parcel based / Single Source

The parcel level is the simplest type of configuration. In this case green infrastructure on a parcel is used to manage stormwater on that parcel. An example would be a roof downspout that flows into a rain garden. By managing water from impervious surfaces in the rain garden, a parcel-based approach helps to keep stormwater out of the sewers. The parcel is also the building block for other, more complex networks.



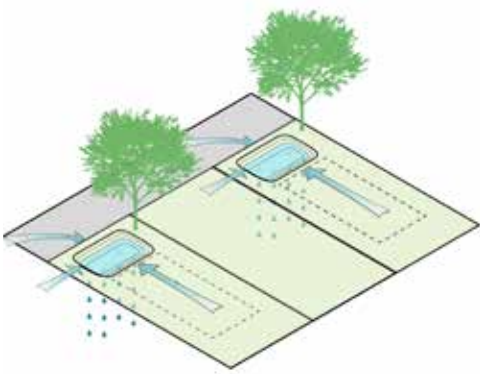
Aggregated / Multi-Source

An aggregated system uses green infrastructure to manage stormwater runoff from a variety of sources. A rain garden that manages roof and driveway runoff from multiple parcels is an example of an aggregated system. Aggregated systems may also involve a treatment train—where stormwater passes through multiple green infrastructure interventions. For example, porous pavement may be used in a driveway or parking lot to manage stormwater. If a rain garden were present on the same parcel, it would manage rainfall from larger events that is not able to be handled by the porous paving alone. By combining green infrastructure strategies, more stormwater is managed.



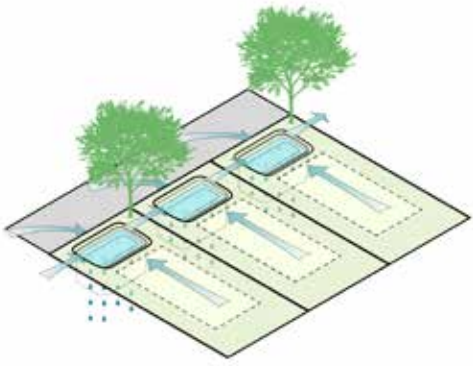
Distributed

A distributed system is where multiple aggregated systems are managing stormwater. Because there is more green infrastructure, more stormwater is being managed. While more effective than an aggregated system alone, a distributed system is smaller and less effective than a more networked system. A distributed system or systems can be a step toward a more networked system.



Networked / Multi-Part System

A networked system is the largest, most complex and ultimately the most effective network type at reducing the amount of stormwater entering the sewer system. A networked system combines distributed systems, increasing the treatment train. For example, a networked system might include a streetscape with a bioswale. The bioswale would manage stormwater from the roadway and convey it to a larger rain garden or wetland. That same bioswale could also pick up water that overflows from private parcels, or from aggregated or distributed systems, networking them together into a larger system. In addition to lengthening the treatment train and allowing more water to infiltrate into the ground or be absorbed by plants, a networked system also creates the highest amount of redundancy in the stormwater management system which allows water from larger storm events to be managed while increasing resiliency.

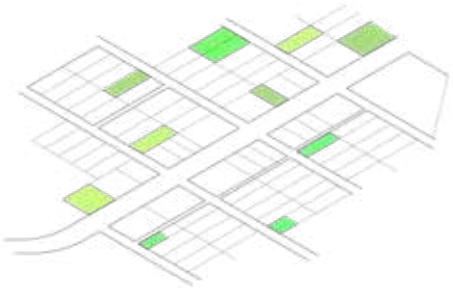


Planning & Decision-Making

To meet the scale of implementation needed to meet compliance goals, Buffalo can bring green infrastructure to scale with different distribution typologies.

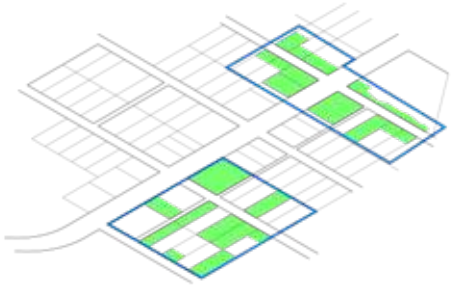
Green infrastructure can be deployed with an opportunistic approach that is typically distributed and parcel-based, responding to available opportunities. Green infrastructure can also be implemented with a strategic approach where that creates larger or more effective networks. Each typology has benefits and drawbacks.

Opportunistic sites are easier to implement and require less planning, but may come at the cost of being less effective at stormwater removal. Strategic approaches may require more time, planning, engineering, coordination among partners, and cost, but handle much larger quantities of stormwater. They also provide greater triple bottom line benefits. Strategic approaches may be based on physical proximity, or they may be more programmatic, focusing on a neighborhood or region or targeted by land use or ownership. The co-benefits of more networked approaches will be discussed in more detail later in this chapter.



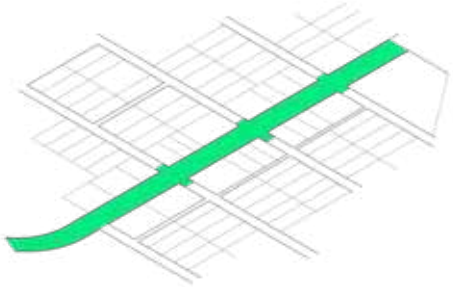
Opportunistic Sites

Green infrastructure is implemented on a parcel basis where there is an opportunity and a willing property owner. This approach is an important step in developing a larger more networked system. The approach is the simplest to implement, but has limited effectiveness in how much stormwater can be removed from the system.



Clusters

A clustered approach is where there are a number of opportunities in a common geographic location. A cluster could be a college campus, or group of institutions, an industrial park, or simply a series of green infrastructure opportunities close to one another. The power of clusters is that it allows for a more networked system, creates greater visibility for green infrastructure, and utilizes green infrastructure as a place-making opportunity.

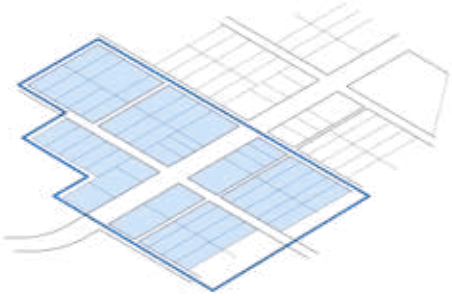


Corridors

Corridors are linearly connected systems of green infrastructure, typically within or along the public right of way. Corridor approaches can provide the armature for more networked systems. Green infrastructure in corridors also provides many other co-benefits, including traffic calming, reduction of urban heat island effect, improved walkability, and access to green space to city residents.

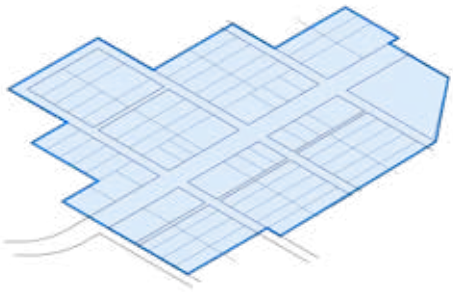
Neighborhoods

Neighborhood programs focus on systematically providing green infrastructure within a neighborhood. Neighborhood programs are most appropriate where there are strong community partners to implement the program. Neighborhood programs might include green streets and street trees along neighborhood commercial districts, working with homeowners to install rain barrels, building rain gardens, and disconnecting downspouts. Neighborhood programs can also provide other co-benefits such as workforce development and economic revitalization. Neighborhoods are also a traditional basis for planning and so planning at the neighborhood level will feel familiar to many partners.



Regional Systems

Regions are where multiple zones, neighborhoods, or clusters are aggregated and large-scale investments can be made to enable localized projects upstream. By working across larger regions, project scale can increase and greater levels of stormwater performance become possible. Regional systems could include larger planning projects or corridors. In the stormwater context, the most effective regional system will be one that encompasses the entire CSO basin and larger watershed.



Targeted Land Use or Ownership

Targeting a particular type of land use—such as parking lots—or a particular type of ownership—such as schools—can be a strategy for demonstrating green infrastructure, for building communities of action, and for providing benefits such as workforce training. Since similar land uses will have similar challenges and opportunities, targeting particular land uses can provide efficiencies and economies of scale with regard to planning and design. In addition, since land uses are often grouped together, targeting specific land uses also facilitates the creation of clusters, neighborhoods, and regional systems.

Programmatic Co-Benefits

Green infrastructure can help neighborhoods feel vibrant and livable with social, economic, and environmental benefits...while managing stormwater more effectively.

Corridors

Buffalo has very prominent avenues and streets. Green corridors and complete streets were envisioned by Olmsted in his plan for Buffalo. Green corridors can help connect neighborhoods, improve the viability of commercial districts, and create public-right-of-way systems that demonstrate green infrastructure viability to private landowners.

Corridors are an opportunity to integrate green infrastructure into complete street concepts. Complete streets integrate people and neighborhoods into the planning and design process for roadways that are safe, convenient, and comfortable for all users, including pedestrians, cyclists, and drivers. Complete streets improve walkability by creating person-scaled sidewalks. Green infrastructure's street trees, porous paving, rain gardens, and bioswales are part of the complete street design toolkit but require maintenance that the City does not have the capacity to provide. Buffalo Sewer will explore opportunities for shared maintenance responsibility with local community groups and landowners.

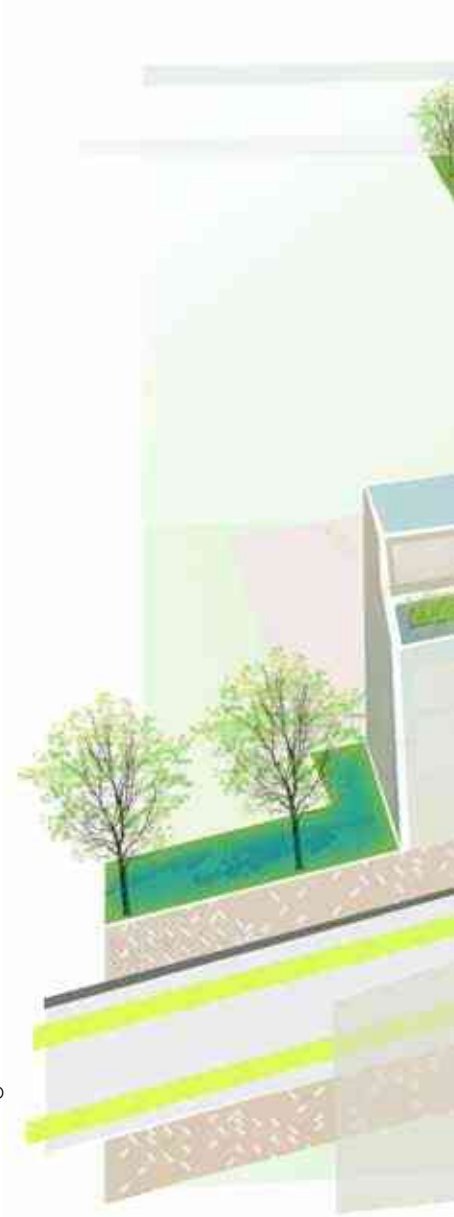
Commercial Property

Commercial properties have large impervious areas that contribute significant amounts of stormwater to the combined sewer system and contribute to urban heat island effect, including parking lots and rooftops. By incorporating green infrastructure technologies such as green roofs, rain gardens, porous paving and tree planting onto commercial properties, the quantity of stormwater runoff can be reduced.

Converting from traditional landscape maintenance to green infrastructure landscape maintenance requires some additional training but most commercial owners already have a maintenance regimen. Incorporating green infrastructure is essentially a modification of tasks already being performed and paid for, rather than entirely new tasks.

Parking Lots

Parking lots make up a large area of impervious pavement across Buffalo and are therefore major contributors of stormwater runoff to the combined sewer. By targeting parking lots for green infrastructure, the amount of stormwater entering the combined sewer system can be reduced. The addition of green infrastructure to parking lots can create "outdoor rooms," with trees and plants breaking up otherwise monotonous parking areas.



Green infrastructure can improve Buffalo's corridors:

- Improves walkability, can incorporate complete street infrastructure, and can help calm traffic.
- Reduces extreme microclimate conditions due to the urban heat island effect.
- Improves habitat connectivity and usable green space.

Green infrastructure can benefit commercial properties:

- Can serve as an amenity for building occupants and increase lease values.
- Creates natural habitat that improves aesthetics and increases property values.
- Improves the public realm when visible from the public right of way.

Green infrastructure can reshape barren parking lots:

- Saves energy for adjacent buildings as it reduces the urban heat island effect.
- Serves as a visual buffer that improves the appearance of parking lots.
- Creates more walkable streets and sidewalks and provides shade for people and vehicles.

Commercial Cluster

Institutional Property

Institutions, such as schools, churches and community centers, often have large properties where green infrastructure can be implemented. Like commercial properties, institutions typically have maintenance staff that could care for green infrastructure or procure professional services. In addition, they often have a civic or charitable mission and are good partners with the community. Their implementation of green infrastructure can influence others to adopt similar practices. Institutions can implement green infrastructure, such as porous paving, street trees, and rain gardens, on campuses or across a portfolio of buildings. Implementation can range in scale from parcel based to aggregated or distributed networks.

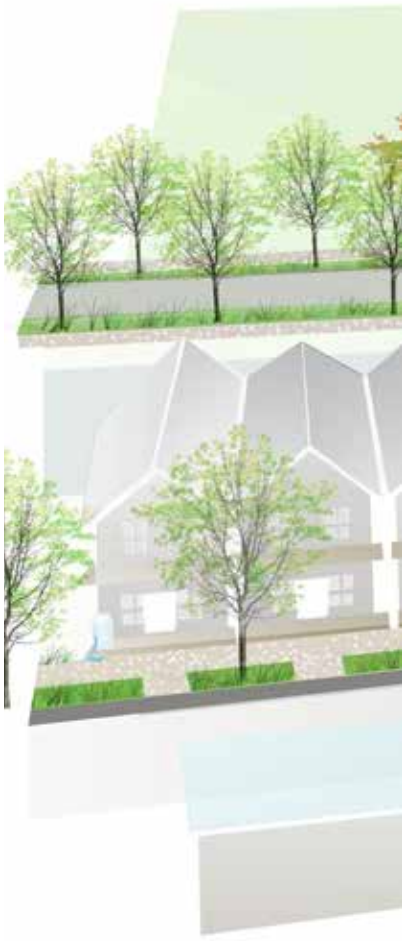
Parks & Open Space

Parks are important pieces of the urban fabric. They provide social benefits, such as access to green spaces for city residents and places for recreation and physical activity. They provide economic benefits by increasing adjacent property values. They provide environmental benefits, including habitat patches, that reduce air pollution and urban heat island effect. Parks are also highly visible and public and are often neighborhood destinations. While parks often already contain less impervious surface than other uses, their stormwater function can be enhanced through increased tree planting and the use of green infrastructure technologies, such as rain gardens and porous paving, to manage stormwater from impervious areas, such as paved playing courts, sidewalks, and parking areas. They can also be the end point for larger green infrastructure networks (for example, along corridors), providing potential sinks for stormwater.

Vacant Lots

Rain Check 1.0 addressed demolition of vacant properties and greening of vacant lots extensively. Vacant lots continue to be an important strategy as Rain Check moves into its next phase.

While vacant lots are often permeable, they can be modified to include green infrastructure and increase their effectiveness with rain gardens, tree plantings, and other practices. Green infrastructure on vacant lots needs to be protected or owned by individuals or entities who can maintain the green infrastructure. Vacant land can also be part of an aggregated stormwater network. For example, a vacant lot in a residential area could contain a rain garden that receives stormwater from disconnected downspouts from several adjacent properties. If the vacant lot is along a complete street corridor, it could be a receiving site for a larger networked public-right-of-way system.



Green infrastructure is aligned with **institutions:**

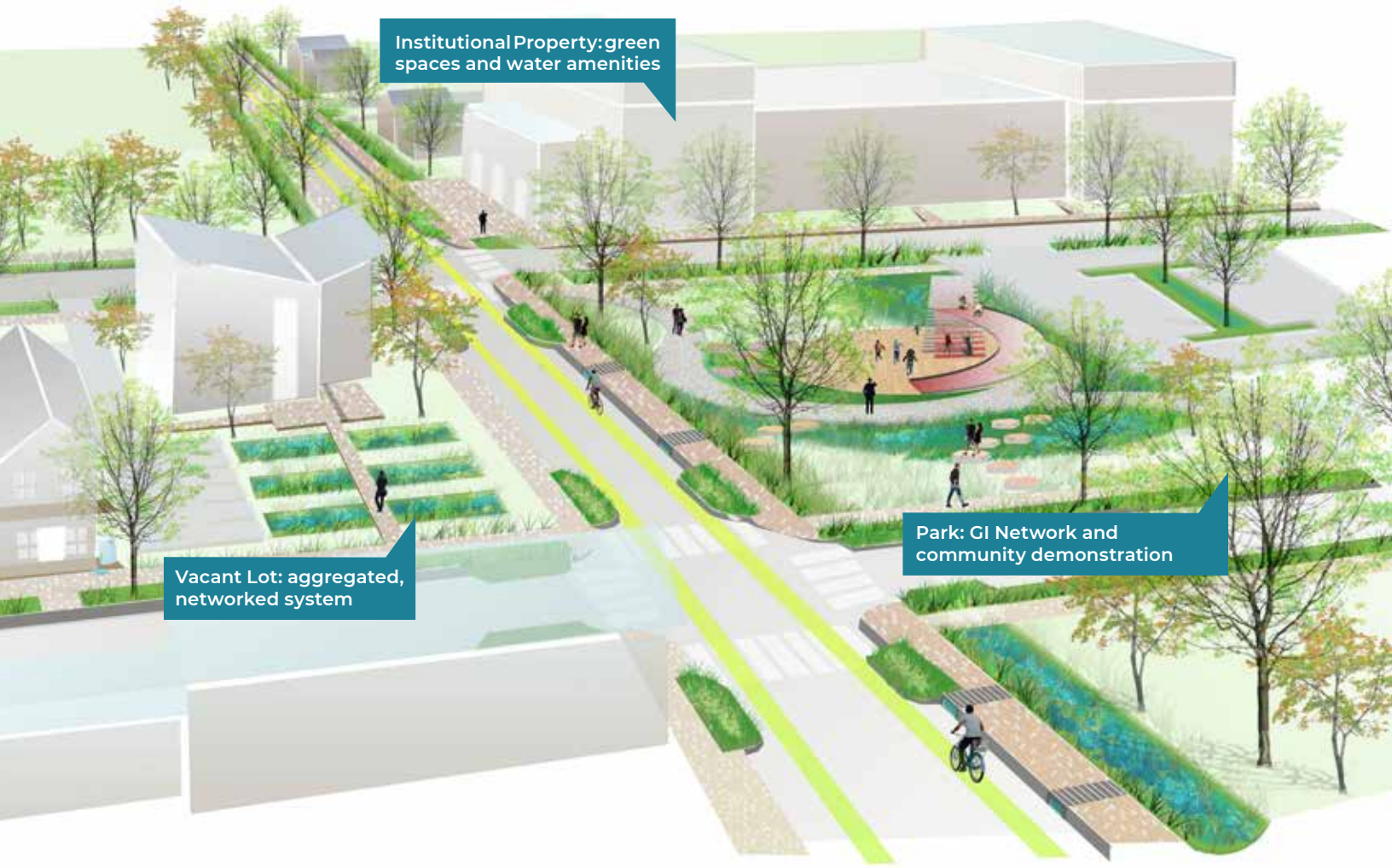
- Can provide workforce development opportunities or can align with other institutional missions.
- Can demonstrate best practices for other community members to adopt.
- Can be incorporated into existing planning, construction, and maintenance practices to ensure viability over time.

Green infrastructure can benefit **parks & open space:**

- Improves habitat, especially in highly urbanized parks.
- Can mitigate heat island effect and make more pleasant places, especially in areas of pavement such as courts and parking lots.
- Creates amenities for neighborhoods and provides opportunities for community care and participation.

Green infrastructure can reinvent Buffalo's **vacant lots by:**

- Decreasing blight.
- Functioning within a green infrastructure network.



Institutional Cluster

Review of Implementation Programs

To achieve the benefits and network efficiencies of green infrastructure, Buffalo Sewer will develop programs to support and promote implementation. Despite a recent surge in new development activity, the pace is insufficient for Buffalo Sewer to depend solely on new development stormwater regulations, such as the Green Code, for its green infrastructure compliance program.

Buffalo Sewer is required to manage runoff from 1,315 acres of impervious surfaces through green infrastructure as part of its combined sewer overflow LTCP. To date, the existing Green Infrastructure Program has focused primarily on streets, sidewalks, and other public property. Recognizing the logistical and cost challenges to meeting goals by focusing exclusively on public property, Buffalo Sewer is encouraging the installation of green infrastructure on private property. Landowners may have existing site maintenance programs that can readily incorporate green infrastructure sites and therefore implementation programs that focus on improving existing developments are key.

This section summarizes implementation programs deployed elsewhere, providing potential implementation models for Buffalo.

Typical Incentives for Green Infrastructure

Many communities, including Portland, Oregon and Howard County, Maryland, have enacted stormwater fees based on the impervious area on each property with higher fees associated with properties with larger impervious areas. Therefore, implementing green infrastructure decreases the impervious area, reducing the fee. The resulting stormwater fee discount would continue in subsequent years, if the total impervious area is retained at post-green infrastructure implementation levels. Buffalo Sewer does not currently have a stormwater fee, making this a more ambitious option.

Grant or rebate programs offer reimbursement of installation costs associated with green infrastructure implementation. Requirements for receiving the grant are dictated by the utility and may restrict funds to a certain type of project, a maximum grant amount, and require specific procedures to be followed for receipt of grant funding. Such funding may be issued in the form of a rebate once construction is finished and inspection verifies design goals are met. Examples of such programs include:

- Philadelphia's Stormwater Management Incentives and Greened Acre Retrofit Programs
- Syracuse's Green Improvement Fund, New York City's Green Infrastructure (Competitive) Grant Program
- Pittsburgh Water and Sewer Authority's Green Infrastructure Grant Program
- Allegheny County Sanitary Authority's Green Revitalization of our Waterways Program

Grant programs allow for equitable distribution and allocation of resources to those who have a demand for green infrastructure and provide a cost-effective way to meet stormwater goals.

Other incentive programs encourage developers to implement green infrastructure as they develop or redevelop projects. Such incentives can take the form of expedited permit application review processes, reduced permitting fees, zoning upgrades, and reduced stormwater requirements.

Other programs targeted towards developers also include payments in-lieu of a portion of the stormwater requirements and/or trading stormwater credits (i.e., where a project is implemented with more stormwater retention than required, the additional credit can be sold or traded to developers of more constrained sites).

Figure 2.12: Examples of green infrastructure from Pittsburgh and Buffalo.

Incentives for Implementing Green Infrastructure

Tax Credits
Some communities charge a stormwater fee as part of their sanitary sewer fees and/or property taxes based on the amount of impervious area on a given property. A credit is then extended to the property owner for the inclusion of green infrastructure technologies on the property that either captures and/or treats a given amount of flow. The amount of credit typically is determined by how much impervious area is removed or how much stormwater is captured using the green infrastructure technology.

Stormwater Permitting Fee Credits
Other incentive programs allow for a one-time reduction in stormwater fees paid during the project permitting process.

Rebates/Grants
Reimbursements may be made either during or upon completion of construction of a green infrastructure project for either the full or partial costs (design and construction). Some communities fund these programs from existing wastewater collection and/or treatment budgets, while others use the stormwater fees collected to provide such reimbursements.

New Development Incentives
Non-monetary incentives, which may include fast-track review of permit application, density and/or height bonuses, flexibility on setbacks, etc., may be offered to developers who would then apply those incentives to larger developments, such as multi-family or commercial/industrial/institutional developments.

Downspout Disconnection Program
Downspout disconnection programs encourage homeowners to have their downspouts disconnected and the standpipe to the sewer capped.

Credit Trading
When green infrastructure technologies implemented on-site do not offer sufficient incentives on their own to prove cost-effective, developers may choose to buy credits from other developers that may have excess credits from green infrastructure installations that provide more benefit than required at another site in the same watershed.

Watershed Improvement District
Watershed Improvement Districts (WID) are entities created by local government and landowners. The purpose of a WID is to address water needs, including stormwater, on a system-wide basis, in order to protect water quality and address drainage issues. The WID structures allows local government entities and property owners to collaborate on projects, generate funds needed for projects, and secure grants.

Tree Planting Program
Tree planting programs can include giving away trees, providing assistance with tree planting, or sharing long-term tree maintenance with citizens to expand the tree canopy throughout the City.

Examples of trading programs include Washington DC's stormwater retention credit (SRC) program, which allows a portion of the stormwater requirements to be met by purchasing privately traded SRC credits or paying an in-lieu of fee, and Chattanooga, Tennessee's program, which allows a portion of the stormwater requirements to be met with an in-lieu fee. In both programs, any rainfall retained on site in addition to the first inch can be sold as a credit to other developers working on sites where stormwater retention is more challenging.

Such programs can maximize green infrastructure on sites where implementation is easier and generate funds to encourage implementation by other property owners. This type of program requires significant participation from developers and land owners to be successful and Buffalo Sewer's pipe network is such that credits would need to be provided within a specific geographic area to impact CSO events associated with the particular site. This type of program would be challenging to implement in a timely manner and may not be feasible for the Buffalo market in order to meet LTCP goals.

Other programs offer non-monetary incentives in the form of recognition of the property owner, either formally or informally, in implementing "green" technologies. However, these programs are utilized less frequently than the monetary-based programs. Property owners within Buffalo Sewer's service area are not currently assessed a stormwater fee; the fee paid to Buffalo Sewer is currently based on assessed value of the property and not on impervious area. Therefore, there is no incentive under the existing fee structure to encourage green infrastructure implementation.

Grant or rebate programs seem most suitable for implementation in Buffalo. These offer direct incentives through reimbursement of installation costs associated with green infrastructure implementation. Buffalo Sewer is in the process of creating a green infrastructure grant program to encourage private partners and help realize additional co-benefits.

Programs to Encourage Tree Planting

The City of Buffalo is also researching other ways to encourage tree planting. A review of other programs nationwide highlighted some successful programs where government agencies or non-profit organizations work with citizens to encourage tree planting on private property, or better upkeep of trees planted on public lands. Some examples include giving away trees, providing assistance with tree planting, or sharing long-term tree maintenance with citizens. City of Buffalo Forestry does not currently have the capacity for a major tree planting program on streets, in parks, or within other public properties and Buffalo Sewer will explore alternative options for increasing the tree canopy throughout the City.

Programs for Residential Properties

While commercial properties typically generate larger quantities of stormwater runoff, residential properties also contain impervious surfaces that contribute runoff to the combined sewer system and programs targeted at residential properties can engage homeowners in addressing stormwater challenges.

In addition to tree planting programs that could benefit residential properties as well, downspout disconnection programs are another way to reduce stormwater runoff from residential properties. Downspout disconnection programs encourage homeowners to have their downspouts disconnected and the standpipe to the sewer capped. The disconnected downspout is directed either to a rain barrel or to a vegetated area such as a lawn, rain garden or other landscaped area. In addition to removing stormwater from the sewer system, downspout disconnection programs are a way

of making stormwater management visible and connecting residents to the environment. In addition to the stormwater benefit these programs are also important as part of larger outreach efforts. They provide the opportunity to partner with local organizations to do the work and can be part of workforce development programs as well.

Tree Canopy Crediting and Modeling

Trees provide a major benefit of reducing stormwater runoff, potentially reducing the volume and frequency of Combined Sewer Overflows. Although this benefit is widely accepted among the scientific community, the modeling that is used to estimate CSO volumes in the City of Buffalo currently does not have the granularity to consider the impact of tree planting on stormwater reduction. A panel of urban tree experts (the Tree Technical Advisory Committee), led by Buffalo Sewer, developed a system for estimating the stormwater benefit of urban trees over time. The system was developed using data about the typical trees planted in the City of Buffalo, along with a "water balance" model that accounts for the benefits of trees, including:

1. Intercepting runoff in leaves
2. Improving soil conditions to encourage soil infiltration, and
3. Increasing Evaporation and Transpiration, thus allowing more runoff to infiltrate the soil.

The resulting system equates each tree planted (or each area of tree canopy) with a volume of stormwater runoff reduction. One advantage of this system, is that it accounts for specific traits of trees, such as the age, type of tree and where it is planted.

As a next step, this system can be used to track and estimate the benefits of trees over time, with the goal of integrating trees into Buffalo Sewer's stormwater modeling in the future. Some next steps will involve determining the specific techniques to represent trees within the City's model. Some techniques might include:

1. Reflecting a tree as reducing impervious cover (using the crediting system);
2. Treating trees similar to green infrastructure practices, that reduce the volume of stormwater; or
3. Treating trees as stormwater storage throughout the landscape.

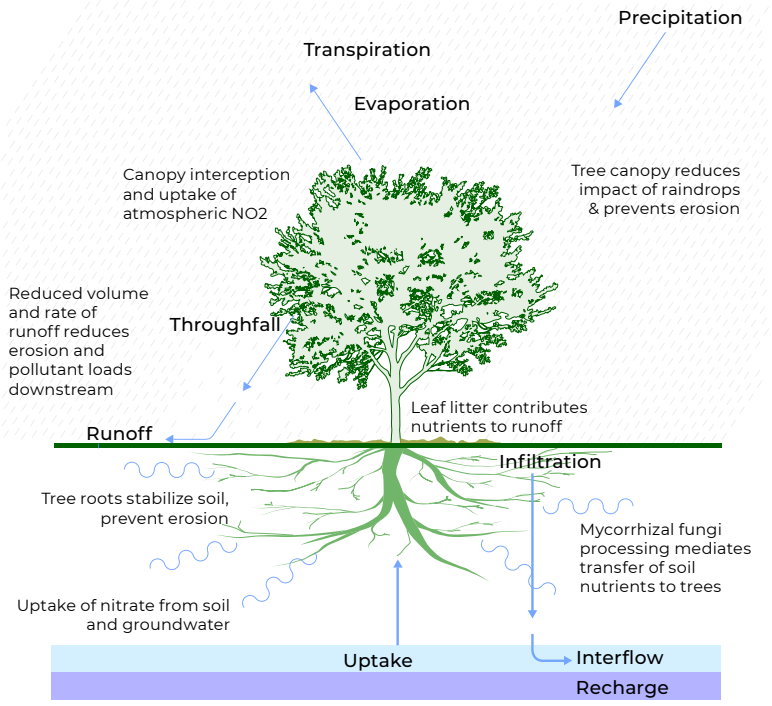


Figure 2.13: Trees reduce the volume and rate of stormwater runoff, which reduces the amount of stormwater and pollutants entering the sewer system

THREE

PEOPLE

People are central to solving Buffalo's stormwater challenge. Buffalo Sewer is creating a green culture to support, advocate for, and implement green infrastructure.

This chapter describes how community partners can help solve Buffalo's stormwater challenge.

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BUILDING A GREEN CULTURE

Buffalo Sewer Learning & Leadership

Buffalo Sewer's leadership begins with strong internal expertise in green infrastructure

Buffalo Sewer continues to be a leader in green infrastructure and is committed to building a culture that supports green investment throughout the City. While green infrastructure is becoming a well established set of technologies, very few agencies have deployed green infrastructure techniques across large regions to reduce stormwater runoff.

Buffalo Sewer has taken a number of steps to build sustainable institutional knowledge, including:

- The establishment of Technical Advisory Committees.
- The design and construction of innovative green infrastructure projects.
- Collaboration with University of Buffalo researchers on a range of systems analysis projects.
- Regular discussion of best practices and lessons learned with the Green Infrastructure Leadership Exchange, an organization comprised of green infrastructure practitioners from municipalities across the country.

These initiatives are designed to build knowledge, establish best practices, and create a systemic understanding of green infrastructure so that Buffalo Sewer can implement green infrastructure to be more environmentally sensitive and equitable.

Buffalo Sewer's Technical Advisory Committee

Buffalo Sewer convened a Technical Advisory Committee (TAC) to advise on best practices and help build a community of action around green infrastructure. The TAC included technical experts from government agencies, academia, community organizations, and local practitioners. The TAC members brought with them a wide range of knowledge and experience. Through regular meetings and focused topic discussions they helped translate national practices to the Buffalo context.

The TAC had three overall goals:

- Identify and provide guidance on technical issues related to green infrastructure.
- Identify opportunities and considerations for green infrastructure

Figure 3.1: Buffalo Sewer Waterworx Pop-Up Park.

given the current state of knowledge and best practices surrounding the planning, design, construction, maintenance, and monitoring of green infrastructure.
- Provide recommendations for implementation of green infrastructure.

The primary role of TAC members was to participate in 6 monthly meetings and have discussions between meetings as part of Buffalo Sewer's green infrastructure work. Members provided input to Buffalo Sewer based on their review of technical materials.

A summary of content for each meeting follows:

- **Meeting 1:** Kickoff Meeting - Project Background, TAC overview, Scope discussion for green infrastructure site selection and site investigation work.
- **Meeting 2:** Technical Issues - Site Constraints and Stormwater Soils.
- **Meeting 3:** Technical Issues – Vegetation and Changing Climate Considerations.
- **Meeting 4:** Opportunities Outside the Public Right of Way and Delivery of Green Infrastructure Programs.
- **Meeting 5:** Community Support/ Community Awareness and Green Infrastructure Maintenance.
- **Meeting 6:** Draft Opportunity Report and Next Steps.

The outcomes of each meeting were summarized with technical issues and recommendations prepared. These recommendations have informed the findings of this report.

Innovative Projects

In addition to gathering experts and consolidating knowledge around green infrastructure, Buffalo Sewer is generating knowledge through the implementation of every project. The innovative projects Buffalo Sewer has completed so far have validated green infrastructure technologies and provided on the ground experience unique to Buffalo. For these projects, Buffalo Sewer examines the whole process including design, construction, and long-term performance. This establishes baseline knowledge and validates assumptions for larger scale planning. Buffalo Sewer has implemented a number of green infrastructure projects including:

- 9 miles of green streets in 17 different projects
- 6 green parking lots
- 224 green post-demolition sites
- Over 1,300 rain barrels

Buffalo Sewer was also the first sewer utility in the country to receive credit for demolitions within their LTCP. Building on the green infrastructure projects already completed by Buffalo Sewer, this report identifies opportunities to increase the scale and scope of green infrastructure implementation in the six priority CSO basins..

Figure 3.2: Green post-demolition for enhanced stormwater performance

Figure 3.3: Green Street Case Study at Ohio Street.

Figure 3.4: Buffalo Sewer WaterWorx Pop-Up Park.

Figure 3.5: Rain Check Opportunity Meeting.

Expert Collaboration

In addition to internal TACs, Buffalo Sewer engages external thought leaders and supports external green infrastructure knowledge building through expert collaborations. Buffalo Sewer is in regular collaboration with University of Buffalo researchers on a range of systems analysis projects and hosts the Research and Education in eNergy, Environment and Water (RENEW) fellowship program. Regular discussion of best practices and lessons learned also occur through the Green Infrastructure Leadership Exchange, an organization comprised of green infrastructure directors from municipalities across the country. Some experts that Buffalo Sewer has worked with in the past include:

- United States Geological Survey (USGS)
- University at Buffalo
- U.S. Environmental Protection Agency (EPA)
- US Army Corps of Engineers
- New York State Department of Environmental Conservation (NYSDEC)

BUILDING A GREEN CULTURE

Creating Communities of Action

Buffalo Sewer will need to build "communities of action," or groups of partners and projects that can implement green infrastructure to meet Buffalo Sewer's stormwater management goals. For example, in early green infrastructure work, Buffalo Sewer was able to work with the City of Buffalo and community groups to create green infrastructure installations on vacant land. By identifying a replicable opportunity, (green infrastructure on vacant land), a key partner (the City of Buffalo), and advocates (community members and neighborhood groups), Buffalo Sewer was able to implement green infrastructure on more than 200 sites. Getting to scale with multiple installations allows Buffalo Sewer and its partners to streamline project administration and can ultimately contribute to the longevity of the installations.

The Challenge of Incentives

Economic benefit is a major motivator for parties to implement green infrastructure. Stormwater fees are assessed in many cities to fund investment in stormwater green infrastructure and property owners may be motivated to implement green infrastructure to avoid fees. Other communities offer incentives to implement green infrastructure. Buffalo does not have a stormwater fee and has only limited incentive funds. Buffalo will need to rely on broader collective action that may be catalyzed by key investments but cannot be fully realized by Buffalo Sewer's efforts alone.

Encourage Voluntary Green Infrastructure

A variety of strategies can be employed to encourage property owners and communities to implement green infrastructure on a voluntary basis. These strategies include:

- Encourage recognition and praise for green infrastructure projects with awards and media attention.
- Establish financial incentives with a grant program.
- Create resources for designers and developers by publishing standards, guidelines, and details to make it easy to incorporate green infrastructure into projects.
- Establish design and planning competitions.
- Create scholarships or awards for green infrastructure related thesis, dissertations, or research projects.

Fostering a Green Infrastructure Knowledge Base and Skilled Workforce

The more knowledgeable the workforce is about green infrastructure implementation, maintenance, and function, the more successful green infrastructure will be. Specifically, Buffalo Sewer is committed to working on the following:

- Training Buffalo Sewer staff and seasonal workers on green infrastructure with the National Green Infrastructure Certification Program (NGICP), which provides the base-level skill set needed to properly construct, inspect, and maintain green stormwater infrastructure.

Figure 3.6: Community Visioning Walk in Buffalo.

- Creating a scholarship program for NGICP training for City of Buffalo residents.
- Incorporating green infrastructure into K-12 public school curricula and programs.
- Developing demonstration sites at schools.
- Hosting field trips for school children to green infrastructure sites.
- Regularly hosting Mayor's Summer Youth internships for high school students.
- Hosting undergraduate interns and graduate student interns.
- Supporting organizations involved in green infrastructure workforce development.
- Providing tuition assistance to Buffalo Sewer staff.
- Creating a water-based curriculum with associates degree granting institutions.
- Supporting Buffalo Sewer staff with professional development classes and training around green infrastructure and other associated skills.
- Providing a career ladder for workers so they have the potential to develop from seasonal temporary laborers to designers or engineers.
- Creating summer-long youth programs in partnership with community organizations, such as the Waterworx program that was conducted in partnership with the Community Action Organization, to expose children to green infrastructure and green-infrastructure-related career options from a young age.

Focus on Community & Economic Benefits of Green Infrastructure

Green infrastructure can also provide significant economic and workforce benefit to Buffalo. Based on economic analyses conducted as part of Rain Check 2.0, every $1 invested in green infrastructure investment in Buffalo generates $1.52 in benefit to Buffalo's economy. Also jobs in the green infrastructure sector have a higher median hourly income – $23.04 – than median hourly wage for the Buffalo metropolitan area ($17.77). The complete analysis can be found in Appendix D.

Figure 3.7: Buffalo Sewer employee and community member discussing rain barrel installation at community outreach event.

Figure 3.8: Buffalo Sewer and Community Action Organization of WNY Pop Up Park event.

Buffalo Sewer does not have stormwater fees or incentives to encourage green infrastructure on existing properties. Thus, Buffalo sewer is exploring other strategies for encouraging private property owners to implement green infrastructure. Some possible groups for joint implementation or collaborative partnership include:

Community Organizations

In some cases, Buffalo Sewer is able to "piggyback" onto existing community improvement projects spearheaded by local groups, to provide additional benefit in the form of green infrastructure. As an example, a community group may be developing new parkland areas, and Buffalo Sewer can contribute funding that would cover the incremental cost of implementing green infrastructure technologies over traditional non-stormwater-based design.

Municipal Properties

Public property owners have a portfolio of properties that are likely centrally administered, have a similar land use or physical characteristics, and may have common maintenance requirements. In addition, municipal properties provide public benefit, ensuring that the investment creates common good.

Portfolio Properties

There are many owners who have a portfolio of similar properties and who could more easily implement green infrastructure across a building type or project type. These include commercial developers, such as retail property owners, as well as institutional owners who manage campuses of medical or educational buildings. They likely have significant existing land management responsibilities where green infrastructure maintenance could be absorbed.

Figure 3.9: Educating the next generation of green infrastructure practitioners at Buffalo Sewer Waterworx event.

Proximate Properties

Studies have shown that people are more likely to take action if they see others doing similar things and that investment can inspire additional investment. In this case, being near each other allows for green infrastructure installations to be visible and become part of a community identity.

Properties that are near each other can be optimized to function as a network, or can have shared administration or maintenance. These properties might be within a geographic boundary such as a neighborhood or be part of a common resource, such as a commercial corridor.

Properties with Similar Land Use

Properties that have a similar land use, such as churches or "big box" retailers may be interested in programs, incentives, and information sharing aimed to meet their specific needs. For example, most large retailers will have similar green infrastructure opportunities such as roof and parking lot installations. They may benefit from shared educational opportunities, incentive programs, and general community cohesion.

Properties Seeking Perceived Market Advantage

Increasingly, sustainability is becoming important to market advantage in real estate. This is one of the premises behind sustainability rating systems, such as ENVISION, LEED and SITES. In certain types of industries (for example high-tech fields) a highly sustainable development is seen as conferring a market advantage. Sustainability, particularly when it is visible and attractive, can make a property more attractive to prospective tenants or buyers and command higher rents. This may also be an incentive for developers to choose to implement green infrastructure.

Figure 3.10: Buffalo Sewer and Community Action Organization of WNY Pop Up Park event.

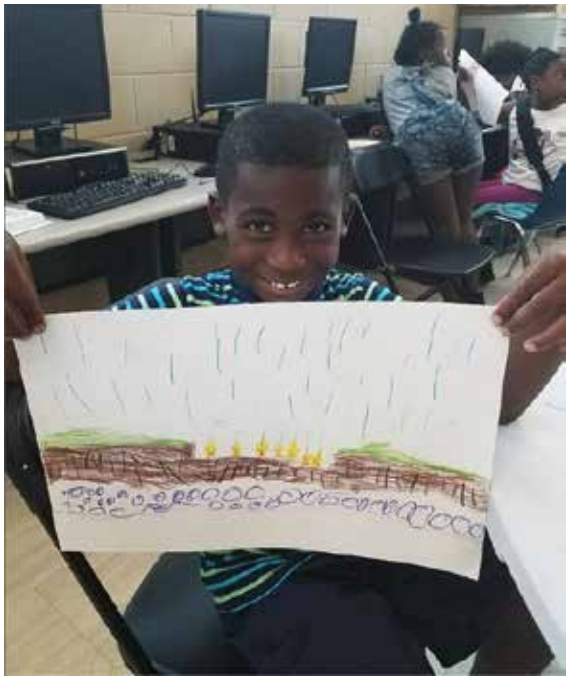


Figure 3.11: Student at Buffalo Sewer Waterworx shows off his rain garden drawing.

BUILDING A GREEN CULTURE

Workforce Development

Workforce development is an important strategy in implementing green infrastructure in Buffalo and improving opportunities for City of Buffalo residents. In order for Buffalo to successfully implement green infrastructure projects, Buffalo needs a skilled workforce to construct and maintain these systems. Buffalo Sewer is committed to creating a pool of such skilled workers who can earn a good living working on green infrastructure.

Buffalo Sewer has taken a number of steps toward achieving this goal. Buffalo Sewer has enhanced its connection to schools and summer programs for children to encourage them to think about possible green infrastructure career paths and build a broader knowledge of green infrastructure. By creating internships, fellowships, and research opportunities, Buffalo Sewer is helping to create knowledge hubs, a trained workforce, and greater opportunity for city residents.

Buffalo Sewer will be hosting training through the National Green Infrastructure Certification Program (NGICP) for Buffalo Sewer staff. NGICP training will also be available to city residents to provide skills and training to communities that may not have many opportunities for career advancement, including those with only a high school diploma/GED.

The NGICP certification training offers the green workforce an opportunity to adhere to a nationally recognized standard that promotes exceptional job knowledge, skills, and abilities to build, inspect, and maintain green infrastructure systems. NGICP certification also enables employers to ensure that they are hiring qualified workers. Having certified individuals on staff demonstrates to those looking to install green infrastructure on their properties that a contractor has the relevant experience and skills to properly install these systems.

NGICP certification offers a training pathway for workers to access skills, contractors to find the most skilled individuals to hire, and property owners to know that those installing and maintaining their systems have the necessary skills to complete the work. Training Buffalo residents for these jobs also helps ensure that the dollars spent on green infrastructure stay in the City and its economy.

The only experienced and certified NGICP professionals in New York State are located in the City of Buffalo. Buffalo is also home to 1 of 21 NGICP trainers in the entire country. Buffalo Sewer is committed to developing the most skilled and knowledgeable individuals in the field of green infrastructure and hopes to expand the number of people in the region certified and trained in green infrastructure. Buffalo Sewer will continue partnerships with organizations that conduct workforce training, such as PUSH Buffalo and Groundwork Buffalo.

Figure 3.12: Workers installing a rain garden facility at JFK community center.

Working Collaboratively

Buffalo Sewer is committed to collaborating with property owners, organizations, and individuals across the City, ranging from homeowners to large institutions. Engagement with stakeholders throughout the process will lead to better projects, open more implementation possibilities, and allow more neighborhoods to benefit.

Finding Partners

Implementing green infrastructure in Buffalo will require partnerships on many levels — local government, community organizations, national organizations, and the private sector. Through series of meetings in 2018, Buffalo Sewer focused on publicizing its green infrastructure efforts in the City, future work and collaboration, and the challenges in implementing a large scale green infrastructure program.

Buffalo Sewer can support the vision and goals of other institutions and organizations by offering technical assistance, logistical support, data sharing, potential funding, co-applications for other grant applications, and shared outreach events with individuals and organizations interested in collaborating with Buffalo Sewer on implementation of green infrastructure.

Throughout the Rain Check program Buffalo Sewer has been coordinating with local government departments and agencies. The Buffalo Green Code emphasizes that landscape, parking and street design must go hand-in-hand with stormwater management and watershed protection efforts to be effective. Collaboration with local government is a key value and approach for Buffalo Sewer and is critical to implementing the LTCP and building a green culture.

Potential partnerships with **local government agencies** include:

- Buffalo Department of Public Works
- Buffalo Employment and Training Center
- Buffalo Municipal Housing Authority
- Buffalo Public Schools
- Buffalo Urban Development Corporation
- Buffalo Urban Renewal Agency
- City of Buffalo Permits and Inspections

Figure 3.13: Buffalo Sewer Community Meeting.

- City of Buffalo Mayor's Office of Strategic Planning
- Empire State Development
- Erie County Environment and Planning
- Niagara Frontier Transportation Authority

In addition to local government, Buffalo Sewer is interested in partnering with local organizations and community groups. In addition to implementing green infrastructure projects, these partnerships can also further Buffalo Sewer's equity goals through workforce development and training programs. Potential partnerships with **local organizations** include:

- Buffalo and Erie Niagara Land Improvement Corporation
- Buffalo Green Fund
- Buffalo Niagara Waterkeeper
- City of Buffalo Block Clubs and neighborhood associations
- Clean Air Coalition
- Community Action Organization of WNY
- Community Foundation for Greater Buffalo
- Garden Walk Buffalo
- Grassroots Gardens
- GroundWork Buffalo
- GrowWNY
- Native Plants Working Group
- Olmsted Parks Conservancy
- PUSH Buffalo
- Western New York Land Conservancy
- Western New York Stormwater Coalition

Potential partnerships with **national organizations** with similar missions, include:

- Center for Neighborhood Technology
- The Nature Conservancy
- Trust for Public Land

Figure 3.14: Demonstrating porous asphalt on Clarendon.

Figure 3.15: Rain Check rain barrel being installed at a residential property..

Finally, many projects will need to be implemented by private property owners. Partners were identified in the **private sector**, including:

- Institutional or nonprofit land owners
- Design professionals
- Commercial property owners
- Developers
- Business trade groups

Property owners also play an important role in making green infrastructure a success by maintaining installations on or near their property. Meetings were held in 2018 to educate private developers on easily implementable, cost-effective green infrastructure measures that also comply with the Buffalo Green Code.

As planning and implementation progresses, Buffalo Sewer will continue to reach out to developers, businesses, organizations, institutions, and large property owners to identify more partners and expand green infrastructure opportunities. This engagement will ensure green infrastructure designs are responsive to the needs of all local partners and will foster a willingness for maintenance and support.

Buffalo Sewer can offer technical assistance, logistical support and potentially funding to individuals and organizations interested in collaborating with Buffalo Sewer to implement green infrastructure.

Figure 3.16: Team installing green infrastructure at the Crane Library.

Figure 3.17: Buffalo Sewer and Community Action Organization of WNY Pop Up Park event.

COMMUNICATION & ENGAGEMENT TOOLS

Communication Materials

Buffalo Sewer is committed to partnering with local government agencies and departments as well as collaborating with partners across the City and from many types of groups and organizations. Green infrastructure is a new part of the Buffalo landscape and it is important for Buffalo Sewer to share how green infrastructure works and how it contributes to improving the performance of the sewer system and water quality.

Buffalo Sewer has been working to develop a robust set of educational tools and knowledge sharing platforms to communicate green infrastructure benefits.

Rain Check 1.0

The Rain Check 1.0 report described the stormwater challenge, the unique role green infrastructure plays in addressing it, Buffalo Sewer's work, and Buffalo Sewer's plan to take green infrastructure to the next level. Rain Check 1.0 focused on green streets, green parking lots, green demolition and vacant lot restoration, and rain barrels and downspout disconnection. The report is a valuable tool for engaging and educating the public around the stormwater challenge.

Rain Check 2.0

Building on Rain Check 1.0, this report is an engagement tool for the next set of projects in the Rain Check program. This report communicates the descriptive characteristics and contexts of the priority areas, possible approaches to implementation, and equity implications, as well as provide locations and strategies of potential opportunities for green infrastructure.

Educational Materials

Buffalo Sewer is developing tools and techniques to deliver green infrastructure content to audiences both inside and outside Buffalo Sewer.

In seeking to expand the scale and diversity of green infrastructure planning in Buffalo, Buffalo Sewer will need to meet with many partners to spread the word on how green infrastructure is a positive investment that will benefit individuals and the community. This will mean holding additional one-on-one meetings with potential partners, having open community meetings, and providing resources for private citizens to learn on their own. In order to reach diverse audiences in many different forums the Rain Check project has prepared a series of strong, clear, and easy to understand materials that provide the core of Buffalo Sewer's educational material. These materials are briefly described here.

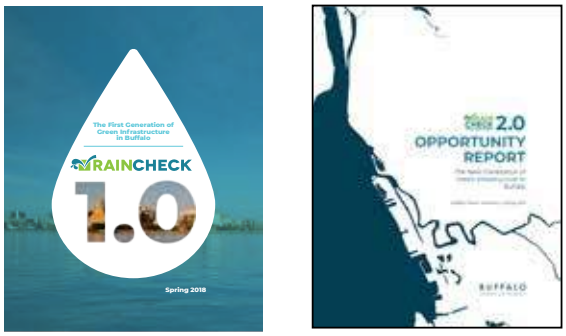


Figure 3.18: Rain Check 1.0 and Rain Check 2.0 Opportunity Report.

Figure 3.19:Rain Check Palm Card.

Figure 3.20: One Page Handouts.

Figure 3.21: Screen Shot of the Online Tour.

Figure 3.22 Buffalo Sewer Waterworx session using demonstration game

Signage will accompany Buffalo Sewer green infrastructure projects. These signs will be installed at the site of any new green infrastructure and provide descriptions of how the green infrastructure works and some of the installation's environmental benefits. These help residents to understand why these new landscape elements have been installed and their value to the environment.

Palm Card This tool can be utilized in tabling events and can be left with groups after in-person meetings. It directs people to the Rain Check website to discover green opportunities and learn more about green infrastructure.

One Page Partnership Handouts can be used in conjunction with the palm card and presentation for groups that have interest in partnering with Buffalo Sewer to take green infrastructure to the next level. The tool describes the Rain Check 2.0 project, the desire of Buffalo Sewer to partner with developers, businesses, churches, and large property owners to explore green infrastructure opportunities, and shows examples of how green infrastructure can be incorporated into different kinds of spaces. It also directs people to the Rain Check website to learn more.

Green Infrastructure Online tour offers highlights from Buffalo's first generation of Rain Check to show a number of green infrastructure projects on roadways, parking lots and vacant lots across Buffalo.

Demonstration Games can be used at in-person meetings. These kits have proved highly effective at demonstrating the stormwater challenge and how green infrastructure can be part of the solution by allowing users to play with different types of green infrastructure and see how they might manage stormwater on a city street.

Website

During the Rain Check 2.0 process a **Website** was created and raincheckbuffalo.org is home to a wide range of materials including easy-to-understand articles, interactive content, and a catalogue of Buffalo Sewer's Completed projects. These have been developed such that they can be used privately by visitors to the site and by Buffalo Sewer staff in meetings with a wide range of forums. The website includes education resources about green infrastructure and the Rain Check 2.0 program.

Green Opportunities – under this section there are three pages to introduce people to the Rain Check program and partnership opportunities with Buffalo Sewer. They also give people ideas for everyday actions that they can take to improve the local environment.

Learning – these pages provide a range of educational pieces and people interested in learning more about green infrastructure and Rain Check should be directed to these pages.

Green Infrastructure Tools – this page includes descriptions of the various green infrastructure tools available.

Our Stormwater Challenge – this page describes the stormwater challenge and why Buffalo needs to find ways to address it.

How Green Infrastructure Works – this page describes how green infrastructure works and can be part of the stormwater solution.

Benefits of Green Infrastructure – this page lays out the benefits of green infrastructure including cost savings, investment in neighborhoods, greening and beautifying neighborhoods, improving safety and public health, and creating jobs.

Green Infrastructure in Buffalo – this page describes how green infrastructure has been implemented in Buffalo, including an online tour, a link to the Rain Check 1.0 report, and a link to the Long Term Control Plan.

Figure 3.23: One of the Rain Check Website's resources pages.

Figure 3.24: Rain Check Website Splash Page.

Engagement Best Practices

Buffalo Sewer is committed to collaborating with partners across the City and across many types of groups and organizations. Public outreach by Buffalo Sewer should be a team effort in partnership with other local government agencies and departments. As Buffalo Sewer leverages these communication tools to advance implementation of Rain Check 2.0, it will be critical to build on the lessons learned through the first generation of Buffalo green infrastructure programs. In order to make decisions and install projects that can minimize harm and promote benefits to marginalized communities, Buffalo Sewer and its partners will prioritize engagement that leads to building relationships and building trust with communities, especially communities that have been historically underserved.

Figure 3.25: Community engagement on William Street.

Principles of Successful Engagement

Highlighted in the Rain Check 1.0 report, key lessons for leveraging communication tools are as follows:

Tailor engagement approaches to meet the needs of diverse communities. Buffalo is made up of many different neighborhoods shaped by diverse cultures and histories. Engagement approaches must respect this diversity and find ways to make green infrastructure concepts relatable. This includes presenting materials in several different formats and tailoring materials to reflect the specific population, languages, buildings, institutions, landscapes, and climate of the project location.

Engage individual property owners. Property owners play an important role in making green infrastructure a success, as they can act as stewards to maintain installations on or adjacent to their property. As Buffalo Sewer broadens its range of projects and the areas of the City where it is installing green infrastructure, it will need to continue to bring individual property owners into the process early, and secure their support and commitment over the long run. To the extent that Buffalo Sewer will rely on private property owners, large businesses, or major institutions to install and maintain green infrastructure, it may be challenging to promote green infrastructure in areas where residents are less likely to own their own properties, live on smaller properties with less available space for green infrastructure installation, or lack the financial resources to feel confident about long-term maintenance of the green infrastructure installations. Communities with these challenges could be targeted for additional support.

Leverage green infrastructure as a visioning tool that can help shape the future of communities. Green infrastructure can be a tool to shape the physical environment residents and stakeholders envision for their community. Implementation of Rain Check 2.0 can greatly benefit from partnering with community groups and neighborhood-level planning efforts. Communication materials can help position green infrastructure as a tool to advance neighborhood goals and aspirations.

Build "Champions" for green infrastructure in neighborhoods across the City. Neighborhood-level stakeholders play an important role

in connecting community members to public engagement processes, while opening doors to a range of audiences — property owners, tenants, customers, community institutions and their members, neighborhood or block clubs and business organizations, real estate professionals, and/or regional, issue-focused organizations. Buffalo Sewer will continue to explore opportunities to identify and empower community champions or local ambassadors for green infrastructure.

Build Trust through transparency, creation of a technical resource committee, public awareness campaign, clear, open and honest communication, and prompt, courteous, and respectful customer service. This work requires sustained investments of time, energy, and resources into building relationships and building trust with communities, interaction by interaction, meeting by meeting, project by project.

Listen First to the goals and aspirations of partners, stakeholders, and the community. Buffalo Sewer recognizes that engaging the community must be a conversation and is committed to listening first to the community vision. Only then can Buffalo Sewer understand how its green infrastructure work can support that community vision.

Figure 3.26: Buffalo Sewer lending a hand at a Pop Up Park event.

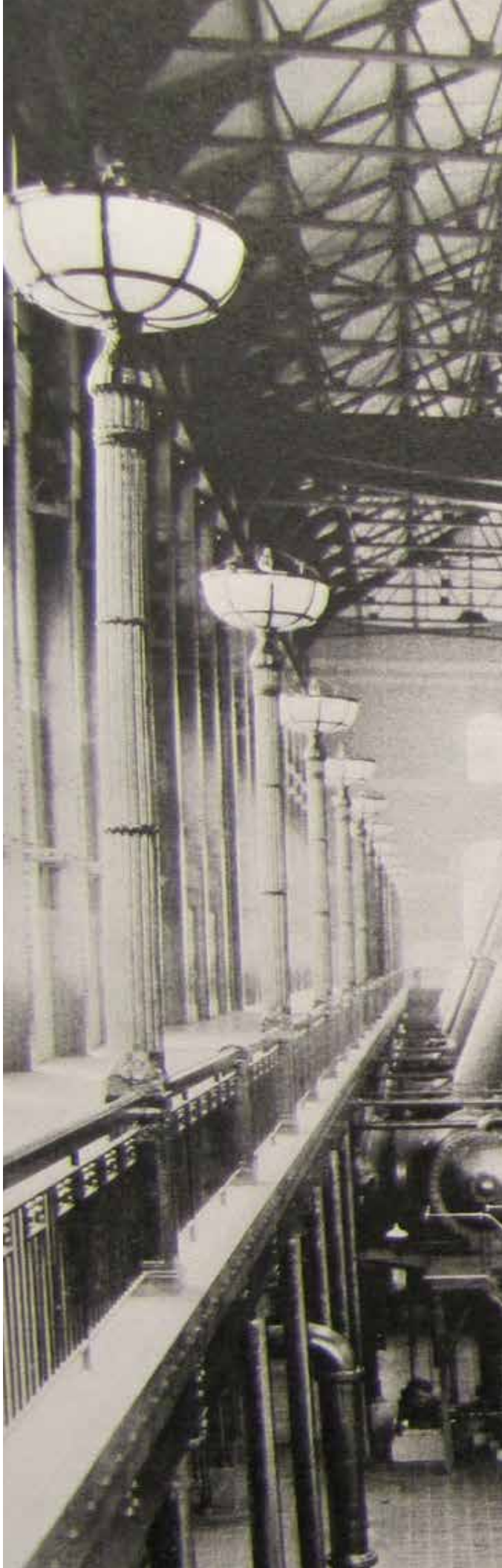
Figure 3.27: Students at Buffalo Sewer Waterworx show off their rain garden drawings.

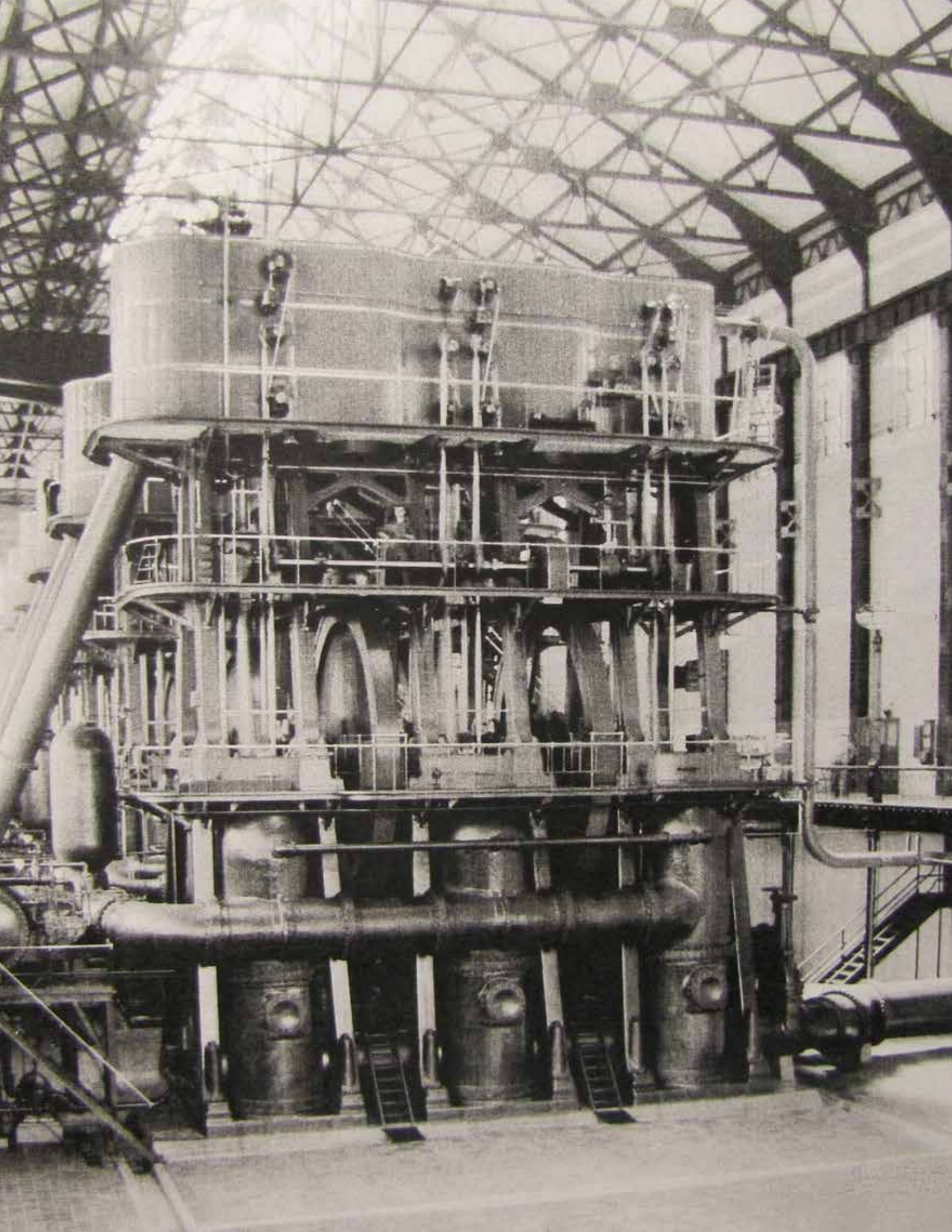
FOUR
METHODS

Successful implementation of green infrastructure requires a deep understanding of conditions on the ground in the priority CSO basins.

This chapter describes the work Buffalo Sewer conducted and the methods used for the analyses that form the basis of this report.

206 **CONTEXT: Rain Check 1.0 and 2.0**
207 **Retrofit Reconnaissance Inventory**
209 **Tree Canopy Analysis**
211 **Equity Analysis**
213 **Engagement and Consultation**





CONTEXT: Rain Check 1.0 and 2.0

Rain Check 1.0 identified key solutions that could be described as "low hanging fruit," or solutions that could be quickly implemented.

Rain Check 2.0 overlaid additional concerns such as equity and building communities of action on to the achievable and technical solutions described in Rain Check 1.0. The analysis was based on a three part approach.

Defining what is **POSSIBLE**. The team gathered more data on topography, runoff, and other place-based performance data that allowed the team to determine what is needed to meet the stormwater goals and the feasibility of basin-wide capture.

Defining what is **PROBABLE**. Additional data points were gathered through simulations, GIS information, and site investigations. Using this data the team was able to find projects and places that are more likely to be strong candidates for green infrastructure.

Suggesting a method for discovering what is **PREFERRED**. Lastly, the team added metrics for evaluation such as an equity analysis, and added recommended methods for engaging a broader community in the discussion to determine what types of green infrastructure would best serve the community.

The approach resulted in some new practices, such as:

- Working with key partners and creating programs to support projects through implementation.
- Leveraging green infrastructure to support community revitalization efforts.
- Focusing on areas where projects have greatest impact.
- Creating a knowledgeable advocacy community by learning internally and from successful programs in other cities.

Work conducted as part of Rain Check 2.0 falls into two main categories. Technical, analytical, place-based work and work related to engagement and consultation with stakeholders and technical experts.

The analytical place-based work focused on quantifying the current conditions of each priority CSO as they relate to development patterns, capacity for green infrastructure installations, canopy conditions and opportunity for expansion, and the equity conditions.

Work related to communication and outreach focused on engaging people on green infrastructure. This work created tools to enhance stakeholder outreach (see **Chapter Three | People** for findings) and address technical challenges for expanding green infrastructure implementation in Buffalo (see **Chapter Two | Place** for findings). This included conversations with public, local government agencies, private property owners, developers, and green infrastructure experts.

Retrofit Reconnaissance Investigations (RRI)

The Rain Check 2.0 initiative identifies opportunities to implement green infrastructure in places where no stormwater management measures are in place. These "Stormwater Retrofits" can be built throughout the landscape, in areas where green infrastructure practices can capture stormwater and are feasible. This project built on the approach described in the "Stormwater Retrofit Handbook" (CWP, 2007), including the following steps:

- A Desktop Analysis using available mapping data to identify potential locations and
- A Field Survey to develop design concepts at each location.

The **Desktop Analysis** identified individual parcels with the greatest potential to implement green infrastructure practices. The initial screening restricted the analysis to parcels of 0.5 acres or larger, and identified potential partners based on parcel land use. Next, this initial list of parcels was refined based on other factors.

The **initial screening** resulted in a list of 945 parcels, each with an area of at least 0.5 acres. Taken together, the parcels totaled 1915 impervious acres, exceeding the total impervious cover target within every CSO basin.

The desktop analysis also considered **key community partners**, including: Public Schools, Parks, Buffalo Urban Redevelopment Authority, Buffalo Urban Development Corporation, Buffalo Municipal Housing Authority, and religious centers. Their status as a keystone for engagement, often large building footprint, and diverse representation of the community, result in a logical starting place for green infrastructure implementation. The preliminary desktop analysis indicated that 10-15% of impervious reduction targets can be achieved through these partners alone.

Figure 4.1: Image of RRI Assessment tool

Type of Information	Data Collected
Administrative Data	Person assessing Date Retrofit ID Date/Time
Property Information	Ownership Land Use Existing Practices Present
Proposed Retrofit Description	Location Purpose Practice Type / Description Practice Site / Dimensions
Retrofit Area Description	Dominant Soils (if available) Available Hydraulic Head Light Availability Visibility Adjacent Land Uses
Potential Constraints or Conflicts	Land Use Conflicts Utilities Potential other site constraints (such as contaminated soils or large trees)
Other Data Collected	Site Photos Concept Sketches Drainage Area Delineation Site and Design Notes

Table 4.1: Key Information Collected during RRI Field Visits

Field surveys of potential retrofit sites were completed using a new electronic version of the Retrofit Reconnaissance Investigation (RRI; CWP, 2007) form, adapted to suit the needs of the Rain Check 2.0 project (Table 4.1). The purpose of the field survey was to: 1) narrow the list of potential parcels to include only those sites where green infrastructure practices are feasible; 2) delineate areas within each site that could be treated by these practices; 3) propose potential solutions appropriate to each site; and 4) identify potential implementation challenges at each site, such as utilities or parking conflicts.

Parcels with Feasible Retrofits

The primary goal of the RRI field surveys was to develop a list of properties from those identified during the desktop screening, where green infrastructure is feasible given existing conditions at each site. Of the 625 sites visited, 450 were suitable for some type of green infrastructure practice. Typically, sites were removed from the list due to major conflicts, such as presence of large utilities throughout a site (for example, an electrical substation) or soil contamination issues. The site investigators used GPS to identify the specific location where they completed the assessment and each point includes data describing if the site is feasible.

Drainage Area Treated

The initial desktop screening identified the area of each parcel, as well as an estimate of the total impervious cover based on land use. At the site level, however, a practice cannot typically capture the entire site area, due to site drainage patterns. During the site visits, team members delineated the boundaries of the drainage area that could be captured by a practice. For sites that were considered feasible, the result is a map of drainage areas that are then overlaid with existing land use and impervious cover to identify the total area of impervious cover that can be captured by green infrastructure practices identified in the field. Taken together, the total impervious area captured within the drainage areas is 482.1 acres with street drainage area included when found feasible in RRI field visits.

Retrofit Concepts and Implementation Concerns

At each site where retrofits were feasible, the investigator also developed a retrofit concept, including a simple sketch of opportunities at the site scale, and a description of the types of green infrastructure practices that may be appropriate. In addition, the investigator described and noted conditions at the site that are important to implementing the practices. Some of these are opportunities, such as potential partnerships or educational opportunities. Others include data needs, such as survey data or locations of drainage features, or constraints, such as existing utilities. These data, contained in the complete database of retrofit opportunities, will be useful when opportunities arise to implement individual practices.

Tree Canopy Analysis

Trees play an important role in stormwater management. To better understand their role in Buffalo, an in-depth analysis of the tree canopy was conducted for the entire City and also for each priority CSO Basin.

Analysis of Existing Canopy

The existing tree canopy was measured using 2014 LiDAR (Light Detection and Ranging) data and GIS software. This analysis allowed the team to determine gaps in tree canopy coverage and available spaces for "street trees"" (i.e. trees located at the front of the property between the sidewalk and the street). From this evaluation, potential locations were identified for tree planting to reduce stormwater runoff.

Opportunities for Expanding the Canopy

Identification of potential sites for additional tree planting focused on several areas:

- Within the street rights-of-way. Typically located between the sidewalk and the street, acceptable planting locations currently without trees were identified through previous evaluations conducted by the City in 2014. These trees are directly managed by the City.
- Outside the public rights-of-way, on both residential and non-residential properties. These locations were identified using U.S. Forest Service protocols with input from the Rain Check 2.0 Tree Technical Advisory Committee members (Tree TAC) to identify City-specific restrictions. The potential planting sites included pervious acres not already covered by tree canopy and excluded areas within 50 feet of a railroad and any vacant city-owned parcels due to potential maintenance challenges. Trees located outside the public rights-of-way are the responsibility of the property owner.

The identified locations require further investigation to ensure that they can support long-term tree growth and survival and that appropriate tree species are selected. The City does not have the capacity or resources to take on a large-scale street tree planting campaign; therefore, partnering with property owners for the planting and maintenance of trees outside the public right-of-way will be critical for stormwater management success as significant opportunities exist on private land.

Defining the Stormwater Benefits of Trees

In addition to analyzing the opportunities for tree planting in Buffalo throughout the City and in the priority CSO basins in particular, Buffalo Sewer also established a methodology to define the benefits of tree plantings for reducing stormwater volume. The development of such a framework was needed to evaluate the volume reduction benefits of trees as compared with other green infrastructure practices. Although trees are known to improve stream quality and watershed health by decreasing the amount of stormwater runoff and pollutants that reach local waters, no single accepted methodology exists to account for these benefits in a quantitative way, particularly for single storm events.

Figure 4.2: Historic Image of Buffalo's Street Trees (source: Buffalo Rising)

Buffalo Sewer developed a method that builds on a water balance modeling framework and incorporates the expertise of a Tree TAC that was assembled for this project to develop a method that takes into account the unique needs of the City of Buffalo and the Rain Check 2.0 effort. Technical experts in forestry were brought together from government agencies and academia, along with national and local practitioners. Buffalo Sewer convened these experts as the Tree TAC to advise on this effort. Through regular meetings and focused topic discussions they helped to translate national practices and specific tree criteria to inform the method. The framework builds on work done by the Center for Watershed Protection on developing a national Stormwater Performance-Based Credit for tree planting.

The Buffalo Rain Check 2.0 Framework includes two elements to account for tree planting: 1) a per-tree credit for future planting, and 2) a canopy based credit for tracking progress over time. These credits are also supported by basic assumptions regarding tree growth rates as well as ongoing data collected as part of routine tree inventories. The credit will quantify an event-based reduction in runoff volume associated with tree planting for the City of Buffalo.

Figure 4.3: Timon St. street trees in Buffalo, NY (source: Buffalo Rising)

Equity Analysis

A detailed analysis of equity in Buffalo and how equity considerations intersect with green infrastructure was completed. Integrating equity considerations into the decision-support framework for green infrastructure is an explicit goal of Buffalo Sewer and the City of Buffalo. Part of the rationale for adopting a green infrastructure approach to reduce stormwater runoff and prevent combined sewer overflows in Buffalo is that there are social, economic, and environmental benefits to be gained as green infrastructure is installed throughout the City. These potential benefits make the equitable provision of green infrastructure an important concern.

The Equity Analysis was grounded in the understanding that CSO basins are not familiar geographies to many people; instead, these areas are neighborhoods where people are born, live, learn, work, play, worship, and age. The Equity Analysis focused on vulnerable communities that have historic or contemporary barriers to economic and social opportunities and a healthy environment as a central concern of green infrastructure planning.

The Equity Analysis consisted of two approaches: (1) a citywide equity index and (2) individual CSO equity profiles. First, a composite index of seventeen variables was developed to compare census block groups across Buffalo on measures of need, deprivation, and risk. The index included two types of variables: socioeconomic variables related to disadvantage and vulnerability, and environmental factors related to both exposure to environmental risks and access to environmental amenities. Using geographic information systems (GIS), each of the seventeen variables and index values were mapped at the block group level. The index values and accompanying set of maps provide an easy, visual way for Buffalo Sewer and stakeholders to better understand the citywide distribution of need, deprivation, and risk and to compare different neighborhoods on various measures.

Second, a series of profiles was developed for the six priority CSO basins that were identified as target areas for Rain Check 2.0. Each equity profile offered an in-depth look at demographic, economic, health, and environmental conditions for the people living in the "neighborhoods" (census tracts) located in and around the CSO basin. The profiles also highlighted community assets and institutions, including major employers, community centers, schools and religious institutions in each CSO basin. Some of the variables included in the Equity Analysis were also examined in other work, such as land use patterns and tree canopy cover. This repetition was intentional; analyzing this data alongside or in combination with socioeconomic data offered a more balanced or holistic evaluation of challenges and opportunities in each CSO basin.

The Equity Analysis focused attention upon the community and economic benefits associated with green infrastructure, the neighborhoods that are located within priority sewer basins, and the inequitable distribution of disadvantage and vulnerability by

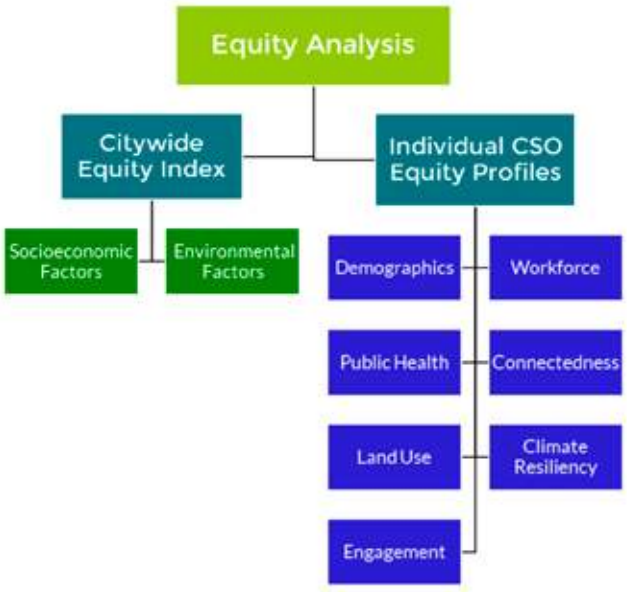


Figure 4.4: Data analyzed for City-Wide Green Infrastructure Index and Individual CSO Equity Profiles

neighborhood, race, and ethnicity across Buffalo. The equity index maps and equity profiles provided a more nuanced understanding of communities most in need of green infrastructure.

The equity index and equity profiles should not stand alone as planning tools absent community input on both the indicators and their importance. Instead, the index and profiles can be used to shape and strengthen community discussions about equity and green infrastructure. Both the index and profiles can be modified to include additional indicators.

As Buffalo Sewer targets interventions in other areas of the City, similar data can be collected and analyzed. Buffalo Sewer's methods and data were informed by engagement with the community and key stakeholders, which also set the stage for future partnerships.

More information on the Equity Index can be found in the Appendix A1.

Figure 4.5: Hoop house being installed (Source: PUSH Buffalo)

Engagement & Consultation

Private Engagement

Buffalo Sewer engaged developers, design professionals, property owners, business groups and institutional and non-profit land owners as part of the process of developing this report. Since the majority of Buffalo's land area is privately owned, engaging the private sector is key to achieving Buffalo's stormwater management goals. To engage with the private sector, Buffalo Sewer conducted one-on-one interviews with developers and private property owners, held focus group meetings, sent out email questionnaires, and researched programs used by other cities to engage the private sector in implementing green infrastructure.

Stakeholder Engagement

Buffalo Sewer engaged with the public and local government stakeholders to publicize past green infrastructure efforts in the City, discuss lessons learned, and develop approaches for local stakeholders to implement as they continue their projects. Meetings involved several one-on-one interviews as well as focus group discussions.

Technical Advisory Committees

Buffalo Sewer identified technical experts in the field of green infrastructure from government agencies, academia, community organizations, and local practitioners. Buffalo Sewer Authority convened these experts as a Technical Advisory Committee (TAC) to advise on the best possible green infrastructure network. The TAC members brought with them a wide range of knowledge and experience. Through regular meetings and focused topic discussions they helped to translate national practices to the Buffalo context.

The outcomes of each TAC meeting were summarized with recommendations prepared. The TAC meeting outcomes and recommendations were incorporated into the project process and also into this report where appropriate.

Next Steps

Buffalo Sewer's next steps are to continue the engagement and consultation process. This will include outreach to neighborhood groups and property owners in the priority CSO basins, creation of a grant program for green infrastructure implementation, green infrastructure training, and establishing partnerships.

Figure 4.6: Buffalo Sewer Waterworx educational session on soil science

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Buffalo Sewer Authority

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Andy Rabb
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Rishawn Sonubi

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Demone Smith

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David Rodriguez

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Peter M. Cammarata
David A. Stebbins
Brandye Merriweather

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Keith Lucas

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Nadine Marrero
Tuona Bachelor
Jason Paananen

Consultant Team

Arcadis of New York, Inc
David Barnes
Rachel Smith
Mike Moscariello
John Salvagno
Angela Hintz
Erin Beyer
Colette McDonald
Hannah Rockwell
Fernando Pasquel
James Cottone

evolve enironment :: architecture
Christine Mondor
Nico Azel
Elijah Hughes
Claudia Saladin
Daniel Klein

UBRI
Bart Roberts
Enjoli Hall
Brian Conley

Watts Architecture & Engineering
Kristopher Winkler
Jessica Harms
Robert Frazer

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Ken Parker
Es Jimenez
Sarah Caputi

Center for Watershed Protection
Deb Caraco
Neely Law
Laurel Williamson
Lisa Fraley-McNeal

CORE Environmental Consultants
Shannon Hennessey
Jared Pristach

CallisonRTKL
Monica Streeper

Technical Advisory Committee

John Bidell - Buffalo Public Works
Hal Sprague – Center for Neighborhood Technologies
Marcella Bondie Keenan – Center for Neighborhood Technologies (CNT)
Anna Wolf – Center for Neighborhood Technologies (CNT)
Dawn Walker – Center for Neighborhood Technologies (CNT)
Jared Pristach – Core Environmental Consultants, Inc.
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Joy Kuebler – Joy Kuebler Landscape Architect
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Tree Technical Advisory Committee

Justin Hynicka – American Forests
Adam Berland – Ball State
Ross Hassinger – City of Buffalo Bureau of Forestry
Andy Rabb – City of Buffalo Bureau of Forestry
Deb Caraco - Center for Watershed Protection (CWP)
Neely Law – Center for Watershed Protection (CWP)
Shannon Hennessey – CORE Environmental Consultants
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Practitioners (Developers/Engineers)

Chris Wood – Carmina, Wood, Morris, PC
Bill Paladino – Ellicott Development
Matt Roland – Hamister Group
Nick Dolpp – Iskalo Development
Leslie Zemsky – Larkin Development Group
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Dave Majewski - Sustainable Resource Group
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RAIN CHECK
clean water buffalo

raincheckbuffalo.org

A.5 USDA Web Soil Survey Results

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- ([LVWLQJ 5HFHLYHU 6HZHU 0DLQV
- 2YHUODQG)ORZ 3DWK
- $YDLODEOH *6,)RRWSULQW&RPELQHG
- 3URSRVHG *6,)RRWSULQW6DQLWDU\
- :DWHU 0DLQ
- 6HZHU 0DQKROHV
- 06
- &RPELQHG
- 6DQLWDU\
- 6WRUP 2YHUIORZ
- 5HLHI
- 6WRUP
- $EDQGRQHG ,Q 3ODFH
- 6HZHU 'LUHFWLRQ
- ,QWHUFHSWRU
- 6WRUP 2YHUIORZ
- 5HLHI
- 6WRUP
- $EDQGRQHG ,Q 3ODFH
- 3DUFHO %RXQGDU\

086<0

- 8G 8UEDQ ODQG
- 8J 8UEDQ ODQG &D\XJD FRPSOH[
- 8P$ 8UEDQ ODQG &RRODPHH FRPSOH[WR SHUFHQW VORSHV
- 8W 8UEDQ ODQG 2GHVVD FRPSOH[WR SHUFHQW VORSHV
- 8X 8UEDQ ODQG 6FKRKDULH FRPSOH[WR SHUFHQW VORSHV

1RWHV
&RRUGLQDWH 6\VWHP 1$' 6WDWH3ODQH 1HZ <RUN :HVW),36
'DWD 6RXUFHV %XIIDOR 6HZHU $XWKRULW\

Stantec

3DJH R

'LVFODLPHU 7KLV GRFXPHQW KDV EHHQ SUHSDUHG EDVHG RQ LQIRUPDWLRQ SURYLGHG E\ RWKHUV DV FLWHG LQ WKH 1RWHV VHFWLRQ 6WDQWHF KDV QRW YHULILHG WKH DFFXUDF\ DQG RU FRPSOHWHQHVV RI WKLV LQIRUPDWLRQ DQG VKDOO QRW EH UHVSRQVLEOH IRU DQ\ HUURUV RU RPLVVLRQV ZKLFK PD\ EH

%\ UHFRQRO\ 5HYLVHG

(VDBJVLBZRUNLQJ ?EVDBJVLBZRUNLQJ DSUI 6WDQWHF?GHVNWRS?%HUQDGHWWHF?EXIDOR VHZHU?EVDBJVLBZRUNLQJ ?QHJHULYH 6WDQWHF?GHVNWRS?%HUQDGHWWHF?EXIDOR VHZHU?QHJHULYH %\ ?8VHUV?UHFRQRO\?QHJHULYH 6WDQWHF?GHVNWRS?%HUQDGHWWHF?EXIDOR VHZHU?QHJHULYH

)LJXUH 1R

'5$)7

7LWOH

*HQHVHH *DWHZD\ 7ULDQJOH ([LVWLQJ &RQGLWLRQV

&OLHQW 3URMHFW

%XIIDOR 6HZHU $XWKRULW\ )HDVLELOLW\ 6WXG\

3URMHFW /RFDWLRQ

%XIIDOR 1<

3UHSDUHG E\ 5& RQ

k

)HHW

$W RULJLQDO GRFXPHQW VL]H RI [

/HJHQG

([LVWLQJ 5HFHLYHU 6HZHU 0DLQV

2YHUODQG)ORZ 3DWK

$YDLODEOH *6,)RRWSULQW&RPELQHG

3URSRVHG *6,)RRWSULQW6DQLWDU\

:DWHU 0DLQ ,QWHUFHSWRU

6HZHU 0DQKROHV 6WRUP 2YHUIORZ

06 5HOLHI

&RPELQHG 6WRUP

6DQLWDU\ $EDQGRQHG ,Q 3ODFH

3DUFHO %RXQGDU\

,QWHUFHSWRU 086<0

6WRUP 8UEDQ ODQG

6WUHDP 2YHUIORZ 8J 8UEDQ ODQG &D\XJD FRPSOH[

5HOLHI 8P$ 8UEDQ ODQG &RQGRPLQLXP FRPSOH[WR SUHFHQW VORSHV

6WRUP 8W 8UEDQ ODQG 2GHVVD FRPSOH[WR SUHFHQW VORSHV

$EDQGRQHG ,Q 3ODFH 8X 8UEDQ ODQG 6FKRRONDULH FRPSOH[WR SUHFHQW VORSHV

6HZHU 'LUHFWLRQ

1RWHV

&RRUGLQDWH 6\VWHP 1$' 6WDWH3ODQH 1HZ <RUN :HVW),36 'DWD 6RXUFHV %XIIDOR 6HZHU $XWKRULW\

Stantec

'LVFODLPHU 7KLV GRFXPHQW KDV EHHQ SUHSDUHG EDVHG RQ LQIRUPDWLRQ SURYLGHG E\ RWKHUV DV FLWHG LQ WKH 1RWHV VHFWLRQ 6WDQWHF KDV QRW YHULILHG WKH DFFXUDF\ DQG RU FRPSOHWHQHVV RI WKLV LQIRUPDWLRQ DQG VKDOO QRW EH UHVSRQVLEOH IRU DQ\ HUURUV RU RPLVVLRQV ZKLFK PD\ EH

)LJXUH 1R

'5$)7

7LWOH
+HQQHSLQ 3DUN
([LVWLQJ &RQGLWLRQV

&OLHQW 3URMHFW
%XIIDOR 6HZHU $XWKRULW\
)HDVLELOLW\ 6WXG\

3URMHFW /RFDWLRQ
%XIIDOR 1<

3UHSDUHG E\ 5& RQ

k

)HHW
$W RULJLQDO GRFXPHQW VL]H RI [

/HJHQG

- ([LVWLQJ 5HFHLYHU
- 2YHUODQG)ORZ 3DWK
- $YDLODEOH *6,)RRWSULQW
- 3URSRVHG *6,)RRWSULQW
- :DWHU 0DLQ
- 6HZHU 0DQKROHV
  - 06
  - &RPELQHG
  - 6DQLWDU\
  - ,QWHUFHSWRU
  - 6WRUP 2YHUIORZ
  - 5HOLHI
  - 6WRUP
  - $EDQGRQHG ,Q 3ODFH
- 6HZHU 'LUHFWLRQ
- 6HZHU 0DLQ
- 6WRUP 2YHUIORZ
- &RPELQHG
- 6DQLWDU\
- ,QWHUFHSWRU
- 6WRUP
- $EDQGRQHG ,Q 3ODFH
- 3DUFHO %RXQGDU\

086<0

- 8G 8UEDQ ODQG
- 8J 8UEDQ ODQG &D\XJD FRPSOH[
- 8P$ 8UEDQ ODQG &RQGRPLQLXP FRPSOH[WR SHUPQW VORSHV
- 8W 8UEDQ ODQG 2GHVVD FRPSOH[WR SHUPQW VORSHV
- 8X 8UEDQ ODQG 6FKRKDULH FRPSOH[WR SHUPQW VORSHV

1RWHV
&RRUGLQDWH 6\VWHP 1$' 6WDWH3ODQH 1HZ <RUN :HVW),36
'DWD 6RXUFHV %XIIDOR 6HZHU $XWKRULW\

Stantec

3DJH R

'LVFODLPHU 7KLV GRFXPHQW KDV EHHQ SUHSDUHG EDVHG RQ LQIRUPDWLRQ SURYLGHG E\ RWKHUV DV FLWHG LQ WKH 1RWHV VHFWLRQ 6WDQWHF KDV QRW YHULILHG WKH DFFXUDF\ DQG RU FRPSOHWHQHVV RI WKLV LQIRUPDWLRQ DQG VKDOO QRW EH UHVSRQVLEOH IRU DQ\ HUURUV RU RPLVVLRQV ZKLFK PD\ EH

)LJXUH 1R

'5$)7

7LWOH
/LQFROQ 3DUN
([LVWLQJ &RQGLWLRQV

&OLHQW 3URMHFW
%XIIDOR 6HZHU $XWKRULW\
)HDVLELOLW\ 6WXG\

3URMHFW /RFDWLRQ
%XIIDOR 1<

3UHSDUHG E\ 5& RQ

k

)HHW
$W RULJLQDO GRFXPHQW VL]H RI [

/HJHQG

([LVWLQJ 5HFHLYHU 6HZHU 0DLQV
2YHUODQG)ORZ 3DWK 06
$YDLODEOH *6,)RRWSULQW &RPELQHG
3URSRVHG *6,)RRWSULQW 6DQLWDU\
:DWHU 0DLQ ,QWHUFHSWRU
6HZHU 0DQKROHV 6WRUP 2YHUIORZ
06 5HOLHI
&RPELQHG 6WRUP
6DQLWDU\ $EDQGRQHG ,Q 3ODFH
,QWHUFHSWRU 086<0
6WRUP 2YHUIORZ 8G 8UEDQ ODQG
5HOLHI 8J 8UEDQ ODQG &D\XJD FRPSOH[
6WRUP 8P$ 8UEDQ ODQG &ROODPHU FRPSOH[WR SHUPHQW VORSHV
$EDQGRQHG ,Q 3ODFH 8W 8UEDQ ODQG 2GHVVD FRPSOH[WR SHUPHQW VORSHV
6HZHU 'LUHFWLRQ 8X 8UEDQ ODQG 6FKRKDULH FRPSOH[WR SHUPHQW VORSHV

1RWHV
&RRUGLQDWH 6\VWHP 1$' 6WDWH3ODQH 1HZ <RUN :HVW),36 'DWD 6RXUFHV %XIIDOR 6HZHU $XWKRULW\

Stantec

3DJH R

'LVFODLPHU 7KLV GRFXPHQW KDV EHHQ SUHSDUHG EDVHG RQ LQIRUPDWLRQ SURYLGHG E\ RWKHUV DV FLWHG LQ WKH 1RWHV VHFWLRQ 6WDQWHF KDV QRW YHULILHG WKH DFFXUDF\ DQG RU FRPSOHWHQHVV RI WKLV LQIRUPDWLRQ DQG VKDOO QRW EH UHVSRQVLEOH IRU DQ\ HUURUV RU RPLVVLRQV ZKLFK PD\ EH

)LJXUH 1R

'5$)7

7LWOH

0DUWLQ /XWKHU .LQJ -U 3DUN ([LVWLQJ &RQGLWLRQV

&OLHQW 3URMHFW

%XIIDOR 6HZHU $XWKRULW\ )HDVLELOLW\ 6WXG\

3URMHFW /RFDWLRQ

%XIIDOR 1<

3UHSDUHG E\ 5& RQ

k

)HHW

$W RULJLQDO GRFXPHQW VL]H RI [

/HJHQG

- ([LVWLQJ 5HFHLYHU 6HZHU 0DLQV
- 2YHUODQG)ORZ 3DWK
- $YDLODEOH *6,)RRWSULQW&RPELQHG
- 3URSRVHG *6,)RRWSULQW6DQLWDU\
- :DWHU 0DLQ ,QWHUFHSWRU
- 6HZHU 0DQKROHV 6WRUP 2YHUIORZ
- 06 5HOLHI
- &RPELQHG 6WRUP
- 6DQLWDU\ $EDQGRQHG ,Q 3DFH
- ,QWHUFHSWRU 3DUFHO %RXQGDU\
- 6WRUP 2YHUIORZ 086<0
- 5HOLHI 8G 8UEDQ ODQG
- 6WRUP 8J 8UEDQ ODQG &D\XJD FRPSOH[
- $EDQGRQHG ,Q 3DFH 8P$ 8UEDQ ODQG &RQGHPQ FRPSOH[WR SUHVHQW VORSHV
- 6HZHU 'LUHFWLRQ 8W 8UEDQ ODQG 2GHVVD FRPSOH[WR SUHVHQW VORSHV
- 8X 8UEDQ ODQG 6FKRKDULH FRPSOH[WR SUHVHQW VORSHV

1RWHV

&RRUGLQDWH 6\VWHP 1$' 6WDWH3ODQH 1HZ <RUN :HVW),36 'DWD 6RXUFHV %XIIDOR 6HZHU $XWKRULW\

Stantec

'LVFODLPHU 7KLV GRFXPHQW KDV EHHQ SUHSDUHG EDVHG RQ LQIRUPDWLRQ SURYLGHG E\ RWKHUV DV FLWHG LQ WKH 1RWHV VHFWLRQ 6WDQWHF KDV QRW YHULILHG WKH DFFXUDF\ DQG RU FRPSOHWHQHVV RI WKLV LQIRUPDWLRQ DQG VKDOO QRW EH UHVSRQVLEOH IRU DQ\ HUURUV RU RPLVVLRQV ZKLFK PD\ EH

Appendix B Site Photos

Photo 6
Photo 5
Photo 2
Photo 3
Photo 4
Photo 1
Photo 7
Photo 8
Photo 9

ASSUME REMOVAL OF 1,000 SF CONCRETE DRIVEWAY APRON, REPLACE WITH TURF GRASS

STORMWATER TREE TRENCH #1
DRAINAGE AREA = 26,513 SF
WIDTH = 15 FT
LENGTH = 83.5 FT

REPAIR SIDEWALK, INSTALL STORMWATER TREE TRENCH.

)LJXUH 1R

'5$)7

7LWOH
(GGLH 'DZVRQ 3DUN
*6, ,GHQWLILFDWLRQ

&OLHQW 3URMHFW
%XIIDOR 6HZHU $XWKRULW\
(QYLURQPHQWDO ,PSDFW %RQG

3URMHFW /RFDWLRQ
%XIIDOR 1<

3UHSDUHG E\ 5& RQ

k

)HHW
$W RULJLQDO GRFXPHQW VL]H RI [

/HJHQG

IRFW &RQWRXU
([LVWLQJ 5HFHLYHU
3URSRVHG 5HFHLYHU
3URSRVHG 6WRUP 3LSH
)ORZ 'LUHFWLRQ LQ 3URSRVHG 6WRUP 3LSH
2YHUODQG)ORZ 3DWK
3URSRVHG *6,)RRWSULQW
'UDLQDJH $UHD
3DUN %RXQGDU\
3DUFHO %RXQGDU\
6HZHU 'LUHFWLRQ

6HZHU 0DQKROHV
06
&RPELQHG
6DQLWDU\
,QWHUFHSWRU
6WRUP 2YHUIORZ
5HOLHI
6WRUP

HG ,Q 3ODFH

TOTAL PROPOSED GSI FOOTPRINT AREA: 0.07 AC

TOTAL DRAINAGE AREA MANAGED: 0.69 AC

$EDQGRQHG ,Q 3ODFH

1RWHV
&RRUGLQDWH 6\VWHP 1$' 6WDWH3ODQH 1HZ <RUN :HVW),36
'DWD 6RXUFHV %XIIDOR 6HZHU $XWKRULW\

Stantec

3DJH R

'LVFODLPHU 7KLV GRFXPHQW KDV EHHQ SUHSDUHG EDVHG RQ LQIRUPDWLRQ SURYLGHG E\ RWKHUV DV FLWHG LQ WKH 1RWHV VHFWLRQ 6WDQWHF KDV QRW YHULILHG WKH DFFXUDF\ DQG RU FRPSOHWHQHVV RI WKLV LQIRUPDWLRQ DQG VKDOO QRW EH UHVSRQVLEOH IRU DQ\ HUURUV RU RPLVVLRQV ZKLFK PD\ EH

Photo 1: Existing conditions (facing south along Roetzer Street)

Photo 2: GSI site existing conditions. Concrete driveway apron to be replaced with turf grass (facing southeast; from center of Roetzer Street)

Photo 3: GSI site existing conditions. Concrete driveway apron to be replaced with turf grass (facing northeast; from west side of Roester Street)

Photo 5: GSI site existing conditions. Concrete driveway apron to be replaced with turf grass and stormwater tree trench to be constructed south of driveway (facing northeast; from west side of Roetzer Street)

Photo 5: Existing conditions (facing southeast; from northwest corner of park)

Photo 6: Existing conditions (facing southwest; from northeast corner of park)

Photo 7: GSI site existing conditions. Repair sidewalk and install stormwater tree trench (facing south along Roetzer Street)

Photo 8: GSI site existing conditions. Repair sidewalk and install stormwater tree trench (facing north along Roetzer Street; from southwest corner of park)

Photo 9: Existing conditions (facing northwest; from southeast corner of park)

2024-07-23

)LJXUH 1R

'5$)7

7LWOH
*HQHVHH *DWHZD\ 7ULDQJOH
*6, ,GHQWLILFDWLRQ

&OLHQW 3URMHFW
%XIIDOR 6HZHU $XWKRULW\
(QYLURQPHQWDO ,PSDFW %RQG

3URMHFW /RFDWLRQ
%XIIDOR 1<

3UHSDUHG E\ 5& RQ

k

)HHW

$W RULJLQDO GRFXPHQW VL]H RI [

/HJHQG

IRFW &QWRXU
([LVWLQJ 5HFHLYHU
3URSRVHG 5HFHLYHU
3URSRVHG 6WRUP 3LSH
)ORZ 'LUHFWLRQ LQ 3URSRVHG 6WRUP 3LSH
2YHUODQG)ORZ 3DWK
3URSRVHG *6,)RRWSULQW
'UDLQDJH $UHD
3DUN %RXQGDU\
3DUFHO %RXQGDU\
6HZHU 'LUHFWLRQ

6HZHU 0DQKROHV
06
&RPELQHG
6DQLWDU\
,QWHUFHSWRU
6WRUP 2YHUIORZ
5HOHH
6WRUP

6HZHU 0DLQV

TOTAL PROPOSED GSI FOOTPRINT AREA: 0.02 AC

TOTAL DRAINAGE AREA MANAGED: 0.39 AC

$EDQGRQHG ,Q 3ODFH

1RWHV
&RRUGLQDWH 6\VWHP 1$' 6WDWH3ODQH 1HZ <RUN :HVW),36
'DWD 6RXUFHV %XIIDOR 6HZHU $XWKRULW\

Stantec

3DJH R

'LVFODLPHU 7KLV GRFXPHQW KDV EHHQ SUHSDUHG EDVHG RQ LQIRUPDWLRQ SURYLGHG E\ RWKHUV DV FLWHG LQ WKH 1RWHV VHFWLRN 6WDQWHF KDV QRW YHULILHG WKH DFFXUDF\ DQG RU FRPSOHWHQHVV RI WKLV LQIRUPDWLRQ DQG VKDOO QRW EH UHVSRQVLEOH IRU DQ\ HUURUV RU RPLVVLRQV ZKLFK PD\ EH

Photo 1: GSI site existing conditions. Stormwater trench or bioswale (facing north along East Parade Avenue)

Photo 2: Existing conditions (facing southeast; from west side of East Parade Avenue)

Photo 3: Existing conditions (facing northwest; from corner of Genesee Street and Walden Avenue intersection)

Photo 4: Existing conditions (facing northeast along Genesee Street; from corner of Genesee Street and Walden Avenue intersection)

Photo 5: GSI site existing conditions. Rain garden in front of statue (facing east; from corner of Genesee Street and Walden Avenue intersection)

Photo 6: GSI site existing conditions. Rain garden in front of statue (facing west; from corner of Walden Avenue and East Parade Circle intersection)

)LJXUH 1R

'5$)7

7LWOH
+HQQHSLQ 3DUN
*6, ,GHQWLILFDWLRQ

&OLHQW 3URMHFW
%XIIDOR 6HZHU $XWKRULW\
(QYLURQPHQWDO ,PSDFW %RQG

3URMHFW /RFDWLRQ
%XIIDOR 1<

3UHSDUHG E\ 5& RQ

k

)HHW
$W RULJLQDO GRFXPHQW VL]H RI [

/HJHQG

IRRW &RQWXU	6HZHU 0DQKROHV
([LVWLQJ 5HFHLYHU	06
3URSRVHG 5HFHLYHU	&RPELQHG
3URSRVHG 6WRUP 3LSH	6DQLWDU\
)ORZ 'LUHFWLRQ LQ 3URSRVHG 6WRUP 3LSH	
2YHUODQG)ORZ 3DWK	,QWHUFHSWRU
3URSRVHG *6,)RRWSULQW	6WRUP 2YHUIORZ
'UDLQDJH $UHD	5HOHI
3DUN %RXQGDU\	6WRUP
3DUFHO %RXQGDU\	
6HZHU 'LUHFWLRQ	

6HZHU 0DLQV

HG ,Q 3ODFH

TOTAL PROPOSED GSI FOOTPRINT AREA: 0.30 AC

TOTAL DRAINAGE AREA MANAGED: 11.2 AC

$EDQGRQHG ,Q 3ODFH

1RWHV
&RRUGLQDWH 6\VWHP 1$' 6WDWH3ODQH 1HZ <RUN :HVW),36
'DWD 6RXUFHV %XIIDOR 6HZHU $XWKRULW\

Stantec

3DJH R

'LVFODLPHU 7KLV GRFXPHQW KDV EHHQ SUHSDUHG EDVHG RQ LQIRUPDWLRQ SURYLGHG E\ RWKHUV DV FLWHG LQ WKH 1RWHV VHFWLRQ 6WDQWHF KDV QRW YHULILHG WKH DFFXUDF\ DQG RU FRPSOHWHQHVV RI WKLV LQIRUPDWLRQ DQG VKDOO QRW EH UHVSRQVLEOH IRU DQ\ HUURUV RU RPLVVLRQV ZKLFK PD\ EH

Photo 1: GSI site existing condition. Replace basketball court with underground storage (facing southeast; from Hennepin Street)

Photo 2: Existing conditions (facing southwest; from Hennepin Street)

Photo 3: GSI site existing condition. Replace basketball court with underground storage (facing northeast)

Photo 4: Existing conditions (facing west; from south side of park near Ludington Street)

Photo 5: Existing conditions (facing northwest; from southeast corner of park at Ludington Street and Greene Street intersection)

Photo 6: Existing conditions (facing north; from southeast corner of park at Ludington Street and Greene Street intersection)

Photo 7: GSI site existing condition. Replace basketball court with underground storage (facing southwest; from Hennepin Street)

Photo 8: GSI site existing condition. Replace basketball court with underground storage (facing west)

Photo 9: Existing conditions (facing southeast; from northwest corner of park near Hennepin Street)

Photo 10: Existing conditions (facing south; from northwest corner of park near Hennepin Street)

2024-07-23

)LJXUH 1R

'5$)7

7LWOH
/LQFROQ 3DUN
*6, ,GHQWLILFDWLRQ

&OLHQW 3URMHFW
%XIIDOR 6HZHU $XWKRULW\
(QYLURQPHQWDO ,PSDFW %RQG

3URMHFW /RFDWLRQ
%XIIDOR 1<

3UHSDUHG E\ 5& RQ

k

)HHW
$W RULJLQDO GRFXPHQW VL]H RI [

/HJHQG

IRRW &RQWRXU	6HZHU 0DQKROHV
([LVWLQJ 5HFHLYHU	06
3URSRVHG 5HFHLYHU	&RPELQHG
3URSRVHG 6WRUP 3LSH	6DQLWDU\
)ORZ 'LUHFWLRQ LQ 3URSRVHG 6WRUP 3LSH	,QWHUFHSWRU
2YHUODQG)ORZ 3DWK	6WRUP 2YHUIORZ
3URSRVHG *6,)RRWSULQW	5HOLHI
'UDLQDJH $UHD	6WRUP
3DUN %RXQGDU\	
3DUFHO %RXQGDU\	
6HZHU 'LUHFWLRQ	

6HZHU 0DLQV

HG ,Q 3ODFH

TOTAL PROPOSED GSI FOOTPRINT AREA: 0.04 AC

TOTAL DRAINAGE AREA MANAGED: 0.79 AC

$EDQGRQHG ,Q 3ODFH

1RWHV
&RRUGLQDWH 6\VWHP 1$' 6WDWH3ODQH 1HZ <RUN :HVW),36
'DWD 6RXUFHV %XIIDOR 6HZHU $XWKRULW\

Stantec

3DJH R

'LVFODLPHU 7KLV GRFXPHQW KDV EHHQ SUHSDUHG EDVHG RQ LQIRUPDWLRQ SURYLGHG E\ RWKHUV DV FLWHG LQ WKH 1RWHV VHFWLRQ 6WDQWHF KDV QRW YHULILHG WKH DFFXUDF\ DQG RU FRPSOHWHQHVV RI WKLV LQIRUPDWLRQ DQG VKDOO QRW EH UHVSRQVLEOH IRU DQ\ HUURUV RU RPLVVLRQV ZKLFK PD\ EH

Photo 1: GSI site existing conditions. Install small rain garden to capture flow from Amity Street and de-pave asphalt (facing northwest; from Amity Street)

Photo 2: GSI site existing conditions. Install small rain garden to capture flow from Amity Street and de-pave asphalt (facing northeast along Amity Street)

Photo 3: Existing conditions (facing north; from Amity Street)

Photo 4: GSI site existing conditions. Install underground trench (facing north along Peck Street; from Grimes Street and Peck Street intersection)

Photo 5: GSI site existing conditions. Install underground trench (facing south along Peck Street; from center of Peck Street)

Photo 6: GSI site existing conditions. Install underground trench (facing south along Peck Street; from east side of Peck Street)

Photo 7: GSI site existing conditions. Install underground trench (facing north along Peck Street; from east side of Peck Street)

Photo 8: GSI site existing conditions. Install underground trench (facing south along Peck Street; from corner of Ashley Street and Peck Street intersection)

Photo 9: Existing conditions (facing south along Quincy Street; from Ashley Street and Quincy Street intersection)

)LJXUH 1R

'5$)7

7LWOH

0DUWLQ /XWKHU .LQJ -U 3DUN *6, ,GHQWLILFDWLRQ

&OLHQW 3URMHFW

%XIIDOR 6HZHU $XWKRULW\ (QYLURQPHQWDO ,PSDFW %RQG

3URMHFW /RFDWLRQ
%XIIDOR 1<

3UHSDUHG E\ 5& RQ

k

)HHW
$W RULJLQDO GRFXPHQW VL]H RI [

/HJHQG

IRRW &RQWRXU	6HZHU 0DQKROHV
([LVWLQJ 5HFHLYHU	06
3URSRVHG 5HFHLYHU	&RPELQHG
3URSRVHG 6WRUP 3LSH	6DQLWDU\ 3LSH
)ORZ 'LUHFWLRQ LQ 3URSRVHG 6WRUP 3LSH	,QWHUFHSWRU
2YHUODQG)ORZ 3DWK	6WRUP 2YHUIORZ
3URSRVHG *6,)RRWSULQW	5HLHI
'UDLQDJH $UHD	6WRUP
3DUN %RXQGDU\	
3DUFHO %RXQGDU\	
6HZHU 'LUHFWLRQ	

6HZHU 0DLQV

TOTAL PROPOSED GSI FOOTPRINT AREA: 2.07 AC

TOTAL DRAINAGE AREA MANAGED: 3.69 AC

$EDQGRQHG ,Q 3ODFH

1RWHV
&RRUGLQDWH 6\VWHP 1$' 6WDWH3ODQH 1HZ <RUN :HVW),36
'DWD 6RXUFHV %XIIDOR 6HZHU $XWKRULW\

Stantec

3DJH R

'LVFODLPHU 7KLV GRFXPHQW KDV EHHQ SUHSDUHG EDVHG RQ LQIRUPDWLRQ SURYLGHG E\ RWKHUV DV FLWHG LQ WKH 1RWHV VHFWLRQ 6WDQWHF KDV QRW YHULILHG WKH DFFXUDF\ DQG RU FRPSOHWHQHVV RI WKLV LQIRUPDWLRQ DQG VKDOO QRW EH UHVSRQVLEOH IRU DQ\ HUURUV RU RPLVVLRQV ZKLFK PD\ EH

Photo 1: Existing conditions (facing northeast; from Humboldt Parkway South)

Photo 2: Existing conditions (facing west; from Humboldt Parkway South)

Photo 3: Existing conditions (facing west; from Humboldt Parkway South)

Photo 4: Existing conditions (facing north; from Humboldt Parkway South)

Photo 5: GSI site existing conditions. Permeable pavement along internal park roadways (facing west; from Humboldt Parkway South)

Photo 6: GSI site existing conditions. Permeable pavement along internal park roadways (facing east; from Humboldt Parkway South)

Photo 7: GSI site existing conditions. Permeable pavement along internal park roadways (facing north; from south corner of Humboldt Parkway South and West Parade Circle intersection)

Photo 8: GSI site existing conditions. Permeable pavement along internal park roadways (facing south; from Humboldt Parkway)

Photo 9: Existing conditions (facing southeast; from west corner of Charles R. Drew Science Magnet School)

Photo 10: Existing conditions (facing southeast; from east side of Charles R. Drew Science Magnet School)

Photo 11: Existing conditions (facing east; from east side of Charles R. Drew Science Magnet School)

Photo 12: GSI site existing conditions. Permeable pavement along internal park roadways (facing east; from parking lot along Martin Luther King Park)

Photo 13: GSI site existing conditions. Permeable pavement along internal park roadways (facing southeast; from parking lot along Martin Luther King Park)

Photo 14: GSI site existing conditions. Permeable pavement along internal park roadways (facing west; from north corner of Martin Luther King Park and Fillmore Avenue intersection)

Photo 15: Existing conditions (facing east along North Parade Avenue; from Fillmore Avenue and North Parade Avenue intersection)

Photo 16: GSI site existing conditions. Stormwater trench or bioswale at perimeter of park (facing southeast; from North Parade Avenue)

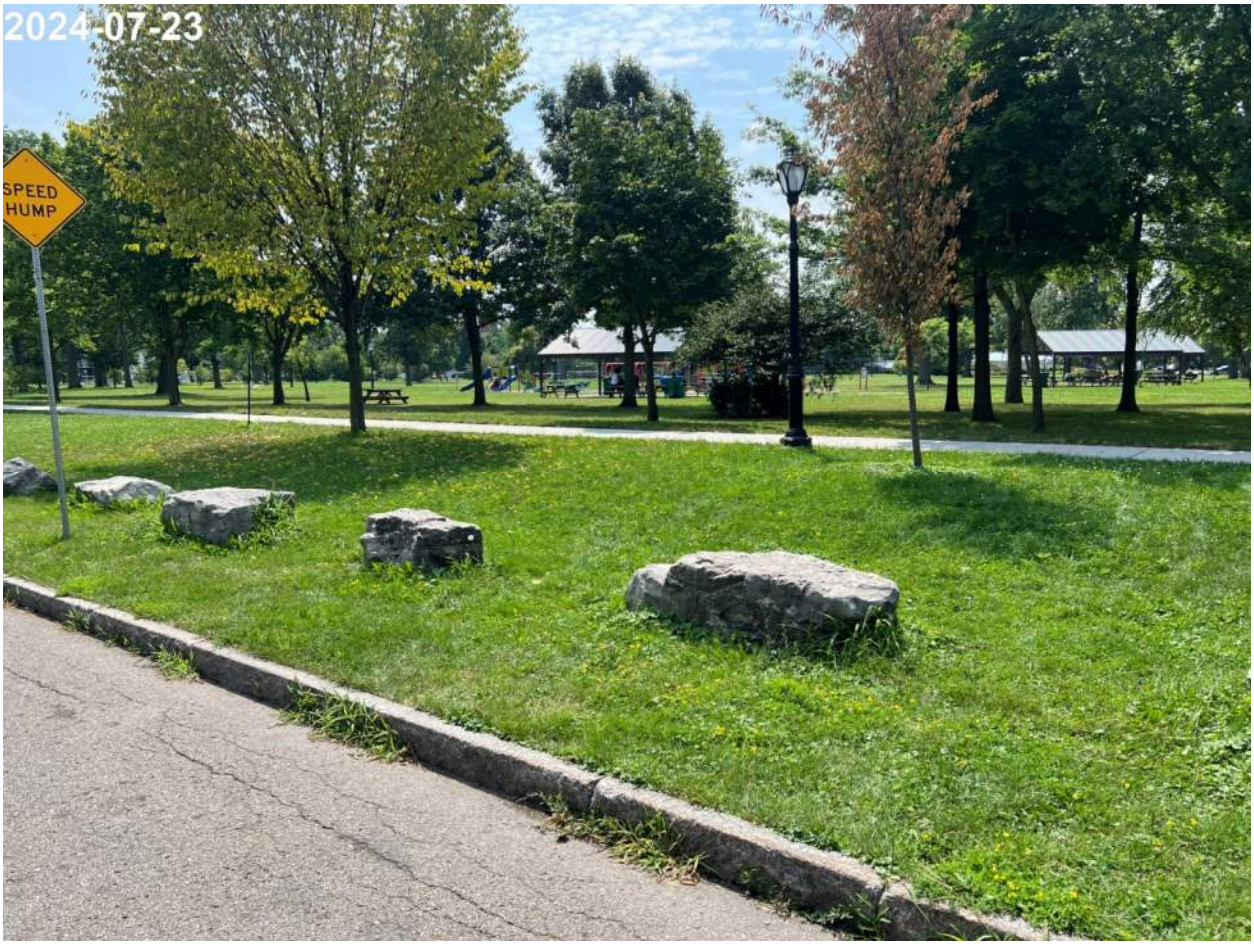

Photo 17: GSI site existing conditions. Stormwater trench or bioswale at perimeter of park (facing west along North Parade Avenue; from North Parade Avenue and East Parade Avenue intersection)

Photo 18: GSI site existing conditions. Stormwater trench or bioswale at perimeter of park (facing west along North Parade Avenue; from North Parade Avenue and East Parade Avenue intersection)

Photo 19: Existing conditions (facing south along East Parade Avenue)

Photo 20: GSI site existing conditions. Permeable pavement along internal park roadways and rain garden or bump for traffic calming (facing west along Humboldt Parkway South; from east corner of Humboldt Parkway South and Fillmore Avenue intersection)

Photo 21: GSI site existing conditions. Rain garden or bump out for traffic calming (facing northwest from Humboldt Parkway South and Fillmore Avenue intersection)

Appendix C - Proposed Green Infrastructure Retrofits

C.1 Green Infrastructure Park Improvement Figures

C.2 Proposed Green Infrastructure Details

C.3 NYSDEC WQ_v Worksheets

C.1 Green Infrastructure Park Improvement Figures

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7LWOH
(GGLH 'DZVRQ 3DUN
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- 2YHUODQG)ORZ 3DWK
- 3URSRVHG 6WRUP 3LSH
- $YDLODEOH *6,)RRWSULQW
- 3URSRVHG *6,)RRWSULQW
- 'UDLQDJH $UHD
- 6WRUPZDWHU 0DQDJHPHQW &DQGLGDWH 6LWH
- 3DUFHO %RXQGDU\
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- 6WRUP 2YHUIORZ
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  - 5HOLHI
  - 6WRUP
  - $EDQGRQHG ,Q 3ODFH

System ID	GSI System Type	System Area (SF)	Impervious Area Managed (SF)	Estimated Loading Ratio (1:X)
DPW-001	Stormwater tree trench	1,126	23,392	21
DPW-002	Stormwater tree trench	1,257	15,984	13

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&RRUGLQDWH 6\VWHP 1$' 6WDWH3ODQH 1HZ <RUN :HVW),36 'DWD 6RXUFHV %XIIDOR 6HZHU $XWKRULW\

Stantec

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- 2YHUODQG)ORZ 3DWK
- 3URSRVHG 6WRUP 3LSH
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- 'UDLQDJH $UHD
- 6WRUPZDWHU 0DQDJHPHQW &DQGLGDWH 6LWH
- 3DUFHO %RXQGDU\
- :DWHU 0DLQ
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System ID	GSI System Type	System Area (SF)	Impervious Area Managed (SF)	Estimated Loading Ratio (1:X)
DPW-003	Rain garden	2,000	9,685	28
DPW-004	Rain garden	1,000	7,323	29

1RWHV

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  - 5HWHQWLRQ
  - 6WRUP
  - $EDQGRQHG ,Q 3ODFH

System ID	GSI System Type	System Area (SF)	Impervious Area Managed (SF)	Estimated Loading Ratio (1:X)
DPW-005	Underground storage	13,000	389,862	30

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Stantec

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%\ UHFRQRO\ 5HYLVHG DSU| ?EVDBJVLBZRUNLQJ ?2QHULYH 6WDQWHF?GHVNWRS?%HUQDCHWH?EXIDOR VHZHU

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- 3URSRVHG 5HFHLYHU
-)ORZ 'LUHFWLRQ LQ 3URSRVHG 6WRUP 3LSH
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- 3URSRVHG 6WRUP 3LSH
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- 3URSRVHG *6,)RRWSULQW
- 'UDLQDJH $UHD
- 6WRUPZDWHU 0DQDJHPHQW &DQGLGDWH 6LWH
- 3DUFHO %RXQGDU\
- :DWHU 0DLQ
- 6HZHU 0DLQ 7\SH
  - 06
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  - 6DQLWDU\
- ,QIUDVWUXFWXUH
- 6WRUP 2YHUIORZ
- 5HWHQWLRQ 3RQG
- 6WRUP
- $EDQGRQHG ,Q 3ODFH
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  - ,QIUDVWUXFWXUH
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  - 5HWHQWLRQ
  - 6WRUP
  - $EDQGRQHG ,Q 3ODFH

System ID	GSI System Type	System Area (SF)	Impervious Area Managed (SF)	Estimated Loading Ratio (1:X)
DPW-009	Porous asphalt	36,783	36,783	1
DPW-010	Rain garden	3,191	11,008	4
DPW-011	Porous asphalt	18,322	18,322	1
DPW-012	Stormwater tree trench	620	13,258	21
DPW-013	Stormwater tree trench	1,582	17,342	11
DPW-014	Stormwater tree trench	1,882	26,142	14

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Stantec

3DJH R

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C.2 Proposed Green Infrastructure Details

GREEN
INFRASTRUCTURE
STANDARD DETAILS

BUFFALO
SEWER AUTHORITY

BUFFALO
SEWER AUTHORITY
STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

COVER SHEET

NO.	DATE	REVISION DESCRIPTION	BY

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SHEET: 056 OF 079

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GI-00 / GI-23

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SHEET INDEX	
DRAWING NO.	SHEET TITLE
GI–00	COVER SHEET
GI–01	INDEX SHEET
GI–02	POROUS ASPHALT PAVING
GI–03	RAIN GARDEN
GI–04	STORMWATER TREE TRENCH
GI–05	BIOSWALE
GI–06	STORMWATER PLANTER (PART 1 OF 4)
GI–07	STORMWATER PLANTER (PART 2 OF 4)
GI–08	STORMWATER PLANTER (PART 3 OF 4)
GI–09	STORMWATER PLANTER (PART 4 OF 4)
GI–10	UNDERGROUND STORMWATER STORAGE SYSTEM (PART 1 OF 2)
GI–11	UNDERGROUND STORMWATER STORAGE SYSTEM (PART 2 OF 2)
GI–12	CURB CUT
GI–13	CURB CUT WITH WHEEL GUARD
GI–14	TRENCH DRAIN WITH WHEEL GUARD
GI–15	CATCH BASIN
GI–16	STONE APRON OUTLET PROTECTION
GI–17	OVERFLOW STRUCTURE WITH UNDERDRAIN CONNECTION
GI–18	JUNCTION BOX WITH UNDERDRAIN CONNECTION
GI–19	UNDERDRAIN CLEANOUT
GI–20	ANTI–SEEP COLLAR
GI–21	OBSERVATION WELL
GI–22	PLANTINGS (PART 1 OF 2)
GI–23	PLANTINGS (PART 2 OF 2)

BUFFALO
SEWER AUTHORITY
STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS
INDEX SHEET

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GI-01 / GI-23

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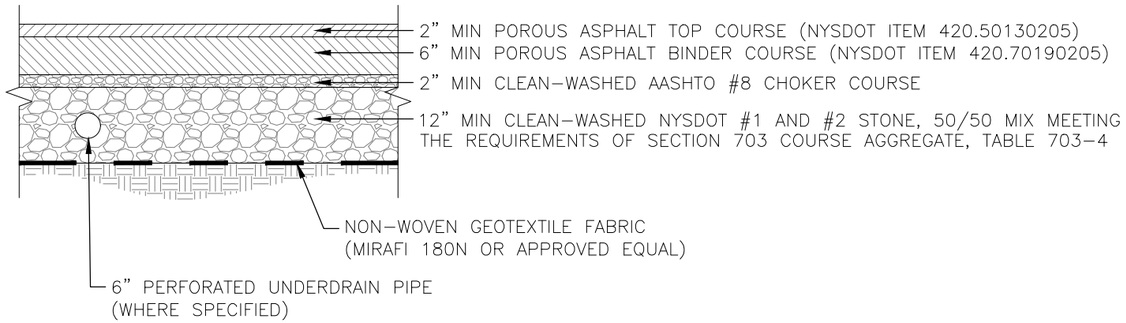

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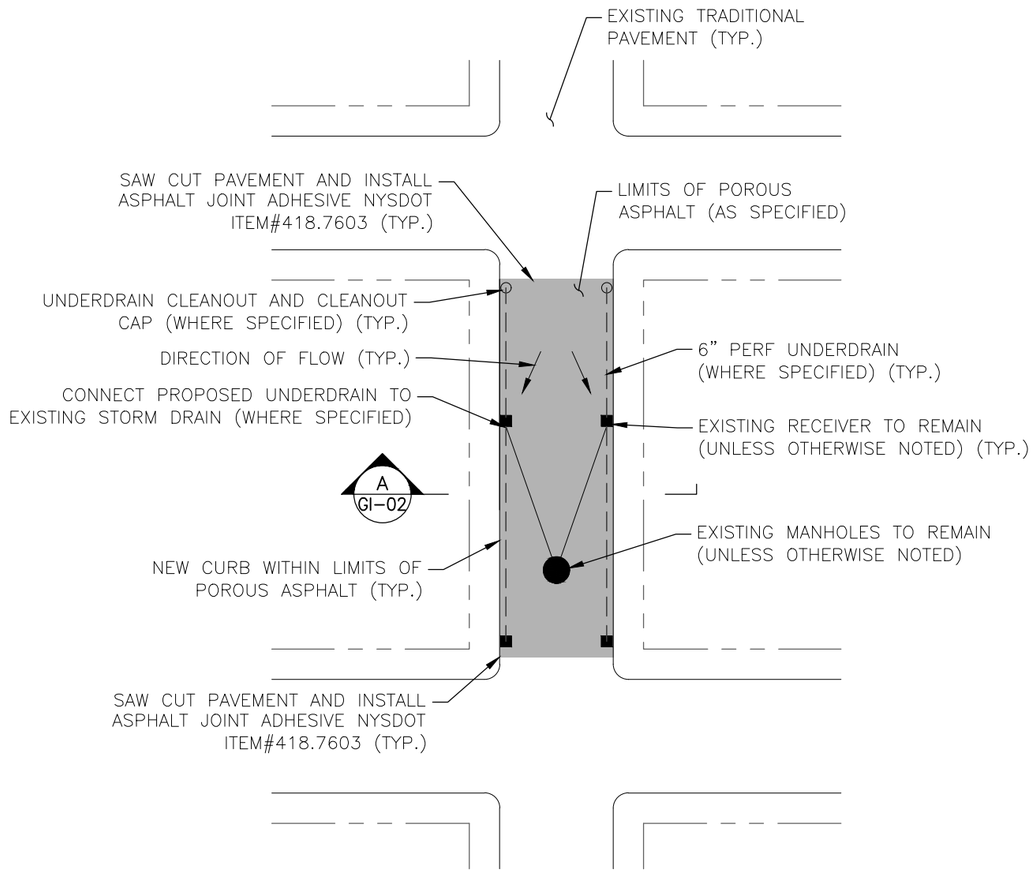

PLAN

NOTES:

1. ALL CONSTRUCTION SHALL BE ADAPTED TO INCORPORATE SITE-SPECIFIC CONDITIONS. THE CONSTRUCTION SHALL PROVIDE ALLOWANCES AND MAINTAIN, AT A MINIMUM, STREET WIDTH, ON-STREET PARKING, DRAINAGE, BICYCLE LANES, BUS ROUTES, ADA ACCESSIBILITY, PROXIMITY TO ADJACENT BUILDINGS AND STRUCTURES, AND VEHICULAR TURNING MANEUVERS.
2. WATERPROOFING MEASURES CONFIRMING TO NYSDOT REQUIREMENTS SHALL BE PROVIDED WHEN DETERMINED REQUIRED BY THE ENGINEER.
3. PERVIOUS DRAINAGE AREAS SHALL BE DIRECTED AROUND POROUS PAVEMENT SURFACE.
4. A MIX DESIGN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.
5. MINIMUM UTILITY SETBACKS AND PROTECTION MEASURES SHALL CONFORM TO CURRENT BSA ASSET PROTECTION STANDARDS AND OTHER UTILITY PROVIDER REQUIREMENTS.
6. A GEOMEMBRANE LINER SHALL BE PROVIDED WHERE SPECIFIED, TO PREVENT INFILTRATION INTO BASEMENTS OF ADJACENT BUILDINGS WHERE DETERMINED REQUIRED BY THE ENGINEER.
7. ALL EDGES BETWEEN NEW AND EXISTING ASPHALT PAVEMENT AND JOINTS FOR UTILITY STRUCTURES SHALL BE SEALED WITH HOT ASPHALT CEMENT CONFORMING TO NYSDOT STANDARD SEPCIFICATIONS.
8. MONITORING WELLS SHALL BE INSTALLED WITHIN SIDEWALK ADJACENT TO POROUS ASPHALT PAVING ON BOTH SIDES OF THE STREET ON A MAXIMUM 200 FOOT INTERVAL (OR AS SPECIFIED).
9. THE CONTRACT SHALL NOT COMPACT THE SUBGRADE SOIL PRIOR TO PLACEMENT OF CLEAN WASHED STONE SUBBASE.

MAINTENANCE DURING CONSTRUCTION:

1. KEEP TRAFFIC OFF PAVEMENT FOR A MINIMUM OF 24- HOURS AFTER ITS PLACED.
2. DIVERT STORMWATER FROM DISTURBED AREAS AND THE POROUS PAVEMENT UNTIL THE AREAS ARE STABILIZED.
3. DO NOT USE SAND OR SALT FOR ICE TREATMENT.
4. PERFORM VACUUM SWEEPING AT A MINIMUM WEEKLY OR AS DETERMINED NECESSARY BY THE ENGINEER.

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

POROUS ASPHALT PAVING

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GI-02 / GI-23

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NOTES:

1. UNDERDRAINS SHALL BE AT LEAST SIX (6) INCHES IN DIAMETER AND CONSTRUCTED OF HIGH-DENSITY POLYETHYLENE PIPING WITH A CORRUGATED EXTERIOR AND SMOOTH INNER WALL. UNDERDRAIN PIPING WITHIN THE STONE STORAGE TRENCH SHALL BE FULL-PERFORATED PIPING MEETING THE AASHTO MATERIALS SPECIFICATIONS M294 AND M252 CLASS II.

2. THE ENGINEER SHALL BE ON SITE DURING THE EXCAVATION OF BIORETENTION TO CONFIRM THAT THE SUBSURFACE CONDITIONS ARE SUITABLE

3. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 72 HOURS NOTIFICATION PRIOR TO BIORETENTION EXCAVATION.

4. BIORETENTION FILTER MEDIA SHALL BE AS SPECIFIED HEREIN.

5. COMPACTION SHALL NOT OCCUR IN THE RAIN GARDEN AREAS PRIOR TO CONSTRUCTION. SCARIFICATION IS REQUIRED IN THE EVENT COMPACTION TAKES PLACE.

6. DO NOT PLACE THE BIORETENTION SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED. SIDE SLOPES ARE TO BE STABILIZED WITHIN THREE WORKING DAY UPON COMPLETION OF FINAL GRADE.

7. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION. PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE SYSTEM.

8. THE GRASS THAT IS PLANTED WITHIN A RAIN GARDEN MUST CONSIST OF A COMBINATION OF WARM SEASON GRASS SEED AND COLD SEASON GRASS SEED IN ORDER FOR THE GRASS TO START GROWING FOR STABILIZATION AND CONTINUE GROWING IN THE SANDY WELL-DRAINED ENVIRONMENT. PLANTING SPECIFICATION WILL MEET THE REQUIREMENTS AS OUTLINED IN SPECIFICATIONS AND THE FOLLOWING: MIX 1 (WARM SEASON GRASSES) (15 LBS/AC) AND INCLUDE ANNUAL AND PERENNIAL RYE GRASS SEED (15 LBS/AC); THE NEW ENGLAND NATIVE WARM SEASON GRASS MIX (23 LBS/AC) BY NEW ENGLAND WETLAND PLANTS, INC.; RAIN GARDEN MIX 180 (15 LBS/AC & 15 LBS/AC OF RYE) / RAIN GARDEN GRASS MIX 180-1 (20 LBS/AC & 10 LBS/AC OF RYE) BY ERNST CONSERVATION SEEDS; OR APPROVED EQUAL.

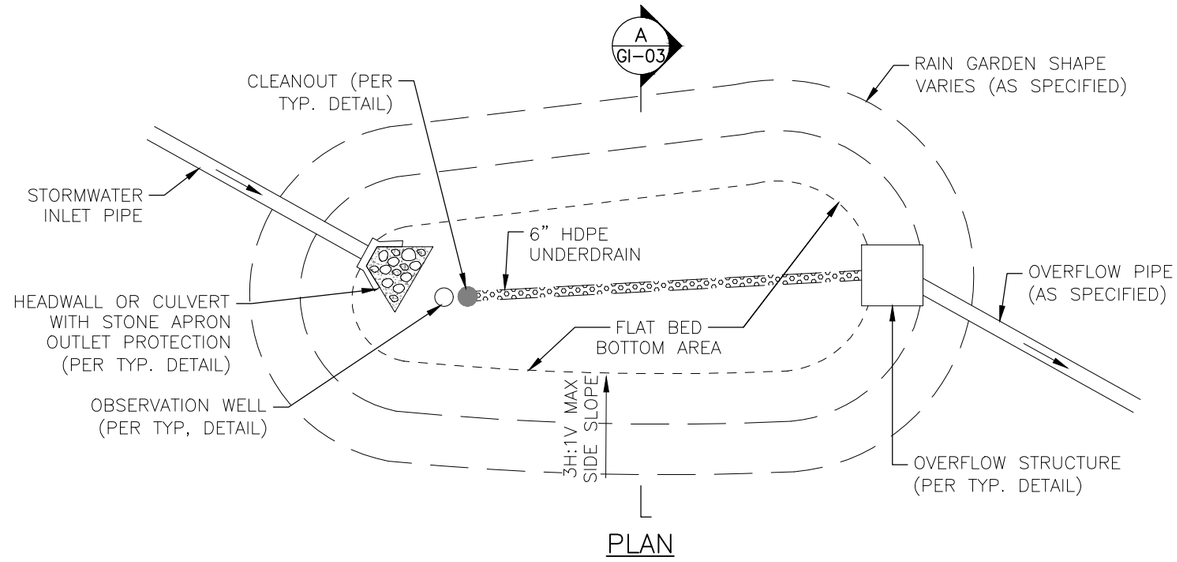
MAINTENANCE REQUIREMENTS:

1. SYSTEMS SHALL BE INSPECTED AT LEAST ONCE WEEKLY, AND FOLLOWING ANY RAINFALL EXCEEDING 0.25 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS DETERMINED REQUIRED BY THE ENGINEER. PRETREATMENT MEASURES SHALL BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY AND AS DIRECTED BY THE ENGINEER.

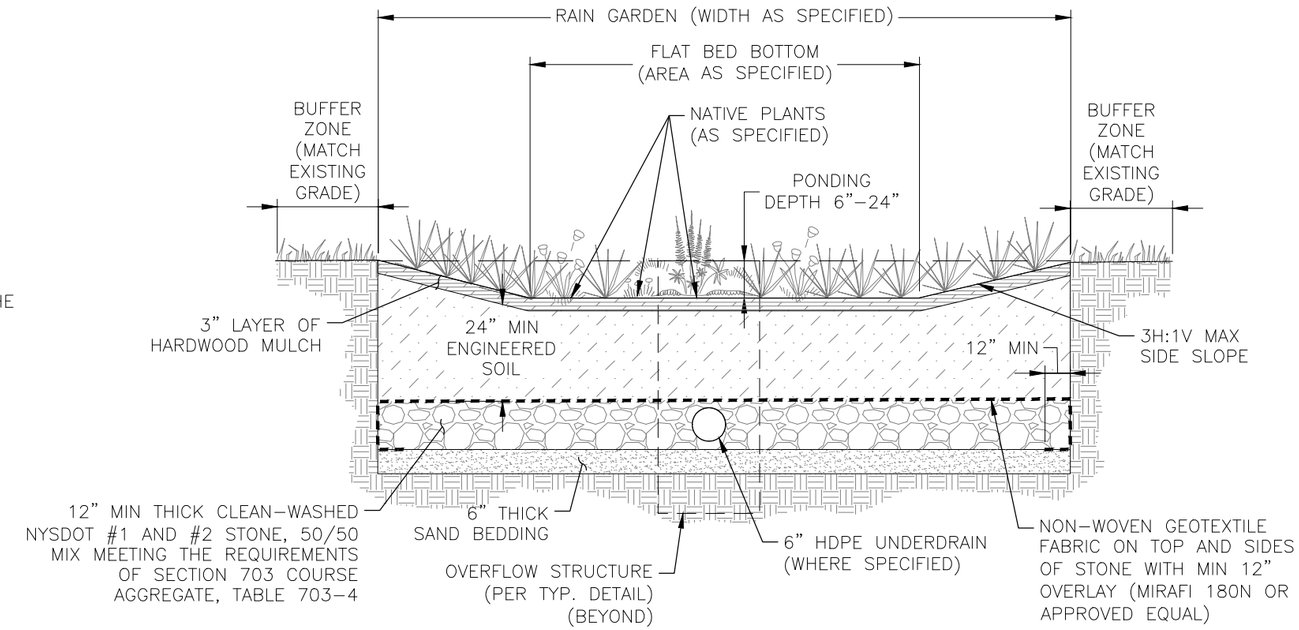
2. AT LEAST ONCE MONTHLY THE SYSTEM SHALL BE INSPECTED FOR DRAWDOWN TIME. IF THE BIORETENTION DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN THE ENGINEER SHALL ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.

3. VEGETATION SHALL BE INSPECTED AT LEAST WEEKLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING, PRUNING, REMOVAL, AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.

ENGINEERED SOIL FILTER MEDIA MIXTURES			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL	
		SIEVE NO.	PERCENT PASSING BY WEIGHT PASSING STANDARD SIEVE SIZE
ASTM C-33 CONCRETE SAND	50 TO 55	-	-
LOAMY SAND TOPSOIL WITH FINE AS INDICATED	20 TO 30	200	15 TO 25
MODERATELY FINE SHREDDED BARK OR WOOD BARK MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5



PLAN



A GI-03 SECTION

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

RAIN GARDEN

NO.	DATE	REVISION DESCRIPTION	BY

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GI-03 / GI-23

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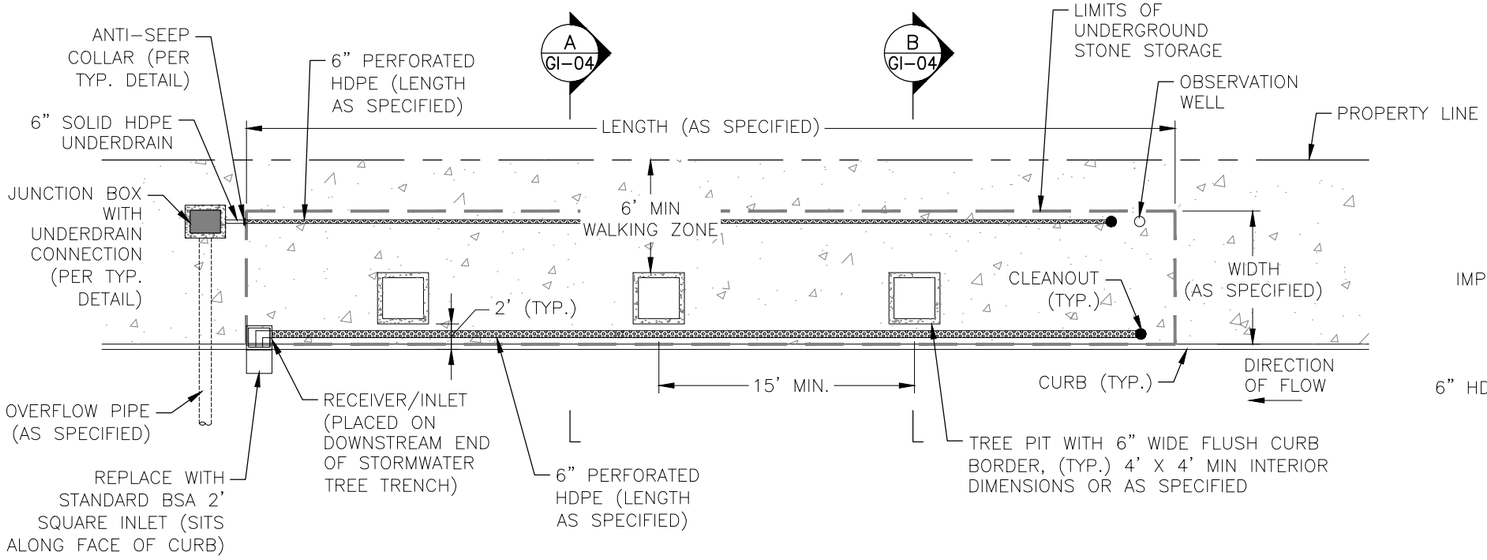
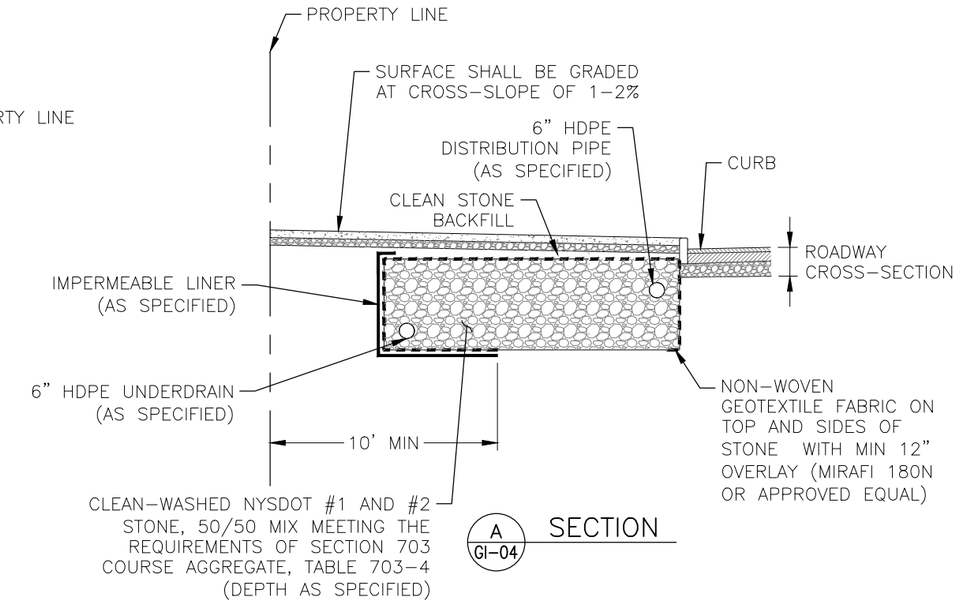


PLAN

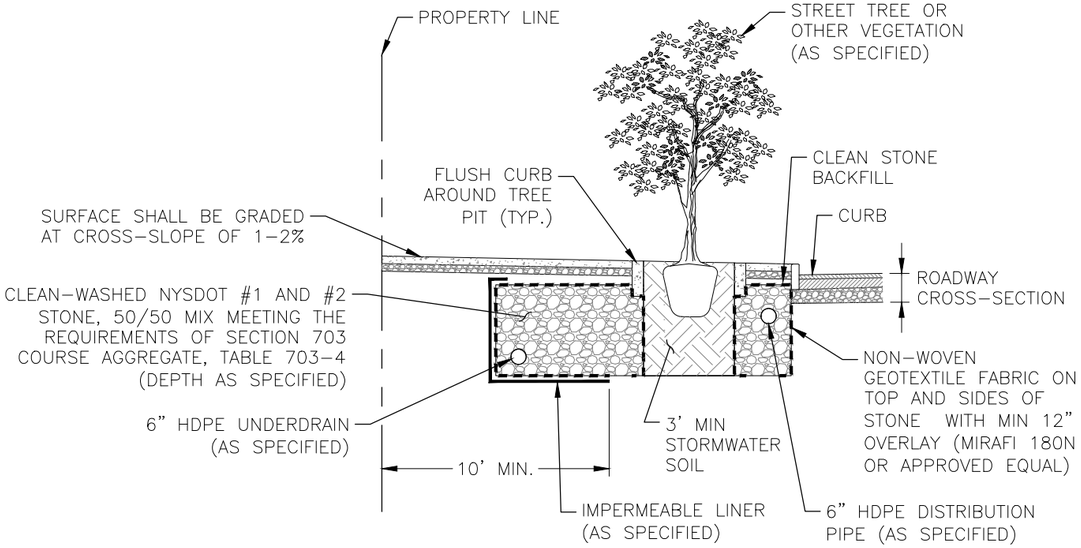


NOTES:

1. ALL CONSTRUCTION SHALL BE ADAPTED TO ADDRESS SITE-SPECIFIC CONDITIONS. THE CONTRACTOR SHALL MAINTAIN, AT A MINIMUM, STREET WIDTH, ON-STREET PARKING, DRAINAGE, BICYCLE LANES, BUS ROUTES, ADA ACCESSIBILITY, PROXIMITY TO ADJACENT BUILDINGS AND STRUCTURES, AND VEHICULAR TURNING MANEUVERS.
2. WATERPROOFING MEASURES CONFIRMING TO NYSDOT REQUIREMENTS SHALL BE PROVIDED WHEN DETERMINED BY THE ENGINEER.
3. ALL TREE PITS SHALL BE SURROUNDED FLUSH CURBING UNLESS OTHERWISE SPECIFIED. ALL EXPOSED CONCRETE EDGES SHALL BE BEVELED. TREE GRATES SHALL NOT BE USED AROUND TREE PITS.
4. THE MINIMUM INTERIOR TREE PIT DIMENSION IS FOUR (4) FEET BY FOUR (4) FEET. LARGER TREE PITS SHALL BE PROVIDED WHERE SPECIFIED IN THE CONTRACT DOCUMENTS.
5. UNDERDRAIN AND DISTRIBUTION PIPING SHALL BE SIX (6) INCHES IN DIAMETER AND CONSTRUCTED OF HIGH-DENSITY POLYETHYLENE PIPING WITH A CORRUGATED EXTERIOR AND SMOOTH INNER WALL. UNDERDRAIN PIPING WITHIN THE STONE STORAGE TRENCH SHALL BE FULL-PERFORATED PIPING MEETING THE AASHTO MATERIALS SPECIFICATIONS M294 AND M252 CLASS II.
6. TREE SPECIES, LOCATION, AND SIZE SHALL BE COORDINATED WITH THE CITY OF BUFFALO PUBLIC WORKS DEPARTMENT.

MAINTENANCE DURING CONSTRUCTION:

1. WATER TREES WEEKLY WITH A SLOW RELEASE WATERING BAG SYSTEM, TREE GATOR OR APPROVED EQUAL.
2. DIVERT STORMWATER FROM DISTURBED AREAS UNTIL THE AREAS ARE STABILIZED.
3. DO NOT USE SAND OR SALT FOR ICE TREATMENT.
4. REMOVE DEBRIS AND SEDIMENT FROM THE TREE PLANTER AREAS WEEKLY OR AS DIRECTED BY THE ENGINEER.



BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

STORMWATER TREE TRENCH

NO.	DATE	REVISION DESCRIPTION	BY

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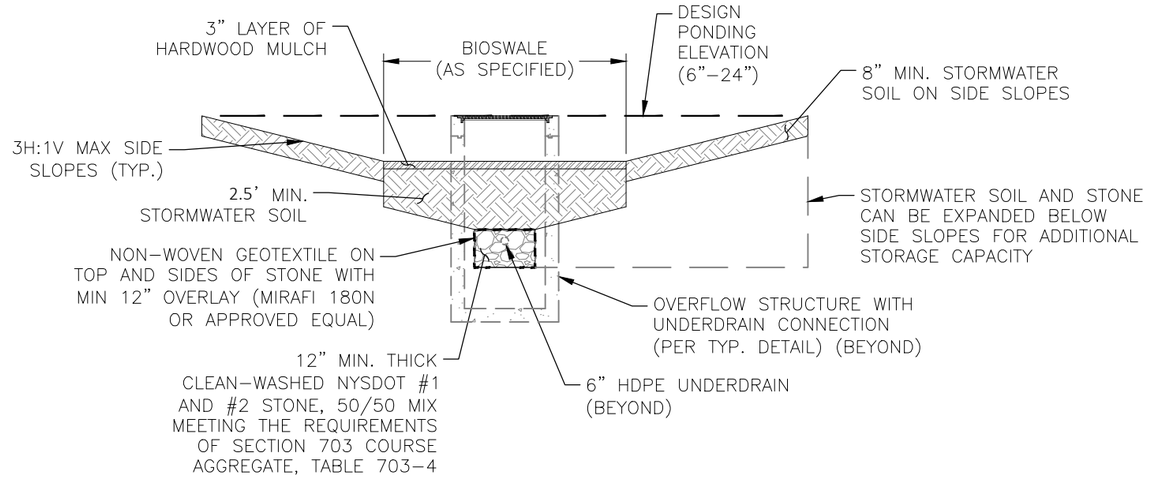
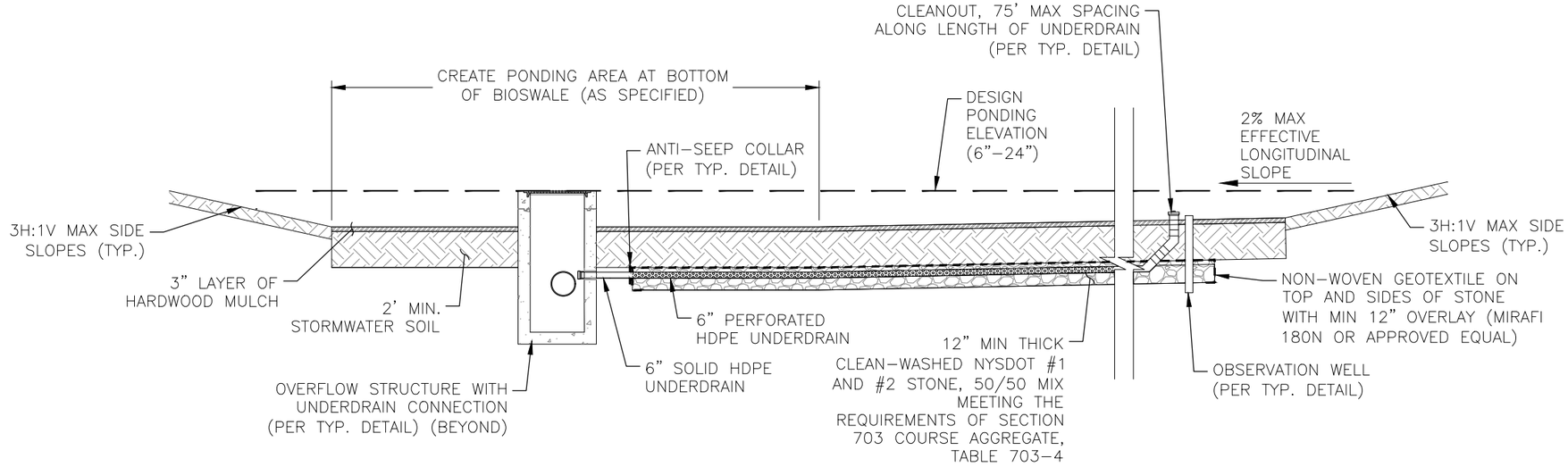


SECTION



PROFILE

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

BIOSWALE

NO.	DATE	REVISION DESCRIPTION	BY

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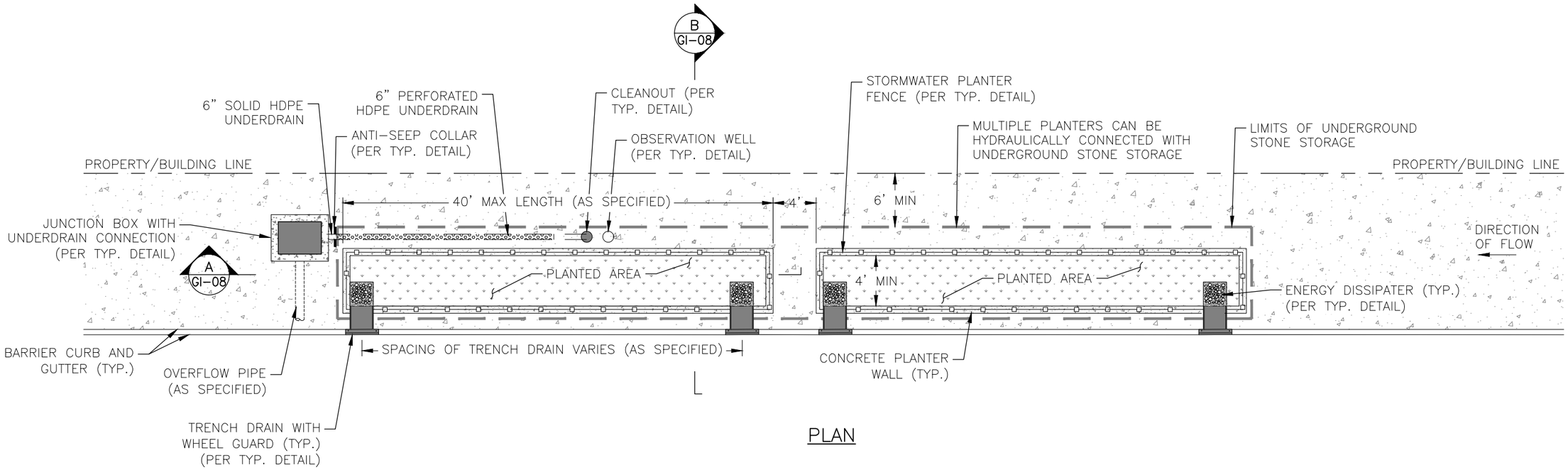

PLAN

NOTES:

1. ALL CONSTRUCTION SHALL BE ADAPTED TO ADDRESS SITE-SPECIFIC CONDITIONS. THE CONTRACTOR SHALL MAINTAIN, AT A MINIMUM, STREET WIDTH, DRAINAGE, BICYCLE LANES, BUS ROUTES, ADA ACCESSIBILITY, AND VEHICLE TURNING MANUEVERS.
2. WATERPROOFING MEASURES CONFORMING TO NYSDOT REQUIREMENTS SHALL BE PROVIDED WHEN DETERMINED BY THE ENGINEER.
3. CUT CUT SPACING SHALL BE DESIGNED TO CONVEY THE INTENDED DESIGN STORM AND SHALL CONSIDER STREET SLOPE AND CONTIBUTING DRAINAGE AREA.
4. THE PLANTER WALL DESIGN AND CONFIGURATION SHALL BE DESIGNED IN COORDINATION WITH STRUCTURAL AND GEOTECHNICAL ENGINEERING INPUT. THE DESIGN DRAWINGS SHALL INCLUDE PLANTER WALL DIMENSIONS, REINFORCEMENT, AND STRUCTURAL FOOTINGS.
5. ALL EXPOSED CONCRETE EDGES OF PLANTER WALL SHALL BE BEVELED.
6. THE LANDSCAPE DESIGN SHALL CONSIDER VEHICULAR SIGHT DISTANCES, CLIMATE, HYDROLOGY, ELEVATION, MAINTENANCE, LIGHT REQUIREMENTS, BLOOM TIME AND COLOR, AND DROUGHT TOLERANCE.
7. UNDERDRAINS SHALL BE SIX (6) INCHES IN DIAMETER AND CONSTRUCTED OF HIGH-DENSITY POLYETHYLENE PIPING WITH A CORRUGATED EXTERIOR AND SMOOTH INNER WALL. UNDERDRAIN PIPING WITHIN THE STONE STORAGE AREAS SHALL BE FULLY-PERFORATED PIPING MEETING THE AASHTO MATERIALS SPECIFICATIONS M294 AND M252 CLASS II.

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

STORMWATER PLANTER (PART 1 OF 4)

NO.	DATE	REVISION DESCRIPTION	BY

SCALE: NTS

DATE: 06/14/2024

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DRAWING NUMBER: GI-06

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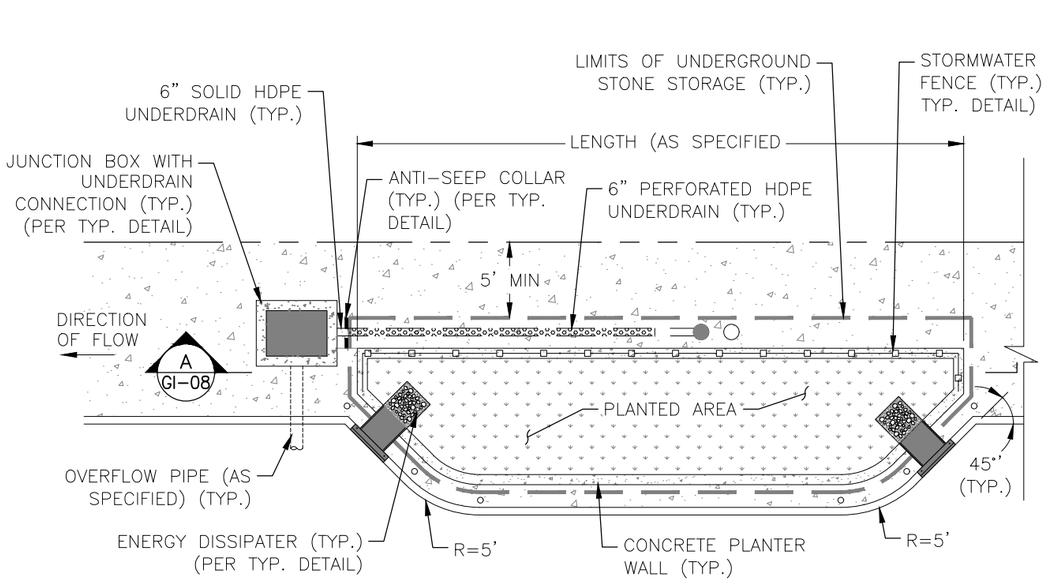
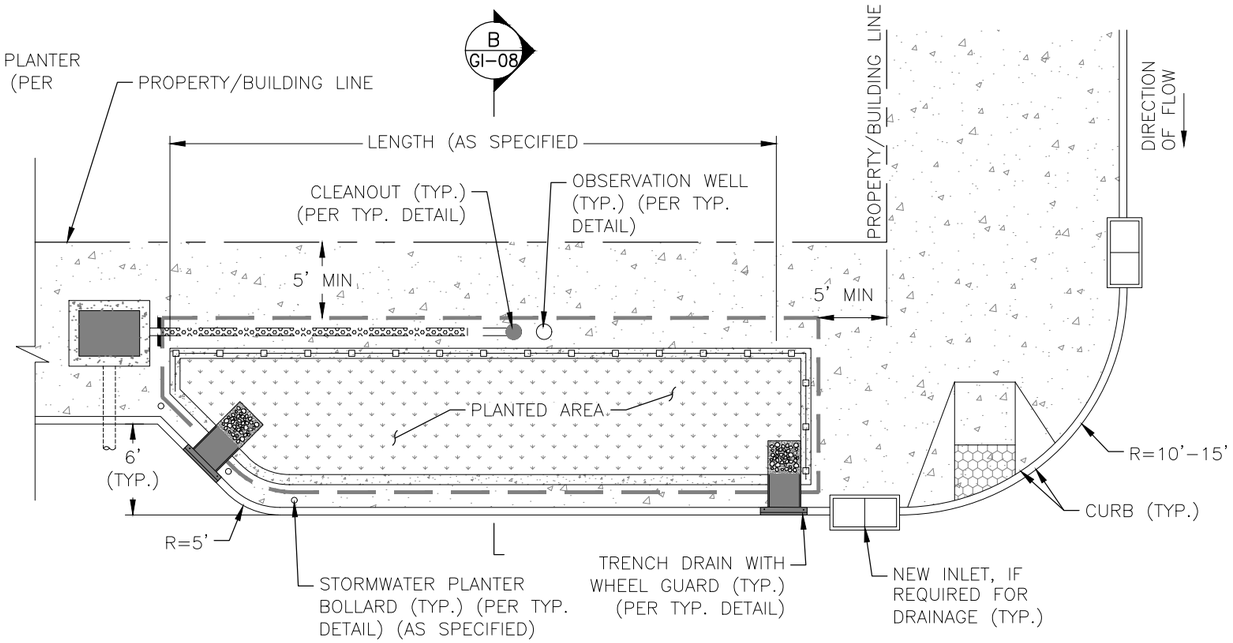


PLAN
MIDBLOCK CURB EXTENSION



PLAN
CORNER CURB EXTENSION

NOTES:

1. ALL CONSTRUCTION SHALL BE ADAPTED TO ADDRESS SITE-SPECIFIC CONDITIONS. THE CONTRACTOR SHALL MAINTAIN, AT A MINIMUM, STREET WIDTH, DRAINAGE, BICYCLE LANES, BUS ROUTES, ADA ACCESSIBILITY, AND VEHICLE TURNING MANUEVERS.
2. WATERPROOFING MEASURES CONFORMING TO NYSDOT REQUIREMENTS SHALL BE PROVIDED WHEN DETERMINED BY THE ENGINEER.
3. CUT CUT SPACING SHALL BE DESIGNED TO CONVEY THE INTENDED DESIGN STORM AND SHALL CONSIDER STREET SLOPE AND CONTIBUTING DRAINAGE AREA.
4. THE PLANTER WALL DESIGN AND CONFIGURATION SHALL BE DESIGNED IN COORDINATION WITH STRUCTURAL AND GEOTECHNICAL ENGINEERING INPUT. THE DESIGN DRAWINGS SHALL INCLUDE PLANTER WALL DIMENSIONS, REINFORCEMENT, AND STRUCTURAL FOOTINGS.
5. ALL EXPOSED CONCRETE EDGES OF PLANTER WALL SHALL BE BEVELED.
6. THE LANDSCAPE DESIGN SHALL CONSIDER VEHICULAR SIGHT DISTANCES, CLIMATE, HYDROLOGY, ELEVATION, MAINTENANCE, LIGHT REQUIREMENTS, BLOOM TIME AND COLOR, AND DROUGHT TOLERANCE.
7. UNDERDRAINS SHALL BE SIX (6) INCHES IN DIAMETER AND CONSTRUCTED OF HIGH-DENSITY POLYETHYLENE PIPING WITH A CORRUGATED EXTERIOR AND SMOOTH INNER WALL. UNDERDRAIN PIPING WITHIN THE STONE STORAGE AREAS SHALL BE FULLY-PERFORATED PIPING MEETING THE AASHTO MATERIALS SPECIFICATIONS M294 AND M252 CLASS II.

BUFFALO
SEWER AUTHORITY
STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS
STORMWATER PLANTER (PART 2 OF 4)

NO.	DATE	REVISION DESCRIPTION	BY

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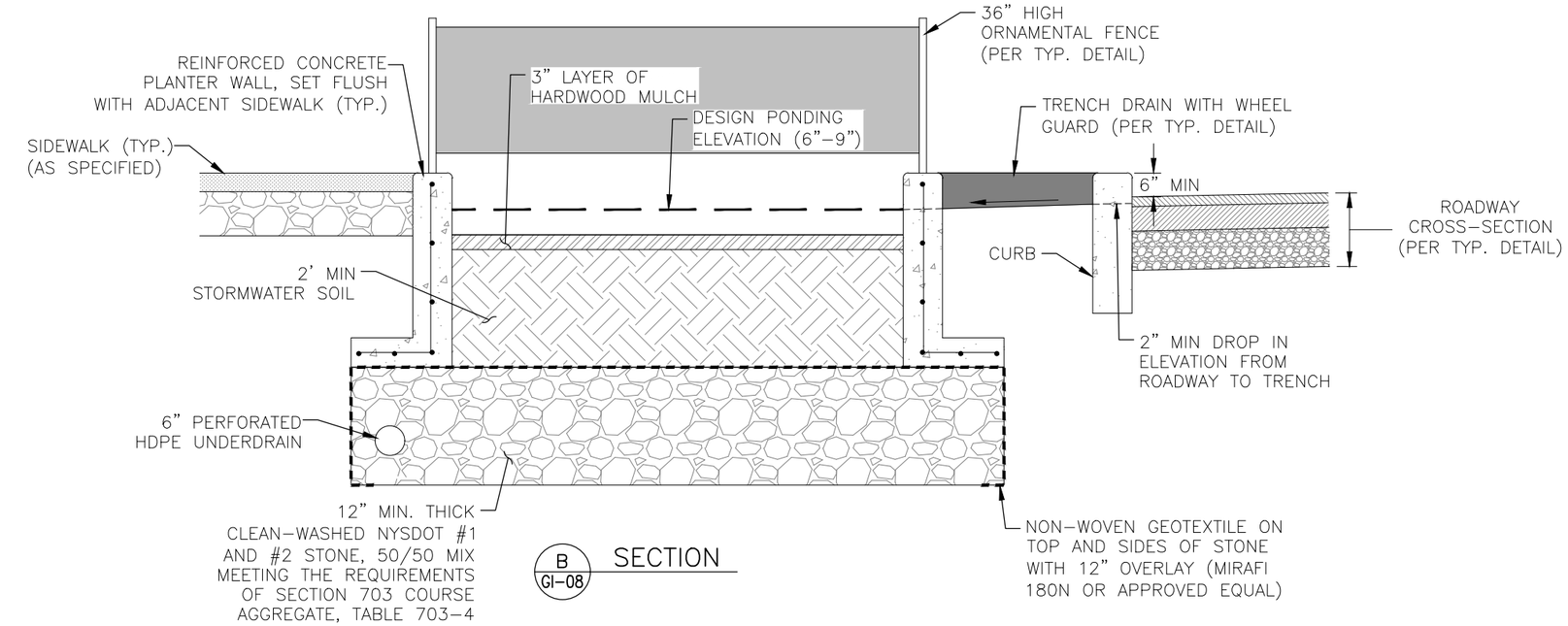

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

STORMWATER PLANTER (PART 3 OF 4)

NO.	DATE	REVISION DESCRIPTION	BY

SCALE: NTS

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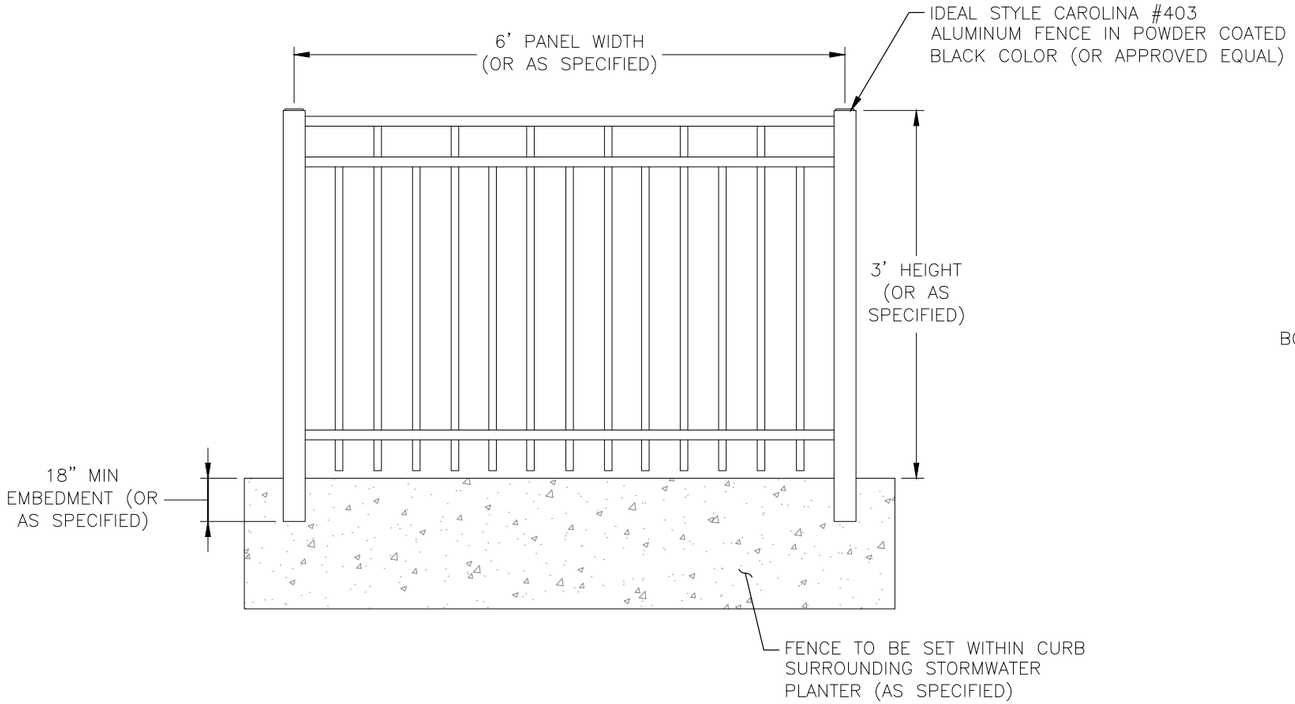
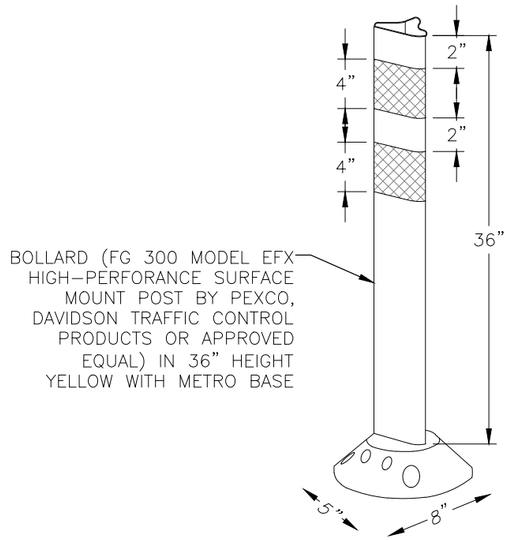


ORNAMENTAL FENCE



BOLLARD

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

STORMWATER PLANTER (PART 4 OF 4)

NO.	DATE	REVISION DESCRIPTION	BY

SCALE: NTS

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DRAWING NUMBER: GI-09

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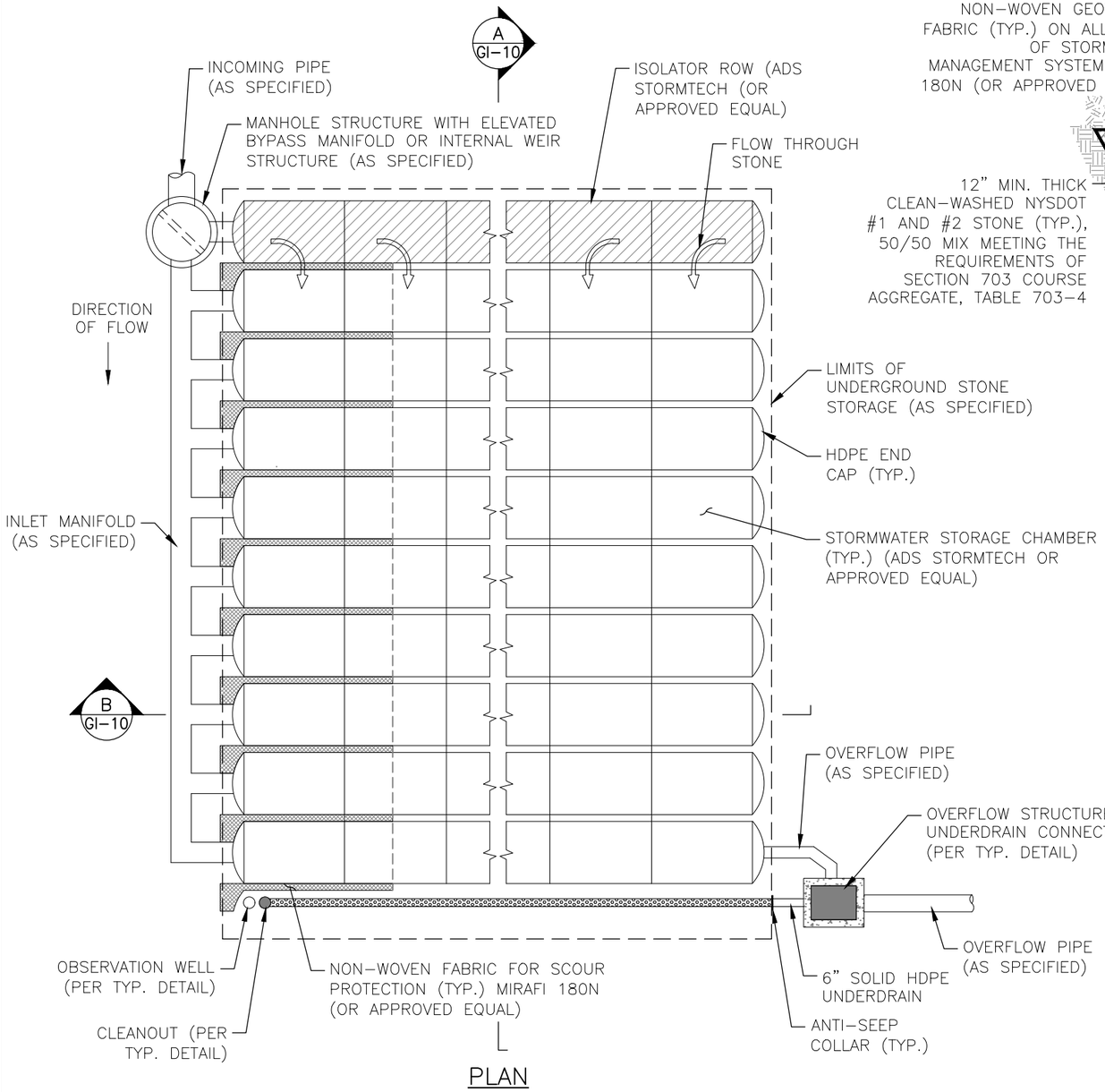

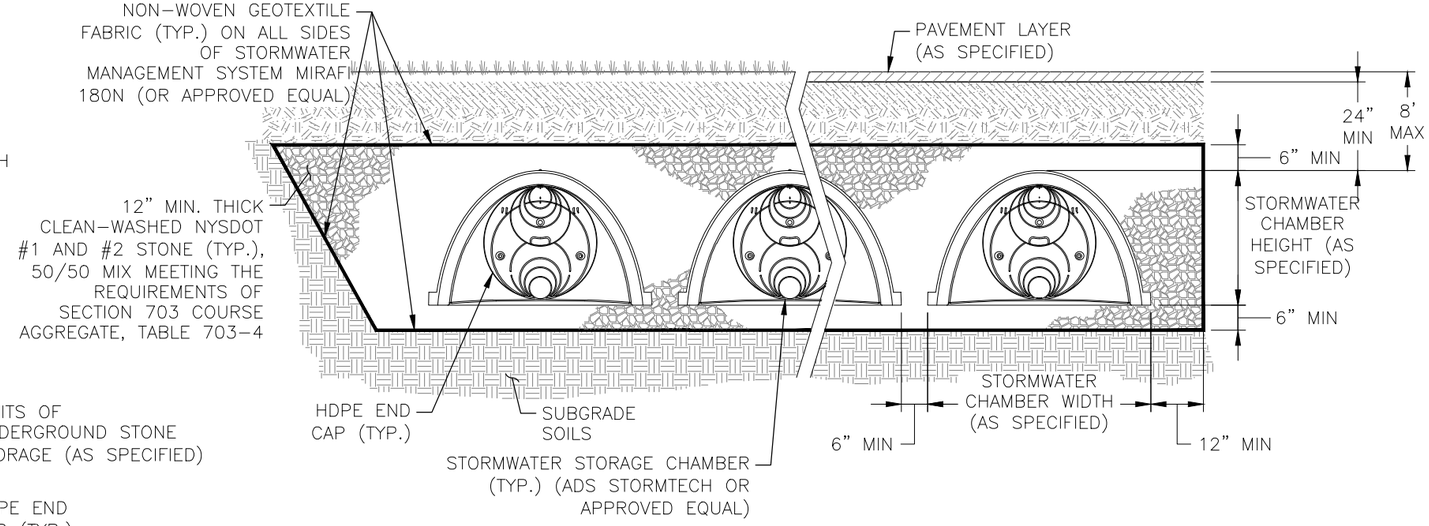

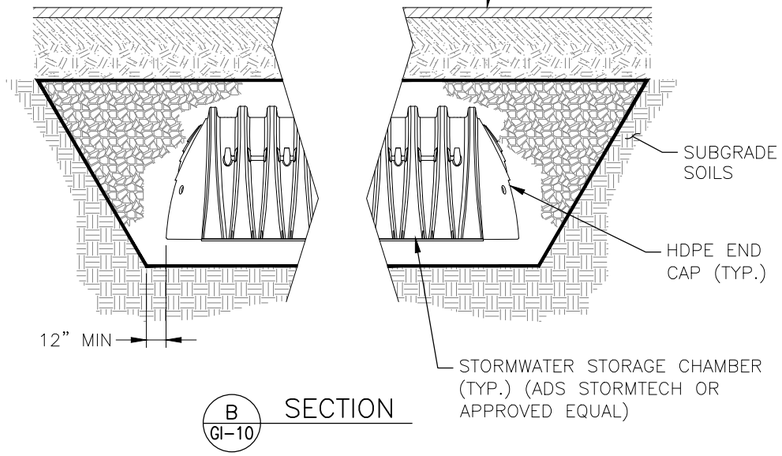

BUFFALO
SEWER AUTHORITY
STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

UNDERGROUND STORMWATER STORAGE SYSTEM (PART 1 OF 2)

NO.	DATE	REVISION DESCRIPTION	BY

SCALE: NTS

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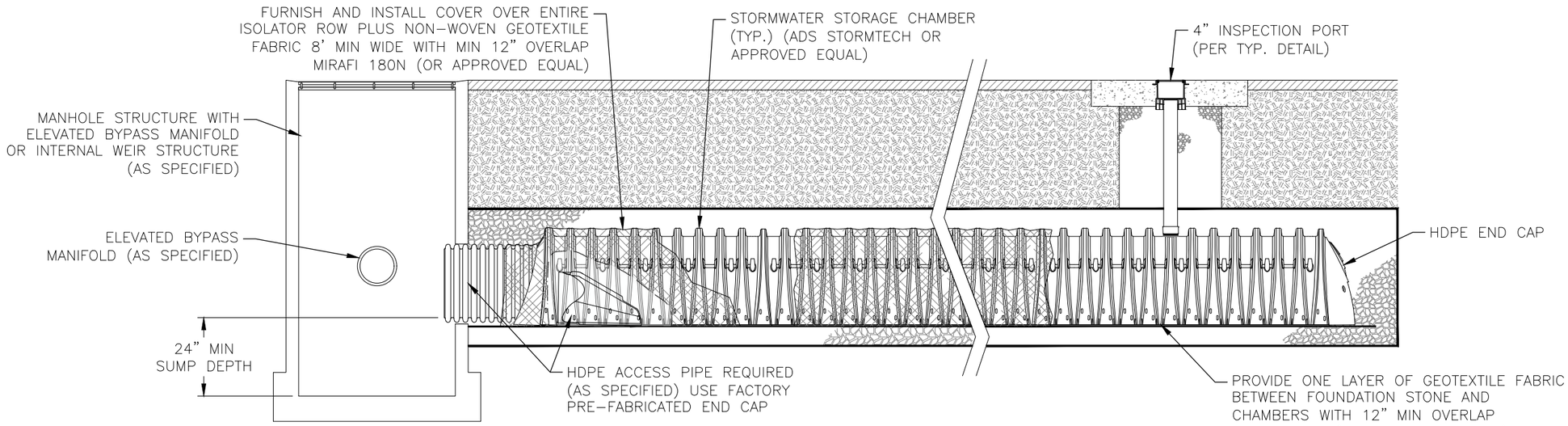


UNDERGROUND STORMTECH CHAMBER STORAGE SYSTEM

INSPECTION AND MAINTENANCE DURING CONSTRUCTION:

STEP 1. INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN.
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED.
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG.
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL).
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS.
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE.
    - B.2.1. MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY.
    - B.2.2. FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE.
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

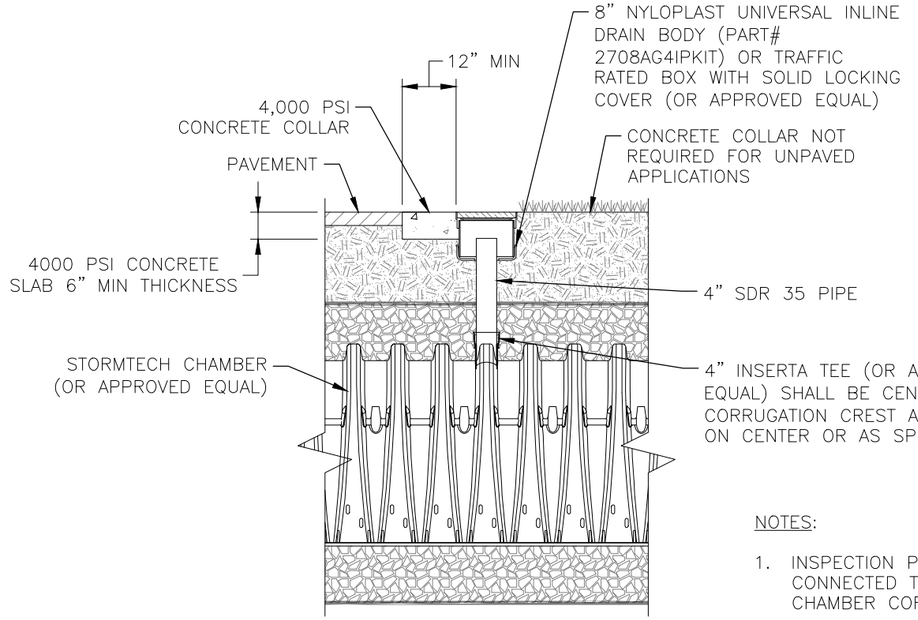
STEP 2. CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" OR MORE IS PREFERRED.
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN.
- C. VACUUM STRUCTURE SUMP AS REQUIRED.

STEP 3. REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4. NSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES:

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



4" PVC INSPECTION PORT

NOTES:

1. INSPECTION PORTS SHALL BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

UNDERGROUND STORMWATER STORAGE SYSTEM (PART 2 OF 2)

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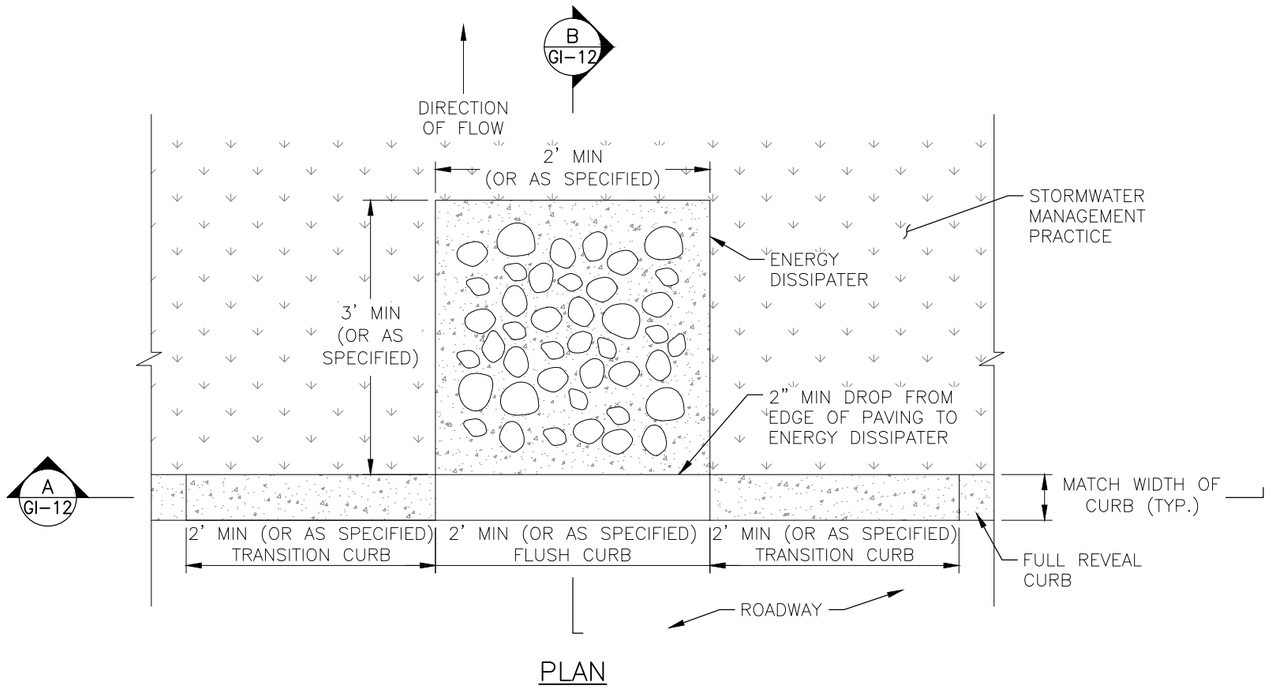
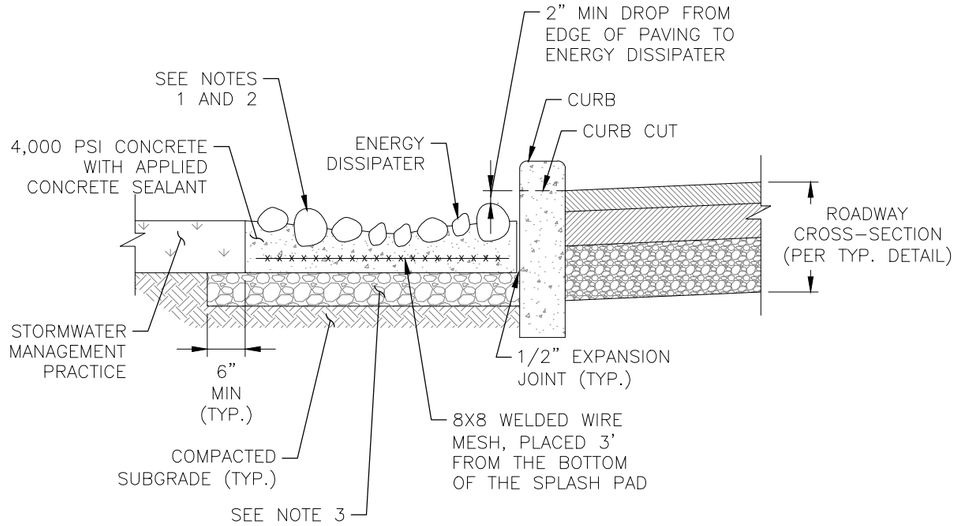
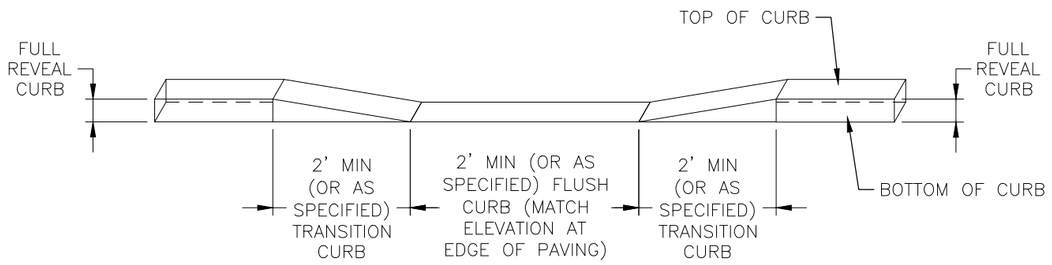


PLAN



B GI-12 SECTION



A GI-12 SECTION

NOTES:

1. D50=6" DIAMETER RIVERSTONE TO BE SET INTO CONCRETE PAD FOLLOWING INITIAL CURING OF CONCRETE. RIVERSTONE TO BE FREE OF JAGGED EDGES. SPACE RIVERTSTONE NO MORE THAN 1" APART.
2. SET TOP OF STONES BELOW INVERT OPENING. ARRANGE RIVERSTONE IN PATTERN THAT PREVENTS LINEAR FLOW PATHS THROUGH ENERGY DISSIPATER. MAKE SIDES SLIGHTLY HIGHER THAN MIDDLE CHANNEL.
3. GRAVEL SUBBASE NYSDOT ITEM #623.02. STORMWATER SOIL AND STONE SUBBASE IMMEDIATELY BELOW AND SURROUNDING ENERGY DISSIPATER SHALL BE COMPACTED TO ENSURE NO LATERAL MOVEMENT PRIOR TO INSTALLATION.

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

CURB CUT

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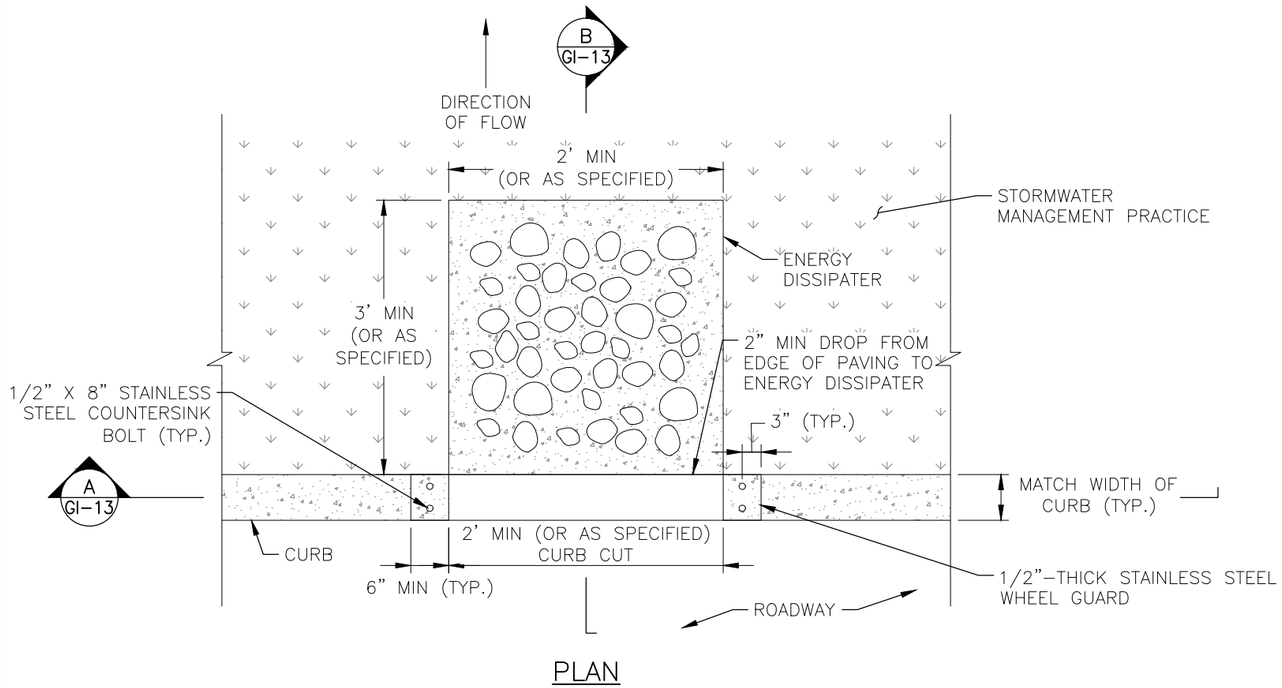
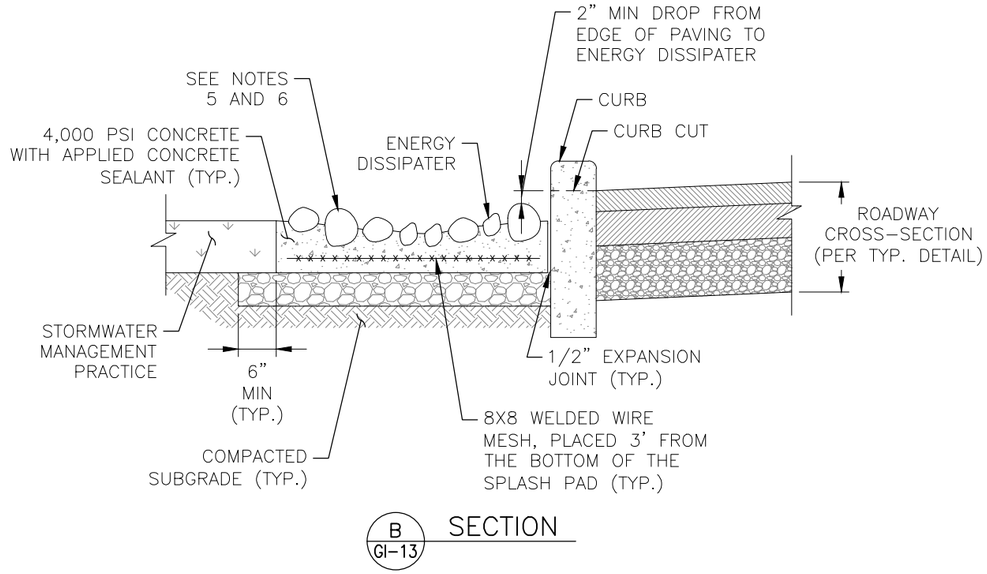


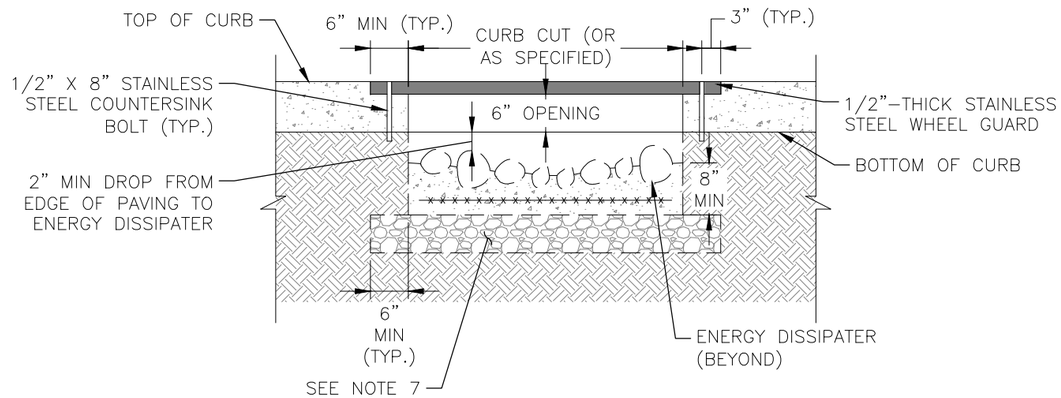
PLAN



B GI-13 SECTION

NOTES:

1. THE WHEEL GUARD SHALL BE INSTALLED TO ALIGN WITH THE PROPOSED CURB CUT WIDTH AND SHOULD EXTEND A MINIMUM OF SIX INCHES ON BOTH SIDES OF THE CURB CUT.
2. THE WHEEL GUARD SHALL BE CONSTRUCTED OF A STEEL PLATE WITH A MINIMUM TENSILE STRENGTH OF 35,000 PSI AND A MINIMUM THICKNESS OF 1/2 INCH.
3. THE WHEEL GUARD AND ASSOCIATED HARDWARE SHALL BE SET FLUSH WITH THE TOP OF THE CURB.
4. THE WHEEL GUARD BOLTS SHALL BE STAINLESS STEEL GRADE 304.
5. D50=6" DIAMETER RIVERSTONE TO BE SET INTO CONCRETE PAD FOLLOWING INITIAL CURING OF CONCRETE. RIVERSTONE TO BE FREE OF JAGGED EDGES. SPACE RIVERTSTONE NO MORE THAN 1" APART.
6. SET TOP OF STONES BELOW INVERT OPENING. ARRANGE RIVERSTONE IN PATTERN THAT PREVENTS LINEAR FLOW PATHS THROUGH ENERGY DISSIPATER. MAKE SIDES SLIGHTLY HIGHER THAN MIDDLE CHANNEL.
7. GRAVEL SUBBASE NYSDOT ITEM #623.02. STORMWATER SOIL AND STONE SUBBASE IMMEDIATELY BELOW AND SURROUNDING ENERGY DISSIPATER SHALL BE COMPACTED TO ENSURE NO LATERAL MOVEMENT PRIOR TO INSTALLATION.



A GI-13 SECTION

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

CURB CUT WITH WHEEL GUARD

NO.	DATE	REVISION DESCRIPTION	BY

SCALE: NTS

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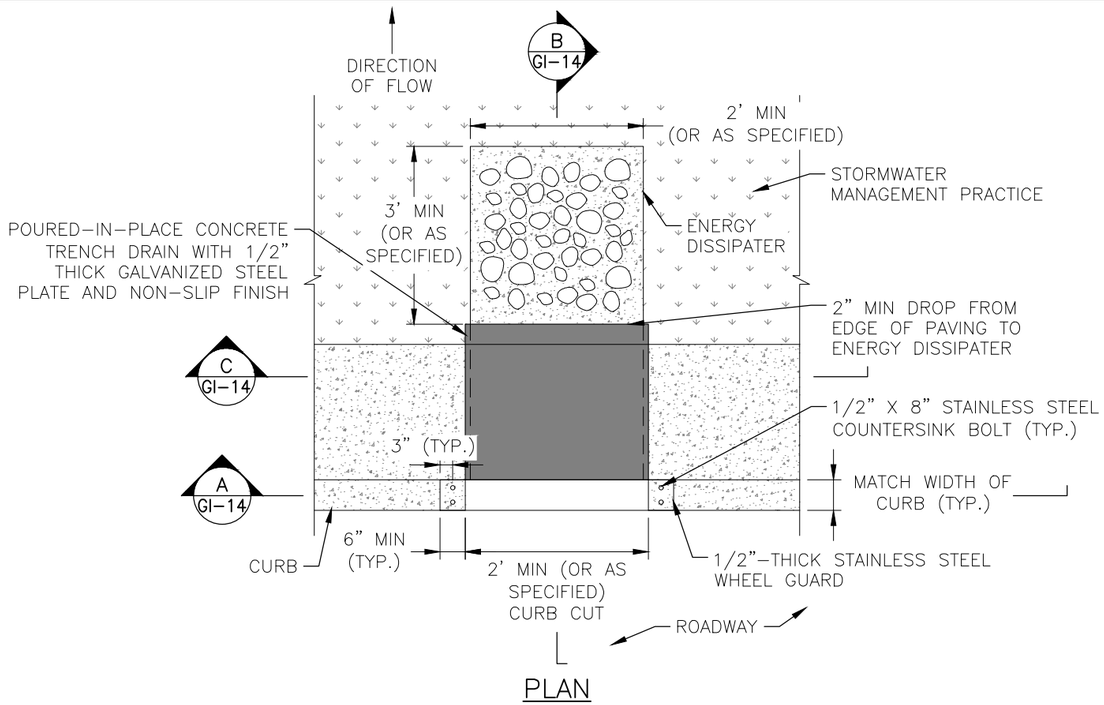


PLAN

NOTES:

1. THE TRENCH DRAIN COVER SHALL BE CONSTRUCTED OF A STEEL PLATE WITH A MINIMUM TENSILE STRENGTH OF 35,000 PSI AND A MINIMUM THICKNESS OF ONE-HALF (1/2) INCH. THE GRATE SHALL BE CUT TO EXTEND CONTINUOUSLY FROM THE BACK OF CURB ALONG THE STREET TO THE INTERIOR PLANTING WALL.
2. THE WHEEL GUARD SHALL BE INSTALLED BE DESIGNED TO ALIGN WITH THE PROPOSED CURB CUT WIDTH AND SHOULD EXTEND A MINIMUM OF SIX INCHES ON BOTH SIDES OF THE CURB CUT.
3. THE WHEEL GUARD SHALL BE CONSTRUCTED OF A STEEL PLATE WITH A MINIMUM TENSILE STRENGTH OF 35,000 PSI AND A MINIMUM THICKNESS OF 1/2 INCH.
4. THE WHEEL GUARD AND ASSOCIATED HARDWARE SHALL BE SET FLUSH WITH THE TOP OF THE CURB.
5. THE WHEEL GUARD BOLTS SHALL BE STAINLESS STEEL GRADE 304.
6. D50=6" DIAMETER RIVERSTONE TO BE SET INTO CONCRETE PAD FOLLOWING INITIAL CURING OF CONCRETE. RIVERSTONE TO BE FREE OF JAGGED EDGES. SPACE RIVERTSTONE NO MORE THAN 1" APART.
7. SET TOP OF STONES BELOW INVERT OPENING. ARRANGE RIVERSTONE IN PATTERN THAT PREVENTS LINEAR FLOW PATHS THROUGH ENERGY DISSIPATER. MAKE SIDES SLIGHTLY HIGHER THAN MIDDLE CHANNEL.
8. GRAVEL SUBBASE NYSDOT ITEM #623.02. STORMWATER SOIL AND STONE SUBBASE IMMEDIATELY BELOW AND SURROUNDING ENERGY DISSIPATER SHALL BE COMPACTED TO ENSURE NO LATERAL MOVEMENT PRIOR TO INSTALLATION.

L2x2x1/4 GALV. STEEL (A)

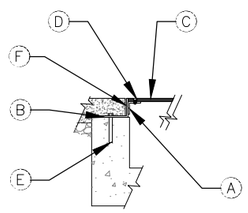
L5X3X1/4 GALV. STEEL (B)

1/2" GALV. PLATE (C)

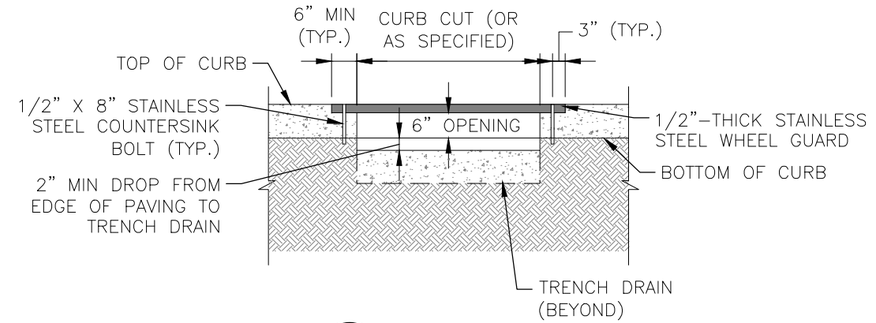
3/8" DIA. GALV. COUNTERSINK SELF DRILLING SCREW @12" O.C. (D)

3/8" DIA. ANCHOR, 4" EMBEDMENT LOCATE 12" O.C. (E)

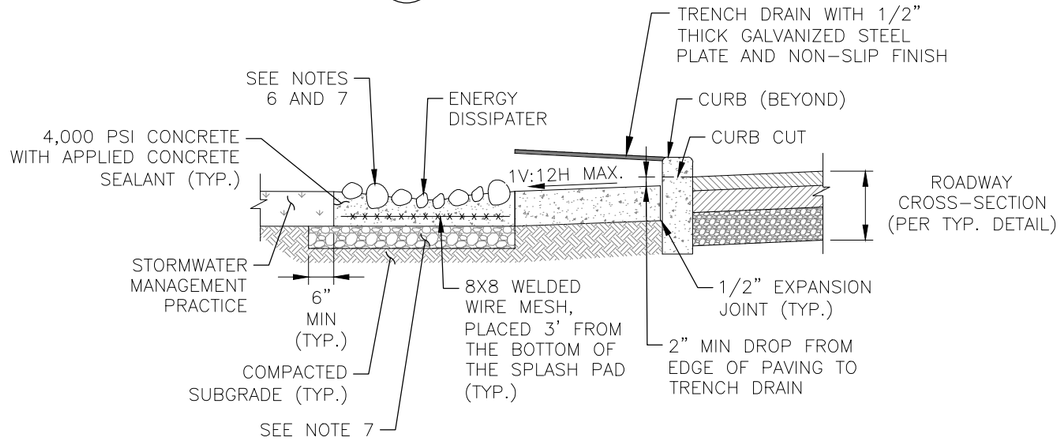
1/2" CLOSED CELL FOAM EXPANSION JOINT (F)



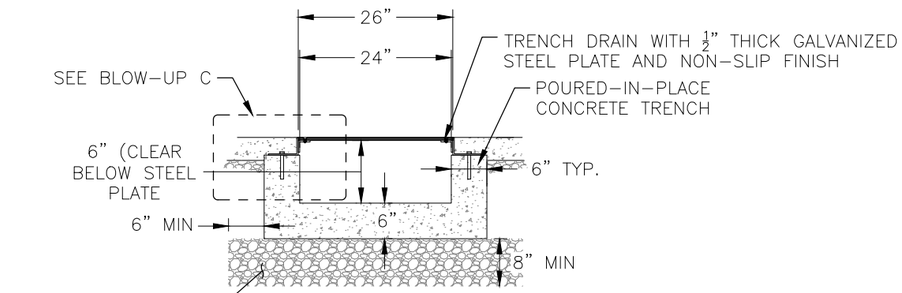
BLOW-UP C



A GI-14 SECTION



B GI-14 SECTION



C GI-14 SECTION

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

TRENCH DRAIN WITH WHEEL GUARD

NO.	DATE	REVISION DESCRIPTION	BY

SCALE: NTS

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BUFFALO
SEWER AUTHORITY
STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

CATCH BASIN

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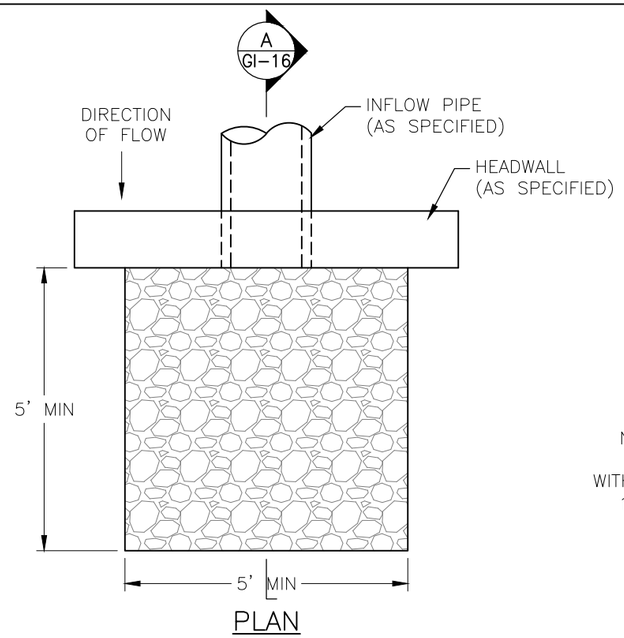
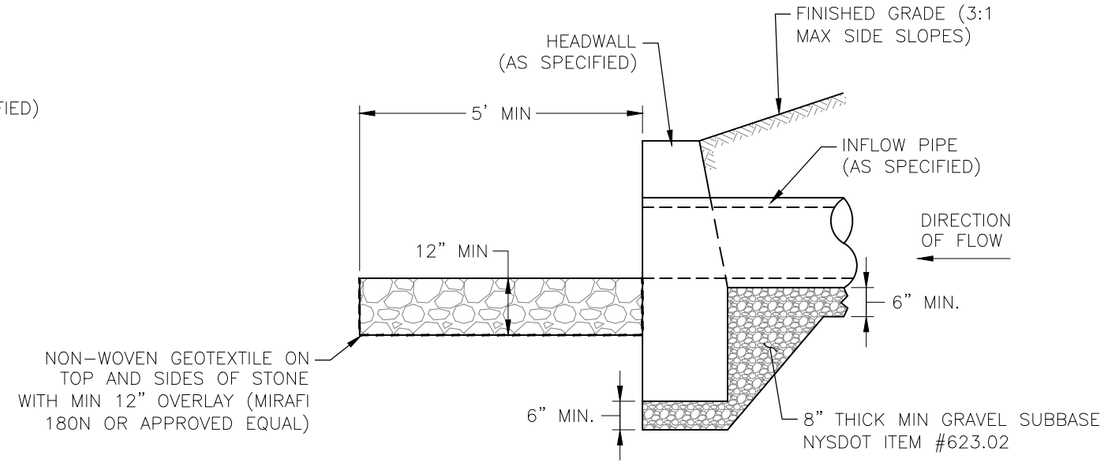
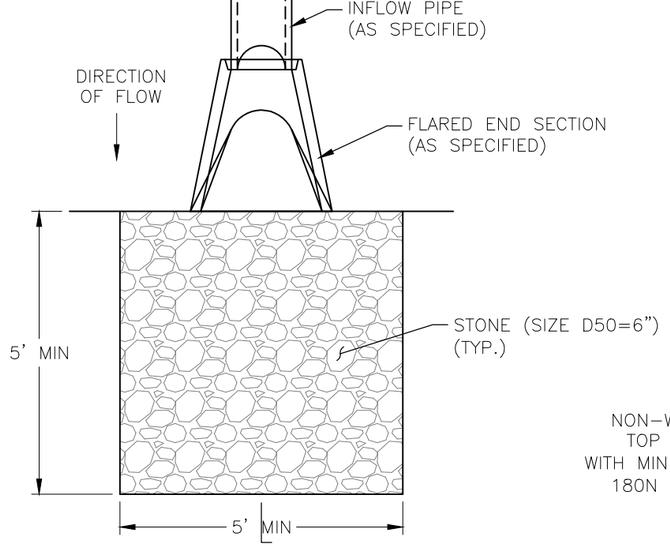


PLAN



A GI-16 SECTION



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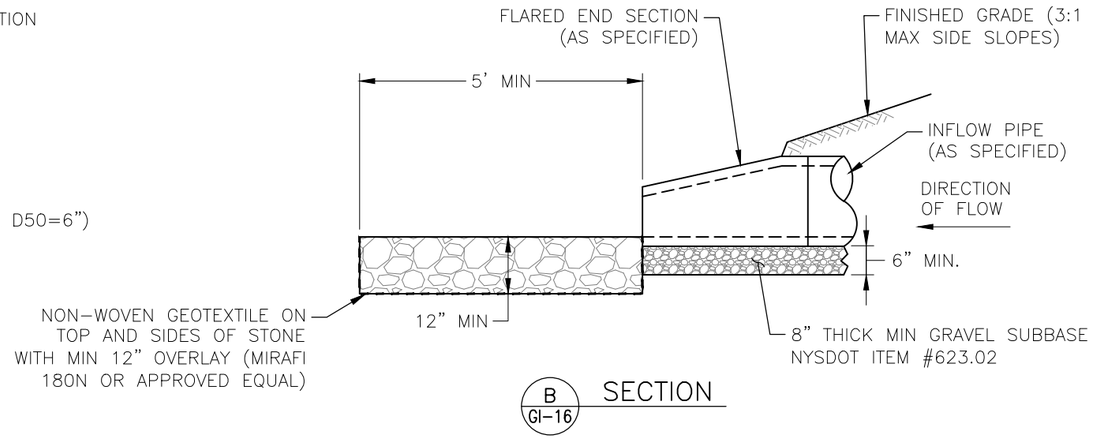

B GI-16 SECTION

NOTES:

1. STONE SHALL CONFORM TO NYSDOT STANDARD SPECIFICATIONS.
2. ALL STONE TO BE SIZE D50=6" EXCEPT WHERE NOTED.

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

STONE APRON OUTLET PROTECTION

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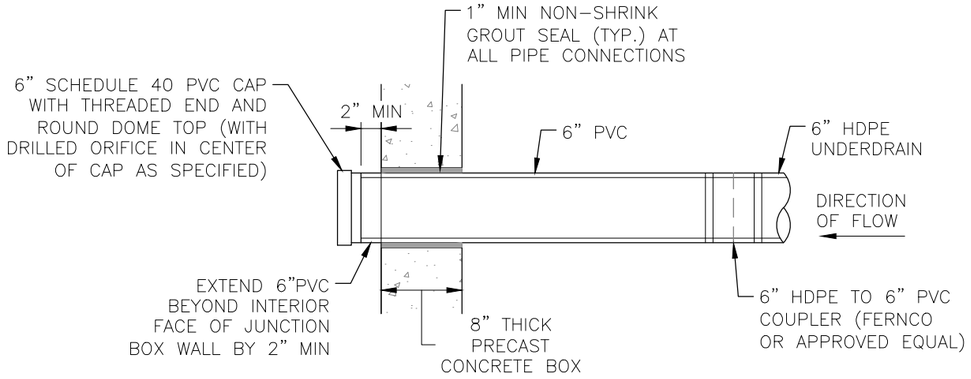
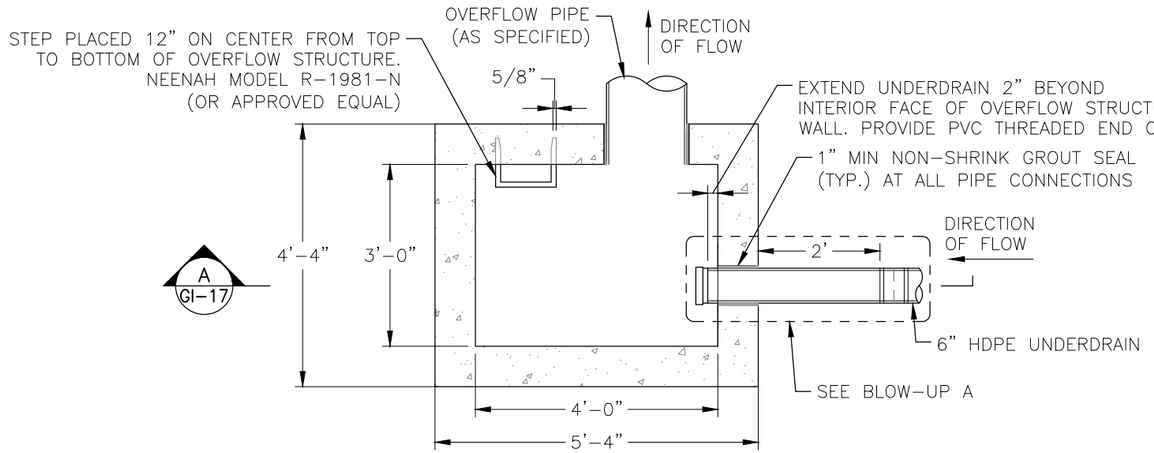


BLOW-UP A



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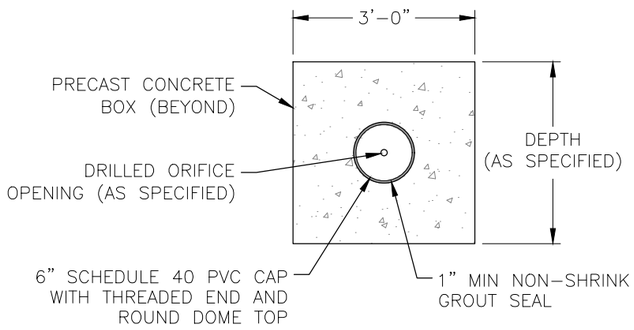
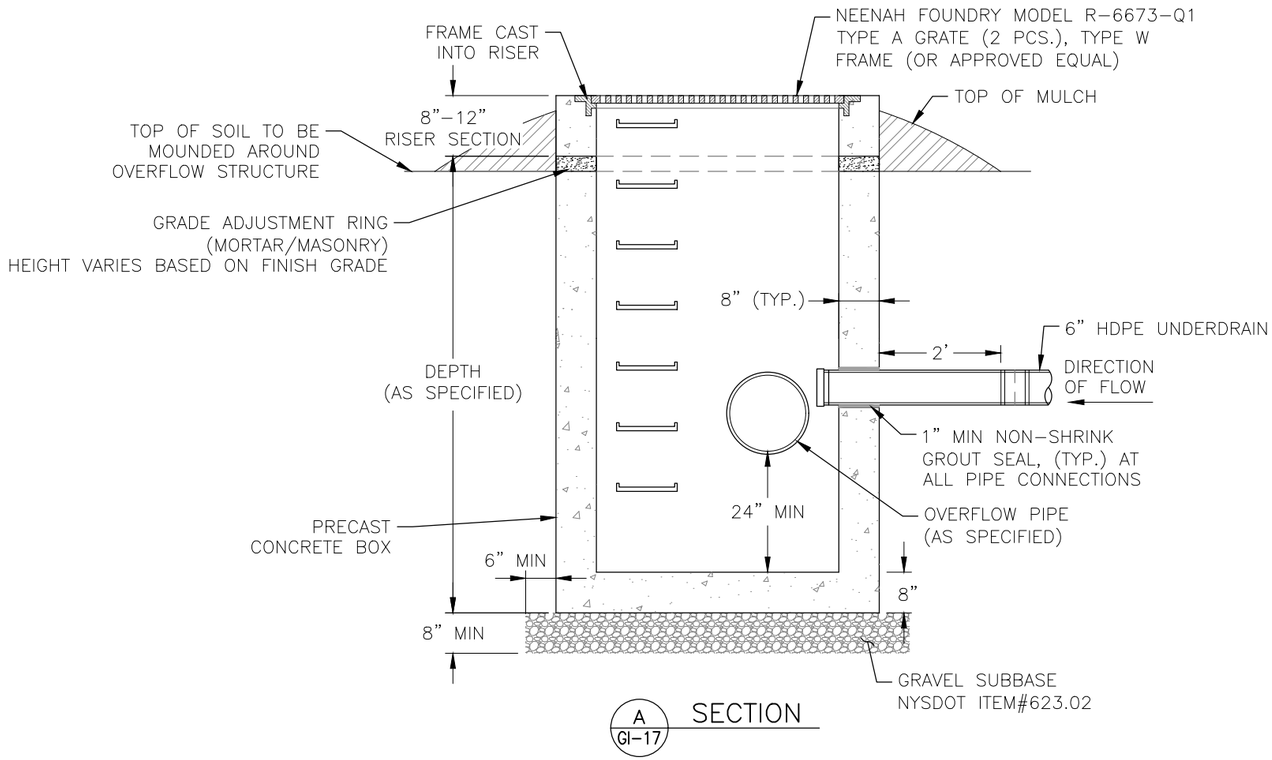


DRILLED ORIFICE DETAIL



A
GI-17
SECTION

NOTES:

1. ALL JOINTS, GRADE ADJUSTMENTS, AND CONNECTIONS SHALL BE WATERTIGHT.
2. SUBGRADE BELOW DRAINAGE STRUCTURE SHALL BE COMPACTED EARTH

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

OVERFLOW STRUCTURE WITH UNDERDRAIN CONNECTION

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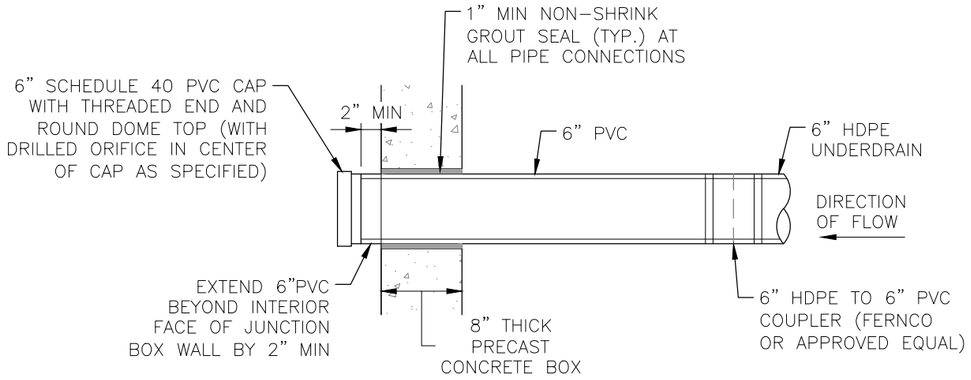

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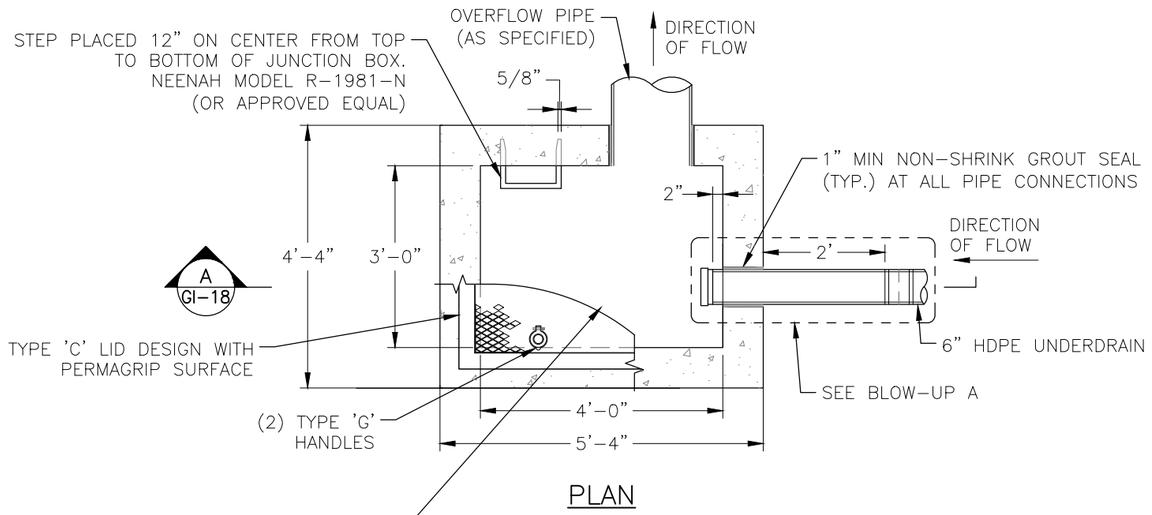
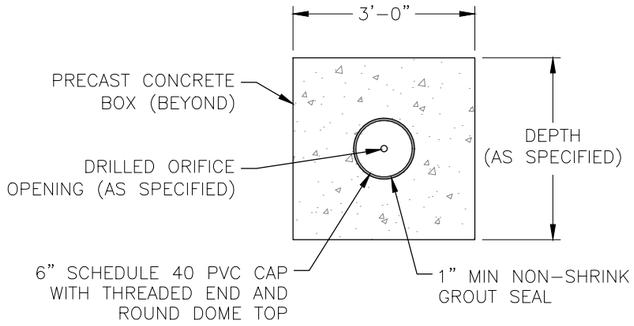


PLAN



DRILLED ORIFICE DETAIL

A GI-18 SECTION

NOTES:

1. ALL JOINTS, GRADE ADJUSTMENTS, AND CONNECTIONS SHALL BE WATERTIGHT.
2. JUNCTION BOX GRATE SHALL BE ADA COMPLIANT AND SHALL BE ADJUSTED TO MATCH THE GRADE OF THE SURROUNDING PAVEMENT.

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

JUNCTION BOX WITH UNDERDRAIN CONNECTION

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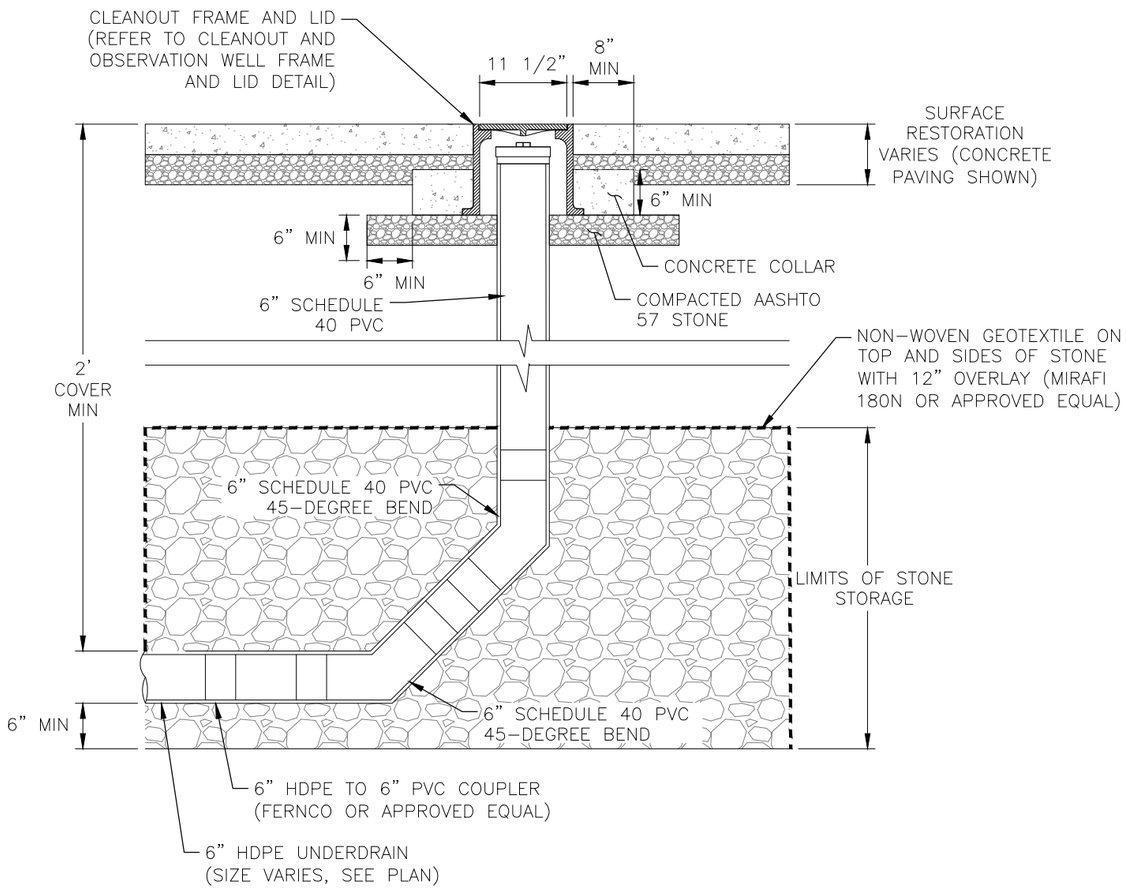
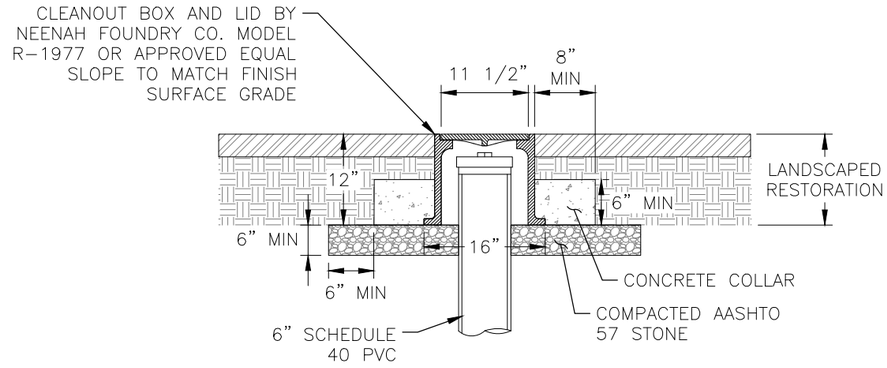
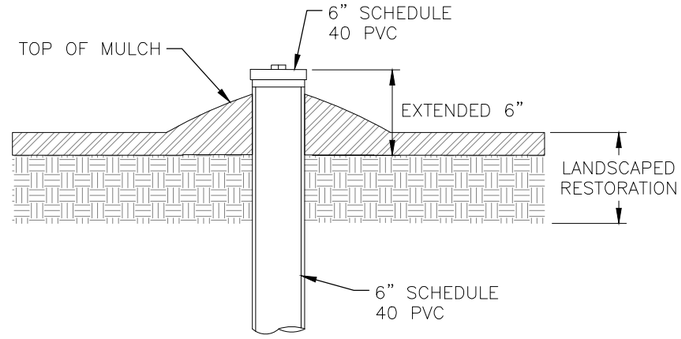


SECTION



AT LANDSCAPED AREAS
(OPTION A)



AT LANDSCAPED AREAS
(OPTION B)

NOTES:

1. CLEANOUTS AND OBSERVATION WELLS SHALL BE AT LEAST SIX (6) INCHES IN DIAMETER AND CONSTRUCTED OF RIGID SCHEDULE 40 PVC PIPE.
2. THE PREFERRED LOCATION FOR A CLEANOUT OR OBSERVATION WELL IS WITHIN A PAVED AREA THAT IS EASILY ACCESSIBLE FOR MAINTENANCE.
3. ALL JOINTS, GRADE ADJUSTMENTS, AND CONNECTIONS SHALL BE WATERTIGHT.
4. STORMWATER SOIL SHALL BE COMPACTED AROUND RISER PIPE AS NEEDED TO PREVENT LATERAL MOVEMENT.

BUFFALO SEWER AUTHORITY
STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

UNDERDRAIN CLEANOUT

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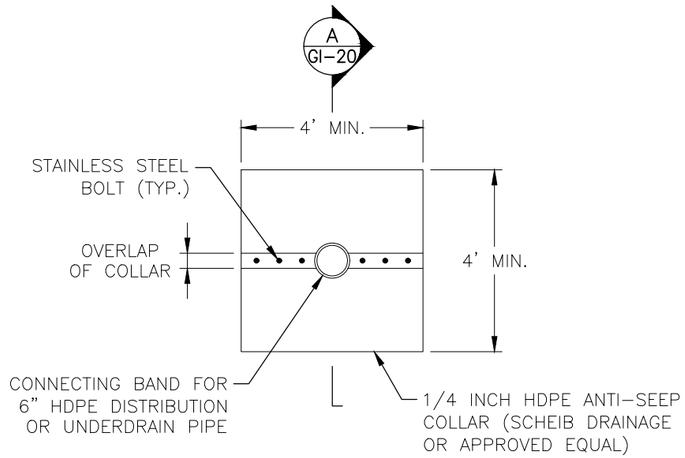
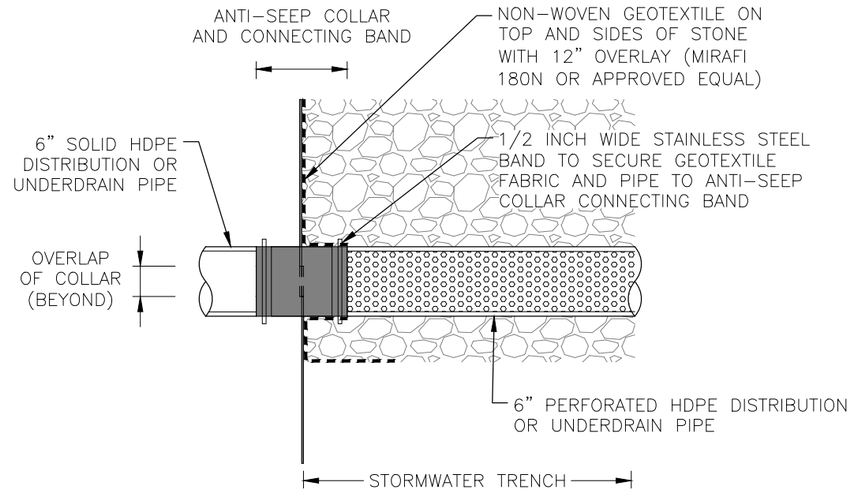


ELEVATION



A / GI–20 SECTION

NOTES:

1. ANTI–SEEP COLLAR SHALL BE USED WHEREVER UNDERDRAIN OR DISTRIBUTION PIPE ENTERS OR EXITS THE STORMWATER STORAGE TRENCH.
2. ANTI–SEEP COLLAR SHALL BE QUARTER–INCH (1/4") HIGH–DENSITY POLYETHYLENE SHEETS.
3. ALL METAL FITTINGS AND ATTACHMENTS SHALL BE NYLON OR STAINLESS STEEL (GRADE 304 OR BETTER).
4. ANTI–SEEP COLLAR SHALL BE SEALED WITH TAR OR MASTIC PER MANUFACTURER'S SPECIFICATIONS.

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

ANTI-SEEP COLLAR

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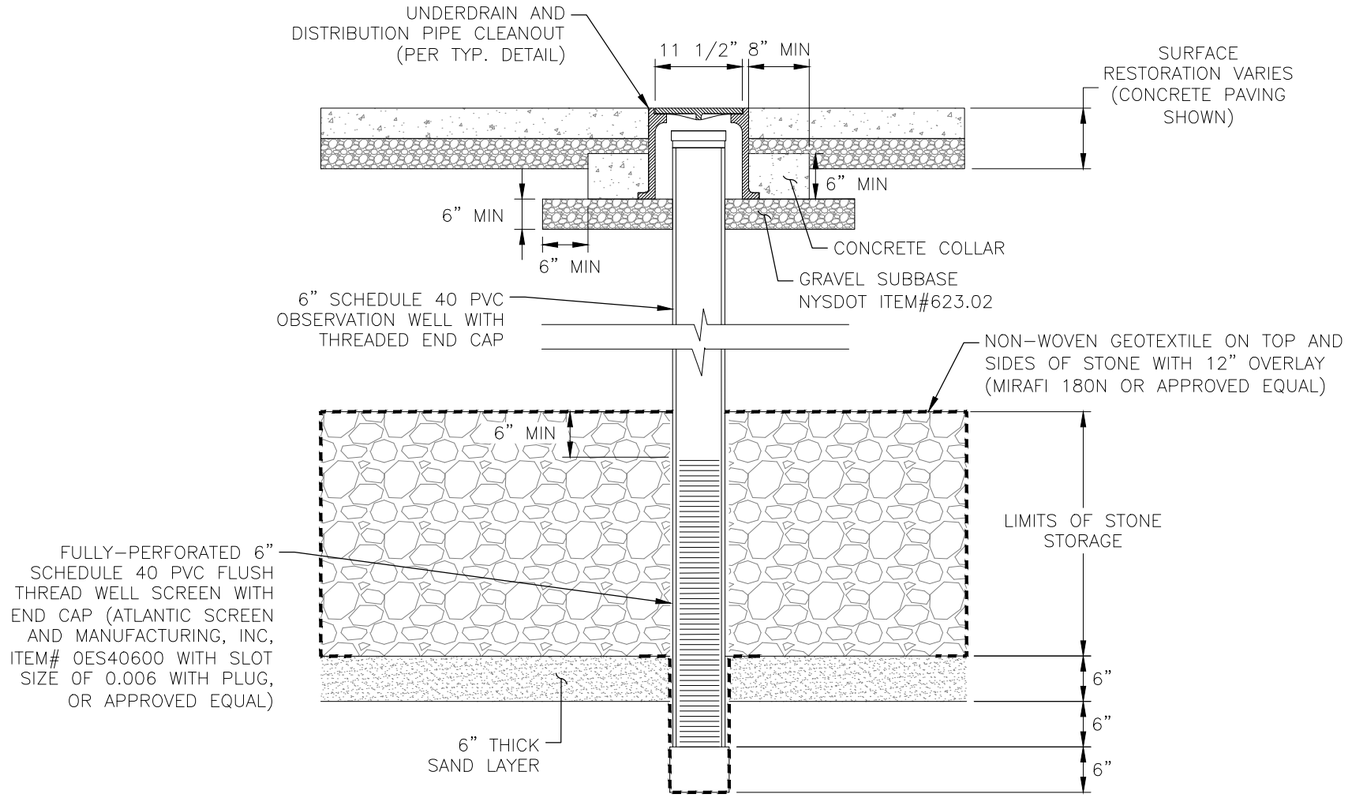

SECTION

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

OBSERVATION WELL

NO.	DATE	REVISION DESCRIPTION	BY

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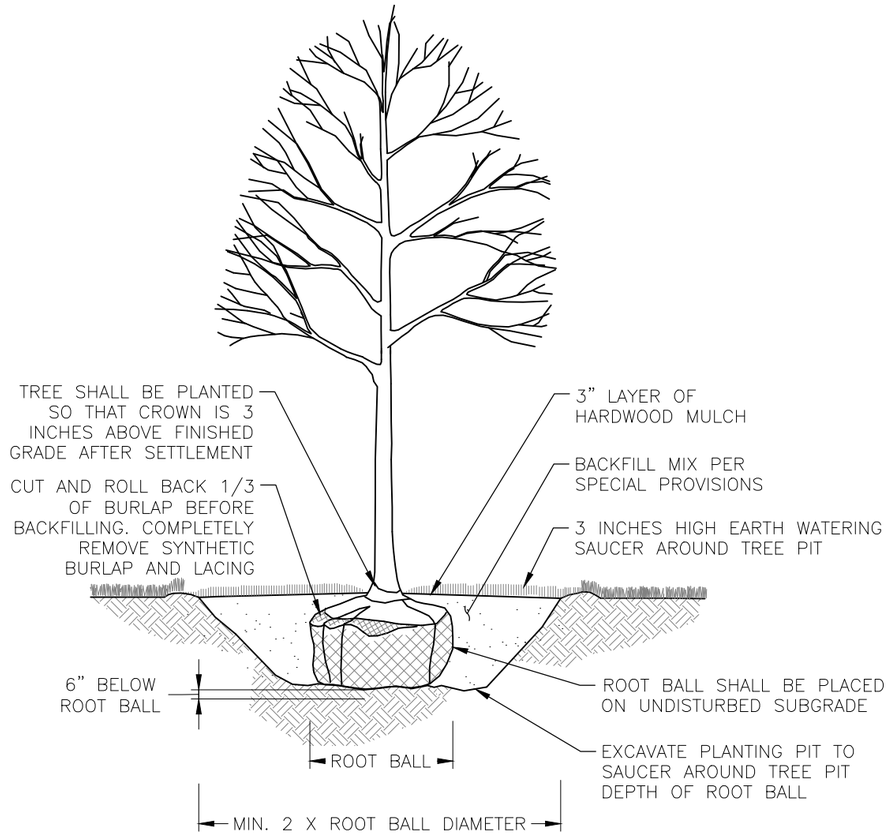
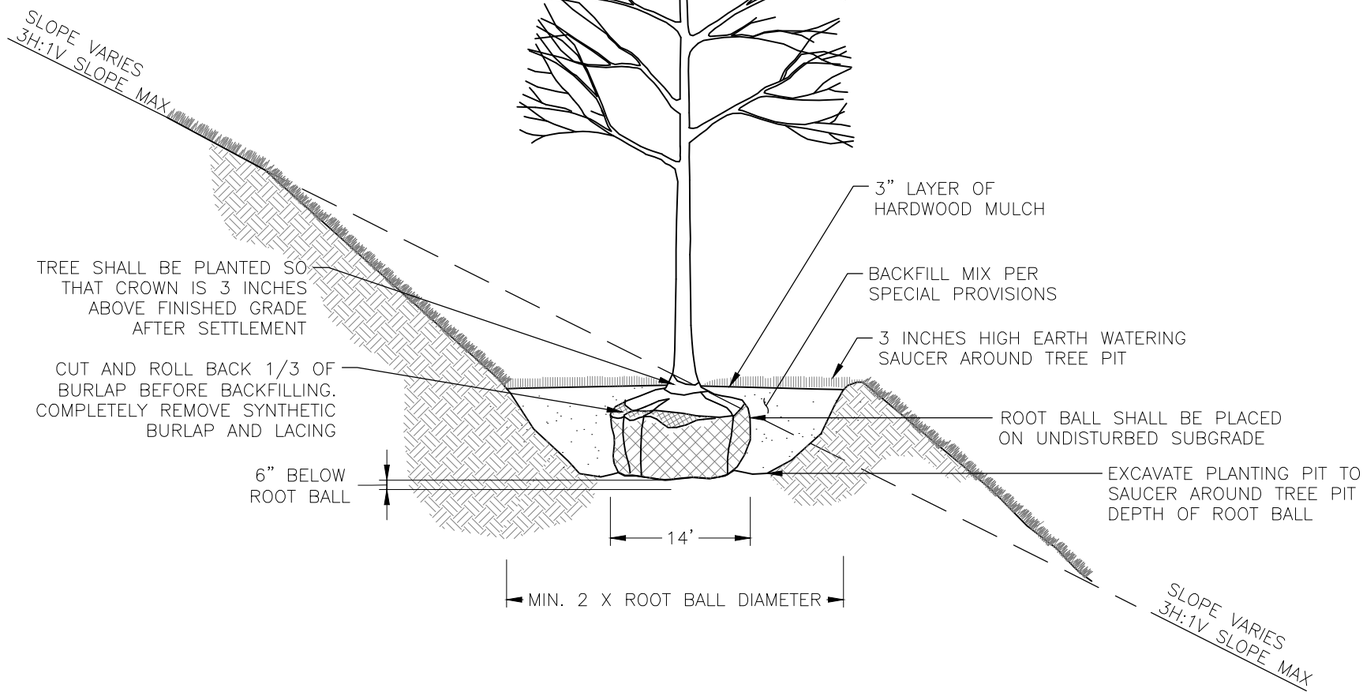
NOTES:

1. THE CONTRACTOR SHALL FURNISH & INSPECT A ROOT BARRIER SUITABLE FOR THE TYPE OF TREE SPECIFIED FOR ALL THE PROPOSED TREE PLANTINGS. COSTS SHALL BE INCIDENTAL TO THE UNIT PRICE COST PER EACH TREE.
2. WATERING SAUCER SHALL BE FLOODED TWICE DURING THE FIRST 24 HOURS AFTER PLANTING.
3. DO NOT CUT LEADER.
4. TREE WRAP SHALL NOT BE USED.
5. TREE SHALL BE SET PLUMB.



FLAT SURFACE TREE PLANTING



SLOPED SURFACE TREE PLANTING

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

PLANTINGS (PART 1 OF 2)

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PLANTING NOTES:

1. ALL PLANT MATERIAL — SHALL BE GUARANTEED TO REMAIN ALIVE AND HEALTHY FOR ONE FULL CALENDAR YEAR FROM TIME OF PROVISIONAL ACCEPTANCE

2. BARK MULCHING — USED SHREDDED PINE BARK; FREE OF STICKS, DIRT, DUST, AND DEBRIS, IN ALL THE PLANTING BED AREAS AND AROUND TREES. A DEPTH OF (4) INCHES THICK SHALL BE PLACED ON THE FINISH GRADE OF ALL PLANTS UNLESS OTHERWISE SPECIFIED.

3. TREE STAKING — REMOVE STAKES AFTER ONE GROWING SEASON.

4. TREE WRAPPING — USE AS APPROPRIATE. CHECK THE WRAP FREQUENTLY AND REMOVE DURING PERIODS ACTIVE GROWTH.

5. TOPSOIL MIX — THE BACK–FILL MIX SHALL BE COMPOSED OF 95% SCREENED LOAM AND 5% CANADIAN SPHAGNUM PEAT MOSS OR EQUAL. NO FERTILIZER IS REQUIRED IN THE TOPSOIL MIX.

6. LAWN SEED AREAS — FIRST, ROUGH GRADE AREA AS REQUIRED. THEN INSTALL (6) INCHES OF SCREENED LOAM IN THE LAWN AREAS. FINE GRADE LOAM TO AN EVEN SURFACE. SEED AREA NEAR BUILDING THAT IS IRRIGATED WITH A "CLASSIC SUNNY TURF MIX" BY LESCO INC. (603–647–4138) OR EQUAL. SEED AREA AWAY FROM BUILDING THAT IS NOT IRRIGATED WITH "PARK AND ATHLETIC MIX" BY LESCO INC. OR EQUAL. LIME AREA AT A RATE OF 50 LBS. PER 1000 SQ.FT. USE A STARTER FERTILIZER AND APPLY AS RECOMMENDED BY SUPPLIER. FOR EROSION CONTROL WHERE NECESSARY, USE CLEAN STRAW MULCH OR OTHER APPROVED MATERIALS.

SLOPE SEED AREA (TYPE 44)	MIN. PURITY	MIN. GERMINATION	KILOGRAMS / HECTARES (LBS / AC.)
CREEPING RED FESCUE	96%	85%	40 (35)
PERENNIAL RYEGRASS	98%	90%	35 (30)
REDTOP	95%	80%	5 (5)
ALSIKE CLOVER	97%	90 (e) %	5 (5)
BIRDSFOOT TREFOIL	98%	80 (e) %	5 (5)
		TOTAL	90 (80)

7. NATIVE GRASS SEED MIX — FIRST, ROUGH GRADE AREA AS REQUIRED. THEN INSTALL (4) INCHES OF SCREENED LOAM IN THESE AREAS. SEED AREA WITH "FINE FESCUE LINKS BLEND" AND USE AS RECOMMENDED BY THE SUPPLIER,LESCO, INC (603–647–4138) OR EQUAL, LIME AT A RATE OF 50 LBS. PER 1000 SQ.FT. APPLY A STARTER FERTILIZER AS RECOMMENDED BY SUPPLIER. USE EROSION CONTROL NETTING AND CLEAN STRAW MULCH TO HOLD MATERIAL IN PLACE DURING GERMINATION.

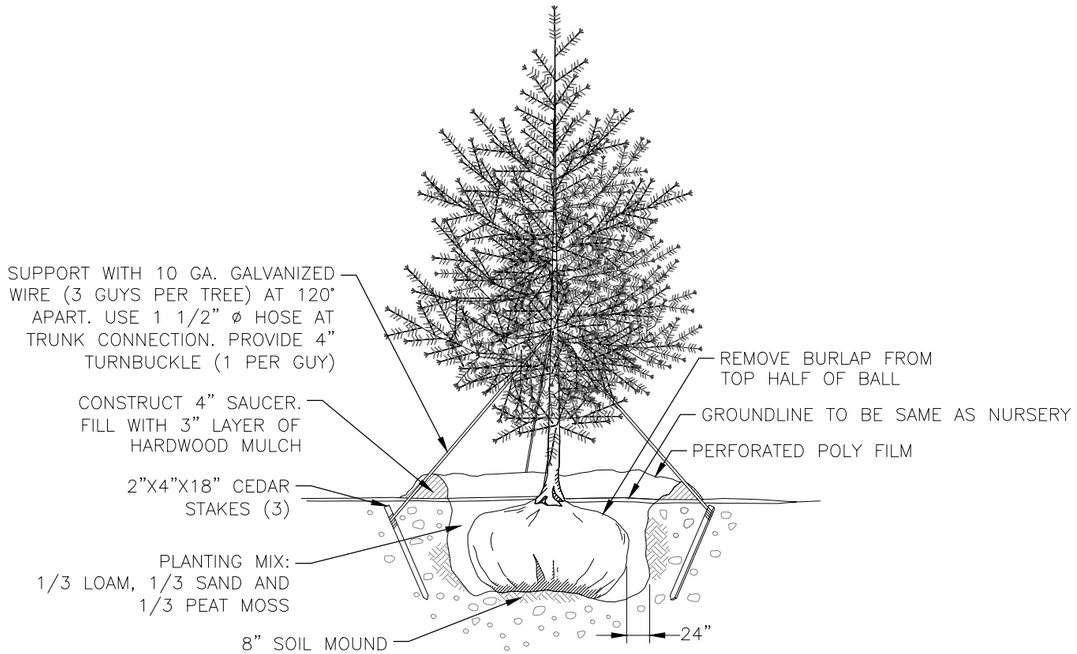
8. PRUNING AND REPAIR — ALL PLANTS SHALL BE NEATLY PRUNED AND/OR CUPPED TO PRESERVE A NATURAL CHARACTER OF THE PLANTS. BROKEN OR BADLY BRUISED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT BY A SHARP TOOL. ALL ACCIDENTAL DAMAGE TO TREES OR SHRUBS OCCURRING DURING PLANTING, WHICH IS NOT SO GREAT AS TO NECESSITATE REMOVAL OF THE BRANCH OR REPLACEMENT OF THE PLANT, SHALL BE PROPERLY TREATED IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE.

9. WATERING — THOROUGHLY WATER ALL PLANTS IMMEDIATELY AFTER PLANTING. MAINTAIN WATERING ON A REGULAR BASIS UNTIL PLANTS HAVE TAKEN (2–3 MONTHS).

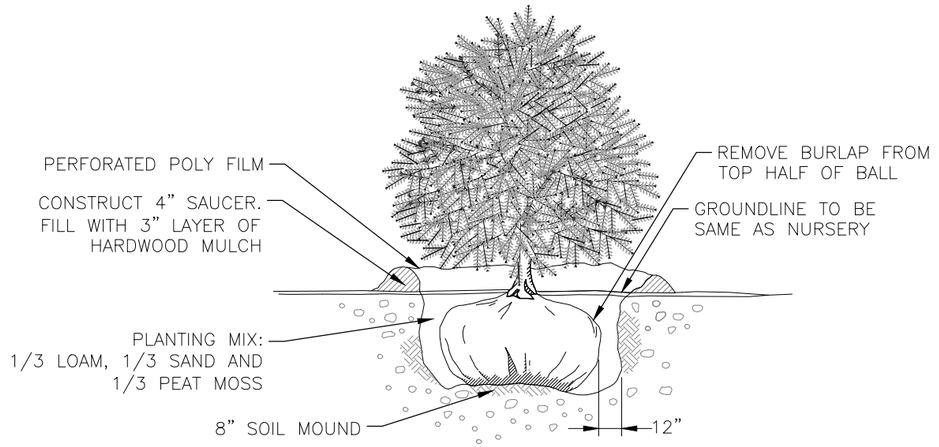
10. SAFETY — CONTACT DIG SAFE PRIOR TO LANDSCAPE CONSTRUCTION. PROTECT ALL UTILITIES DURING EXCAVATION BUT IF DAMAGED, REPAIR AT NO EXTRA COST TO THE OWNER. KEEP ALL THE WORK AREA CLEAN, NEAT AND ORDERLY AT ALL TIMES.

11. STANDARDS — ALL PLANT MATERIALS USED SHALL BE TRUE TO NAME, QUALITY AND SIZE IN CONFORMITY WITH THE LATEST EDITION OR THE "AMERICAN STANDARD FOR NURSERY STOCK", BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.

12. DAMAGES — THE CONTRACTOR SHALL REPAIR ANY AND ALL DAMAGE TO THE PROPERTY THAT RESULTS FROM THEIR NEGLIGENCE AT NO ADDITIONAL COST TO THE OWNER



EVERGREEN TREE



EVERGREEN SHRUB

BUFFALO SEWER AUTHORITY

STANDARD DETAILS FOR CONSTRUCTION

GREEN INFRASTRUCTURE STANDARD DETAILS

PLANTINGS (PART 2 OF 2)

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C.3 NYSDEC WQ_v Worksheets

Version 1.8
Last Updated: 11/09/2015

Total Water Quality Volume Calculation
WQv(acre-feet) = [(P)(Rv)(A)] /12

Eddie Dawson Park

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....	No

Design Point:	1	
P=	0.90	*inch*

Manually enter P, Total Area and Impervious Cover.

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	0.54	0.54	100%	0.95	1,667	Stormwater Planter
2	0.37	0.37	100%	0.95	1,139	Stormwater Planter
3						
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	0.90	0.90	100%	0.95	**2,806**	**Subtotal 1**
Total	0.90	0.90	100%	0.95	**2,806**	**Initial WQv**

The Stormwater Planter Worksheet was utilized to calculate the RRv provided for the Stormwater Tree Trenches as this was deemed to be the closest equivalent practice.

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing Area *(Acre)*	Contributing Impervious Area *(Acre)*	Notes
Conservation of Natural Areas	0.00	0.00	*minimum 10,000 sf*
Riparian Buffers	0.00	0.00	*maximum contributing length 75 feet to 150 feet*
Filter Strips	0.00	0.00	
Tree Planting	0.00	0.00	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**0.00**	**0.00**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	0.90	0.90	100%	0.95	2,806
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**0.90**	**0.90**	100%	0.95	2,806
Disconnection of		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	0.90	0.90	100%	0.95	**2,806**
WQv reduced by Area Reduction techniques					0

Eddie Dawson Park

Runoff Reduction Volume and Treated volumes						
	Runoff Reduction Techiques/Standard SMPs		**Total Contributing Area**	**Total Contributing Impervious Area**	**WQv Reduced (RRv)**	**WQv Treated**
			(acres)	**(acres)**	**cf**	**cf**
Area/Volume Reduction	Conservation of Natural Areas	RR-1	0.00	0.00		
	Sheetflow to Riparian Buffers/Filter Strips	RR-2	0.00	0.00		
	Tree Planting/Tree Pit	RR-3	0.00	0.00		
	Disconnection of Rooftop Runoff	RR-4		0.00		
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	0.90	0.90	842	
	Rain Barrel/Cistern	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	0.00	0.00	0	
	Green Roof (Intensive & Extensive)	RR-10	0.00	0.00	0	
Standard SMPs w/RRv Capacity	Infiltration Trench	I-1	0.00	0.00	0	0
	Infiltration Basin	I-2	0.00	0.00	0	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4				
	Bioretention & Infiltration Bioretention	F-5	0.00	0.00	0	0
	Dry swale	O-1	0.00	0.00	0	0
Standard SMPs	Micropool Extended Detention (P-1)	P-1				
	Wet Pond (P-2)	P-2				
	Wet Extended Detention (P-3)	P-3				
	Multiple Pond system (P-4)	P-4				
	Pocket Pond (p-5)	P-5				
	Surface Sand filter (F-1)	F-1				
	Underground Sand filter (F-2)	F-2				
	Perimeter Sand Filter (F-3)	F-3				
	Organic Filter (F-4	F-4				
	Shallow Wetland (W-1)	W-1				
	Extended Detention Wetland (W-2	W-2				
	Pond/Wetland System (W-3)	W-3				
	Pocket Wetland (W-4)	W-4				
	Wet Swale (O-2)	O-2				
	Totals by Area Reduction	→	0.00	0.00	0	
	Totals by Volume Reduction	→	0.90	0.90	842	
	Totals by Standard SMP w/RRV	→	0.00	0.00	0	0
	Totals by Standard SMP	→	0.00	0.00		0
	Totals (Area + Volume + all SMPs)	→	0.90	0.90	842	0
	Impervious Cover √	okay				
	Total Area √	okay				

Stormwater Planter Worksheet

Eddie Dawson Park

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
1	0.54	0.54	1.00	0.95	1666.68	0.90	Stormwater Planter

Calculate the Mimimum Filter Area			
Parameter	**Value**	**Units**	
WQv	1,667	ft^3	*WQv*
Depth of Soil Media	3	*ft*	*df*
Hydraulic Conductivity	4	*ft/d*	*k*
Average Height of Ponding	1	*ft*	*hf*
Filter Time	1	*d*	*tf*
Required Area of Filter	313	ft^2	*Af*

Area of Filter		
Width	11	*ft*
Length	100	*ft*
Area Provided	1100	ft^2
Volume Provided	5866.66667	

Runoff Reduction	
Soil Type	D
Flow Through Planter?	*Yes*

Determine the Runoff Reduction			
RRv	**1,667**	ft^3	
RRv Applied	**500**	ft^3	

Stormwater Planter Worksheet

Eddie Dawson Park

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Precipitation *(in)*	Description
2	0.37	0.37	1.00	0.95	1138.86	0.90	Stormwater Planter

Calculate the Mimimum Filter Area

Parameter	Value	Units	
WQv	1,139	ft^3	*WQv*
Depth of Soil Media	3	*ft*	*df*
Hydraulic Conductivity	4	*ft/d*	*k*
Average Height of Ponding	1	*ft*	*hf*
Filter Time	1	*d*	*tf*
Required Area of Filter	214	ft^2	*Af*

Area of Filter

Width	10	*ft*
Length	140	*ft*
Area Provided	1400	ft^2
Volume Provided	7466.66667	

Runoff Reduction

Soil Type	D
Flow Through Planter?	*Yes*

Determine the Runoff Reduction

RRv	**1,139**	ft^3	
RRv Applied	**342**	ft^3	

Version 1.8
Last Updated: 11/09/2015

Total Water Quality Volume Calculation
WQv(acre-feet) = [(P)(Rv)(A)] /12

Genesee Gateway Triangle

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....	No

Design Point:	1	
P=	0.90	*inch*

Manually enter P, Total Area and Impervious Cover.

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	0.22	0.22	100%	0.95	690	Rain Garden
2	0.17	0.17	100%	0.95	522	Rain Garden
3						
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	0.39	0.39	100%	0.95	**1,212**	**Subtotal 1**
Total	0.39	0.39	100%	0.95	**1,212**	**Initial WQv**

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing Area *(Acre)*	Contributing Impervious Area *(Acre)*	Notes
Conservation of Natural Areas	0.00	0.00	*minimum 10,000 sf*
Riparian Buffers	0.00	0.00	*maximum contributing length 75 feet to 150 feet*
Filter Strips	0.00	0.00	
Tree Planting	0.00	0.00	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**0.00**	**0.00**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	0.39	0.39	100%	0.95	1,212
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**0.39**	**0.39**	100%	0.95	1,212
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	0.39	0.39	100%	0.95	**1,212**
WQv reduced by Area Reduction techniques					0

Genesee Gateway Triangle

Runoff Reduction Volume and Treated volumes						
	Runoff Reduction Techiques/Standard SMPs		**Total Contributing Area**	**Total Contributing Impervious Area**	**WQv Reduced (RRv)**	**WQv Treated**
			(acres)	**(acres)**	**cf**	**cf**
Area/Volume Reduction	Conservation of Natural Areas	RR-1	0.00	0.00		
	Sheetflow to Riparian Buffers/Filter Strips	RR-2	0.00	0.00		
	Tree Planting/Tree Pit	RR-3	0.00	0.00		
	Disconnection of Rooftop Runoff	RR-4		0.00		
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	0.00	0.00	0	
	Rain Barrel/Cistern	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	0.00	0.00	0	
	Green Roof (Intensive & Extensive)	RR-10	0.00	0.00	0	
Standard SMPs w/RRv Capacity	Infiltration Trench	I-1	0.00	0.00	0	0
	Infiltration Basin	I-2	0.00	0.00	0	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4				
	Bioretention & Infiltration Bioretention	F-5	0.39	0.39	720	492
	Dry swale	O-1	0.00	0.00	0	0
Standard SMPs	Micropool Extended Detention (P-1)	P-1				
	Wet Pond (P-2)	P-2				
	Wet Extended Detention (P-3)	P-3				
	Multiple Pond system (P-4)	P-4				
	Pocket Pond (p-5)	P-5				
	Surface Sand filter (F-1)	F-1				
	Underground Sand filter (F-2)	F-2				
	Perimeter Sand Filter (F-3)	F-3				
	Organic Filter (F-4	F-4				
	Shallow Wetland (W-1)	W-1				
	Extended Detention Wetland (W-2	W-2				
	Pond/Wetland System (W-3)	W-3				
	Pocket Wetland (W-4)	W-4				
	Wet Swale (O-2)	O-2				
Totals by Area Reduction →			0.00	0.00	0	
Totals by Volume Reduction →			0.00	0.00	0	
Totals by Standard SMP w/RRV →			0.39	0.39	720	492
Totals by Standard SMP →			0.00	0.00		0
Totals (Area + Volume + all SMPs) →			0.39	0.39	720	492
	Impervious Cover √	okay				

The flow through bioretention sheet was used to calculate the provided water treatment volume and RRv due to the contributing area to the rain gardens and the media thickness.

Bioretention Worksheet

Genesee Gateway Triangle

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor &

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
1	0.22	0.22	1.00	0.95	690.06	0.90	Rain Garden
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	100%	0.95	690	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					0	ft^3	

Soil Information			
Soil Group	D		
Soil Infiltration Rate	0.05	*in/hour*	*Okay*
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area				
		Value	Units	Notes
WQv		690	ft^3	
Enter Depth of Soil Media	*df*	2	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	1	*days*	
Required Filter Area	***Af***	**1104**	ft^2	

Determine Actual Bio-Retention Area			
Filter Width	100	*ft*	
Filter Length	20	*ft*	
Filter Area	2000	ft^2	
Actual Volume Provided	1250	ft^3	

Determine Runoff Reduction				
Is the Bioretention contributing flow to another practice?		No	Select Practice	
RRv	500			
RRv applied	**500**	ft^3	***This is 40% of the storage provided or WQv whichever is less.***	
Volume Treated	190	ft^3	*This is the portion of the WQv that is not reduced in the practice.*	
Volume Directed	0	ft^3	This volume is directed another practice	
Sizing √	OK		*Check to be sure Area provided ≥ Af*	

Genesee Gateway Triangle

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor & Schueler, 1996)

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
2	0.17	0.17	1.00	0.95	521.76	0.90	Rain Garden
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	100%	0.95	522	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					0	*ft^3*	

Soil Information			
Soil Group	D		
Soil Infiltration Rate	0.05	*in/hour*	*Okay*
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area				
		Value	Units	Notes
WQv		522	*ft^3*	
Enter Depth of Soil Media	*df*	2	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	1	*days*	
Required Filter Area	***Af***	**835**	***ft^2***	

Determine Actual Bio-Retention Area			
Filter Width	100	*ft*	
Filter Length	10	*ft*	
Filter Area	1000	*ft^2*	
Actual Volume Provided	625	*ft^3*	

Determine Runoff Reduction				
Is the Bioretention contributing flow to another practice?		No	Select Practice	
RRv	250			
RRv applied	**250**	***ft^3***	***This is 40% of the storage provided or WQv whichever is less.***	
Volume Treated	272	*ft^3*	*This is the portion of the WQv that is not reduced in the practice.*	
Volume Directed	0	*ft^3*	This volume is directed another practice	
Sizing √	OK		*Check to be sure Area provided ≥ Af*	

Hennepin Park

Total Water Quality Volume Calculation			
Hennepin Park - Underground Infiltrators			
Design Storm	0.90	IN	
Contributing Area	8.95	AC	100% Impervious
Contributing Area	389,862	SF	100% Impervious
Contributing Volume	350,876	CF	
Loading Ratio	30		
Required Treatment, WQ_v	11,696	CF	Contributing impervious area / Loading ratio
Void Ratio	0.90		For underground infiltrators
Required Footprint	12,995	SF	For 100% RR_v Reduction
Provided System Footprint	13,000	SF	

- Infiltration practice provides both water quality treatment volume and 100% RRv reduction.
- There is no GI worksheet for underground infiltrators. The calculations provided are to demonstrate the provided water quality treatment volume and RRv.
- More in depth design calculations will be provided once the design is progressed.

Lincoln Park

Version 1.8
Last Updated: 11/09/2015

Total Water Quality Volume Calculation
WQv(acre-feet) = [(P)(Rv)(A)] /12

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....	No

Design Point:	1	
P=	0.90	*inch*

Manually enter P, Total Area and Impervious Cover.

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	0.17	0.17	100%	0.95	531	Stormwater Planter
2	0.15	0.15	100%	0.95	480	Stormwater Planter
3	0.15	0.15	100%	0.95	470	Rain Garden
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	0.48	0.48	100%	0.95	**1,481**	**Subtotal 1**
Total	0.48	0.48	100%	0.95	**1,481**	**Initial WQv**

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing Area *(Acre)*	Contributing Impervious Area *(Acre)*	Notes
Conservation of Natural Areas	0.00	0.00	*minimum 10,000 sf*
Riparian Buffers	0.00	0.00	*maximum contributing length 75 feet to 150 feet*
Filter Strips	0.00	0.00	
Tree Planting	0.00	0.00	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**0.00**	**0.00**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	0.48	0.48	100%	0.95	1,481
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**0.48**	**0.48**	100%	0.95	1,481
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	0.48	0.48	100%	0.95	**1,481**

Runoff Reduction Volume and Treated volumes						
	Runoff Reduction Techiques/Standard SMPs		**Total Contributing Area**	**Total Contributing Impervious Area**	**WQv Reduced (RRv)**	**WQv Treated**
			(acres)	**(acres)**	**cf**	**cf**
Area/Volume Reduction	Conservation of Natural Areas	RR-1	0.00	0.00		
	Sheetflow to Riparian Buffers/Filter Strips	RR-2	0.00	0.00		
	Tree Planting/Tree Pit	RR-3	0.00	0.00		
	Disconnection of Rooftop Runoff	RR-4		0.00		
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	0.33	0.33	303	
	Rain Barrel/Cistern	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	0.00	0.00	0	
	Green Roof (Intensive & Extensive)	RR-10	0.00	0.00	0	
Standard SMPs w/RRv Capacity	Infiltration Trench	I-1	0.00	0.00	0	0
	Infiltration Basin	I-2	0.00	0.00	0	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4				
	Bioretention & Infiltration Bioretention	F-5	0.15	0.15	210	260
	Dry swale	O-1	0.00	0.00	0	0
Standard SMPs	Micropool Extended Detention (P-1)	P-1				
	Wet Pond (P-2)	P-2				
	Wet Extended Detention (P-3)	P-3				
	Multiple Pond system (P-4)	P-4				
	Pocket Pond (p-5)	P-5				
	Surface Sand filter (F-1)	F-1				
	Underground Sand filter (F-2)	F-2				
	Perimeter Sand Filter (F-3)	F-3				
	Organic Filter (F-4	F-4				
	Shallow Wetland (W-1)	W-1				
	Extended Detention Wetland (W-2	W-2				
	Pond/Wetland System (W-3)	W-3				
	Pocket Wetland (W-4)	W-4				
	Wet Swale (O-2)	O-2				
Totals by Area Reduction		→	0.00	0.00	0	
Totals by Volume Reduction		→	0.33	0.33	303	
Totals by Standard SMP w/RRV		→	0.15	0.15	210	260
Totals by Standard SMP		→	0.00	0.00		0
Totals (Area + Volume + all SMPs)		→	0.48	0.48	513	260
	Impervious Cover √	okay				
	Total Area √	okay				

The flow through bioretention sheet was used to calculate the provided water treatment volume and RRv due to the contributing area to the rain gardens and the media thickness.

Lincoln Park

Stormwater Planter Worksheet

Af=WQv*(df)/[k*(hf+df)(tf)]

where:

Af Required Surface Area (ft2)

WQv Water Quality Volume (ft^3)

df Depth of the Soil Medium (ft)

k The Hyrdaulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil***

hf Average Height of Water above planter bed (ft)

tf The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
1	0.17	0.17	1.00	0.95	530.67	0.90	Stormwater Planter

Calculate the Mimimum Filter Area			
Parameter	**Value**	**Units**	
WQv	531	*ft^3*	*WQv*
Depth of Soil Media	3	*ft*	*df*
Hydraulic Conductivity	1	*ft/d*	*k*
Average Height of Ponding	0	*ft*	*hf*
Filter Time	1	*d*	*tf*
Required Area of Filter	531	*ft^2*	*Af*

Area of Filter		
Width	5	*ft*
Length	125	*ft*
Area Provided	625	*ft^2*
Volume Provided	625	

Runoff Reduction	
Soil Type	D
Flow Through Planter?	*Yes*

Determine the Runoff Reduction			
RRv	**531**	***ft^3***	
RRv Applied	**159**	***ft^3***	

Lincoln Park

Stormwater Planter Worksheet

Af=WQv*(df)/[k*(hf+df)(tf)]

where:

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft^3)
df	Depth of the Soil Medium (ft)
k	The Hyrdaulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil***
hf	Average Height of Water above planter bed (ft)
tf	The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Precipitation *(in)*	Description
2	0.15	0.15	1.00	0.95	480.15	0.90	Stormwater Planter

Calculate the Mimimum Filter Area

Parameter	Value	Units	
WQv	480	*ft^3*	*WQv*
Depth of Soil Media	3	*ft*	*df*
Hydraulic Conductivity	4	*ft/d*	*k*
Average Height of Ponding	0	*ft*	*hf*
Filter Time	1	*d*	*tf*
Required Area of Filter	120	*ft^2*	*Af*

Area of Filter

Width	7	*ft*
Length	100	*ft*
Area Provided	700	*ft^2*
Volume Provided	2800	

Runoff Reduction

Soil Type	D
Flow Through Planter?	*Yes*

Determine the Runoff Reduction

RRv	**480**	***ft^3***	
RRv Applied	**144**	***ft^3***	

Af=WQv*(df)/[k*(hf+df)(tf)]

Lincoln Park

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor &

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
3	0.15	0.15	1.00	0.95	469.75	0.90	Rain Garden
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	100%	0.95	470	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					0	ft^3	

Soil Information			
Soil Group	D		
Soil Infiltration Rate	0.05	*in/hour*	*Okay*
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area				
		Value	Units	Notes
WQv		470	ft^3	
Enter Depth of Soil Media	*df*	2	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	1	*days*	
Required Filter Area	***Af***	**752**	ft^2	

Determine Actual Bio-Retention Area			
Filter Width	28	*ft*	
Filter Length	30	*ft*	
Filter Area	840	ft^2	
Actual Volume Provided	525	ft^3	

Determine Runoff Reduction				
Is the Bioretention contributing flow to another practice?		No	Select Practice	
RRv	210			
RRv applied	**210**	ft^3	***This is 40% of the storage provided or WQv whichever is less.***	
Volume Treated	260	ft^3	*This is the portion of the WQv that is not reduced in the practice.*	
Volume Directed	0	ft^3	This volume is directed another practice	
Sizing √	OK		*Check to be sure Area provided ≥ Af*	

MLK Jr. Park

Version 1.8
Last Updated: 11/09/2015

Total Water Quality Volume Calculation
WQv(acre-feet) = [(P)(Rv)(A)] /12

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....	No

Design Point:	1	
P=	0.90	*inch*

Manually enter P, Total Area and Impervious Cover.

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	0.84	0.84	100%	0.95	2,621	Porous Pavement
2	0.25	0.25	100%	0.95	784	Rain Garden
3	0.42	0.42	100%	0.95	1,305	Porous Pavement
4	0.30	0.30	100%	0.95	945	Stormwater Planter
5	0.40	0.40	100%	0.95	1,236	Stormwater Planter
6	0.60	0.60	100%	0.95	1,863	Stormwater Planter
Subtotal (1-30)	2.82	2.82	100%	0.95	**8,754**	**Subtotal 1**
Total	2.82	2.82	100%	0.95	**8,754**	**Initial WQv**

It was assumed that only 25% of the porous pavement areas will be able to infiltrate; as such, the calculated RRv was multiplied by 0.25 to determine the eligible RRv for the MLK park in the report.

3926 * 0.25 = 981.5 CF

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing Area *(Acre)*	Contributing Impervious Area *(Acre)*	Notes
Conservation of Natural Areas	0.00	0.00	*minimum 10,000 sf*
Riparian Buffers	0.00	0.00	*maximum contributing length 75 feet to 150 feet*
Filter Strips	0.00	0.00	
Tree Planting	0.00	0.00	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**0.00**	**0.00**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	2.82	2.82	100%	0.95	8,754
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**2.82**	**2.82**	100%	0.95	8,754
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	2.82	2.82	100%	0.95	**8,754**

Runoff Reduction Volume and Treated volumes						
	Runoff Reduction Techiques/Standard SMPs		**Total Contributing Area**	**Total Contributing Impervious Area**	**WQv Reduced (RRv)**	**WQv Treated**
			(acres)	**(acres)**	**cf**	**cf**
Area/Volume Reduction	Conservation of Natural Areas	RR-1	0.00	0.00		
	Sheetflow to Riparian Buffers/Filter Strips	RR-2	0.00	0.00		
	Tree Planting/Tree Pit	RR-3	0.00	0.00		
	Disconnection of Rooftop Runoff	RR-4		0.00		
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	1.30	1.30	1213	
	Rain Barrel/Cistern	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	1.27	1.27	3926	
	Green Roof (Intensive & Extensive)	RR-10	0.00	0.00	0	
Standard SMPs w/RRv Capacity	Infiltration Trench	I-1	0.00	0.00	0	0
	Infiltration Basin	I-2	0.00	0.00	0	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4				
	Bioretention & Infiltration Bioretention	F-5	0.25	0.25	750	34
	Dry swale	O-1	0.00	0.00	0	0
Standard SMPs	Micropool Extended Detention (P-1)	P-1				
	Wet Pond (P-2)	P-2				
	Wet Extended Detention (P-3)	P-3				
	Multiple Pond system (P-4)	P-4				
	Pocket Pond (p-5)	P-5				
	Surface Sand filter (F-1)	F-1				
	Underground Sand filter (F-2)	F-2				
	Perimeter Sand Filter (F-3)	F-3				
	Organic Filter (F-4	F-4				
	Shallow Wetland (W-1)	W-1				
	Extended Detention Wetland (W-2	W-2				
	Pond/Wetland System (W-3)	W-3				
	Pocket Wetland (W-4)	W-4				
	Wet Swale (O-2)	O-2				
Totals by Area Reduction →			0.00	0.00	0	
Totals by Volume Reduction →			2.57	2.57	5140	
Totals by Standard SMP w/RRV →			0.25	0.25	750	34
Totals by Standard SMP →			0.00	0.00		0
Totals (Area + Volume + all SMPs) →			2.82	2.82	5,890	34
	Impervious Cover √	okay				
	Total Area √	okay				

It was assumed that only 25% of the porous pavement areas will be able to infiltrate; as such, the calculated RRv was multiplied by 0.25 to determine the eligible RRv for the MLK park in the report.

3926 * 0.25 = 981.5 CF

MLK Jr. Park

Porous Pavement Worksheet

Ap = Vw / (n x dt)

Ap	Required porous pavement surface area	*ft2*	
Vw	Design Volume	*ft3*	
n	porosity of gravel bed/resevoir		*Assume .4 for gravel*
dt	depth of gravel bed/resevoir		

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
1	0.84	0.84	1.00	0.95	2620.82	0.90	Porous Pavement

Enter Soil Infiltration Rate			
Soil Inflitration Rate	0.50	*in/hour*	

Calculate Required Surface Area				
Design Volume	Vw	2,621	*ft^3*	
Are underdrains being used?		Yes	-	Only Gravel Bed Depth below underdrain can be considered.
Porosity of Gravel Bed	*n*	0.40	-	
Gravel Bed Depth	dt	0.50	*ft*	Must be the depth below the underdrain.
Required Surface Area	Ap	13,104	*sf*	
Surface Area Provided		36,783	*sf*	*Dimensions of pavement can be provided here*
Storage Volume Provided		7,357	*ft^3*	

Determine the Runoff Reduction			
RRv	**2,621**	***ft^3***	

MLK Jr. Park

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor &

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
2	0.25	0.25	1.00	0.95	784.35	0.90	Rain Garden
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	100%	0.95	784	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					0	ft^3	

Soil Information			
Soil Group	D		
Soil Infiltration Rate	0.05	*in/hour*	*Okay*
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area				
		Value	Units	Notes
WQv		784	ft^3	
Enter Depth of Soil Media	*df*	2	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	1	*days*	
Required Filter Area	***Af***	**1255**	ft^2	

Determine Actual Bio-Retention Area			
Filter Width	100	*ft*	
Filter Length	30	*ft*	
Filter Area	3000	ft^2	
Actual Volume Provided	1875	ft^3	

Determine Runoff Reduction				
Is the Bioretention contributing flow to another practice?		No	Select Practice	
RRv	750			
RRv applied	**750**	ft^3	***This is 40% of the storage provided or WQv whichever is less.***	
Volume Treated	34	ft^3	*This is the portion of the WQv that is not reduced in the practice.*	
Volume Directed	0	ft^3	This volume is directed another practice	
Sizing √	OK		*Check to be sure Area provided ≥ Af*	

MLK Jr. Park

Porous Pavement Worksheet

Ap = Vw / (n x dt)

Ap	Required porous pavement surface area	*ft2*	
Vw	Design Volume	*ft3*	
n	porosity of gravel bed/resevoir		*Assume .4 for gravel*
dt	depth of gravel bed/resevoir		

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
3	0.42	0.42	1.00	0.95	1305.47	0.90	Porous Pavement

Enter Soil Infiltration Rate			
Soil Inflitration Rate	0.50	*in/hour*	

Calculate Required Surface Area				
Design Volume	Vw	1,305	*ft^3*	
Are underdrains being used?		Yes	-	Only Gravel Bed Depth below underdrain can be considered.
Porosity of Gravel Bed	*n*	0.40	-	
Gravel Bed Depth	dt	0.50	*ft*	Must be the depth below the underdrain.
Required Surface Area	Ap	6,527	*sf*	
Surface Area Provided		18,322	*sf*	*Dimensions of pavement can be provided here*
Storage Volume Provided		3,664	*ft^3*	

Determine the Runoff Reduction			
RRv	**1,305**	***ft^3***	

MLK Jr. Park

Stormwater Planter Worksheet

Af=WQv*(df)/[k*(hf+df)(tf)]

where:

Af Required Surface Area (ft2)

WQv Water Quality Volume (ft^3)

df Depth of the Soil Medium (ft)

k The Hyrdaulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil***

hf Average Height of Water above planter bed (ft)

tf The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
4	0.30	0.30	1.00	0.95	944.66	0.90	Stormwater Planter

Calculate the Mimimum Filter Area			
Parameter	**Value**	**Units**	
WQv	945	*ft^3*	*WQv*
Depth of Soil Media	3	*ft*	*df*
Hydraulic Conductivity	1	*ft/d*	*k*
Average Height of Ponding	0	*ft*	*hf*
Filter Time	1	*d*	*tf*
Required Area of Filter	945	*ft^2*	*Af*

Area of Filter		
Width	8	*ft*
Length	70	*ft*
Area Provided	560	*ft^2*
Volume Provided	560	

Runoff Reduction	
Soil Type	D
Flow Through Planter?	*Yes*

Determine the Runoff Reduction			
RRv	**945**	***ft^3***	
RRv Applied	**283**	***ft^3***	

MLK Jr. Park

Stormwater Planter Worksheet

Af=WQv*(df)/[k*(hf+df)(tf)]

where:

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft^3)
df	Depth of the Soil Medium (ft)
k	The Hyrdaulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil***
hf	Average Height of Water above planter bed (ft)
tf	The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Precipitation *(in)*	Description
5	0.40	0.40	1.00	0.95	1235.62	0.90	Stormwater Planter

Calculate the Mimimum Filter Area

Parameter	Value	Units	
WQv	1,236	*ft^3*	*WQv*
Depth of Soil Media	3	*ft*	*df*
Hydraulic Conductivity	4	*ft/d*	*k*
Average Height of Ponding	0	*ft*	*hf*
Filter Time	1	*d*	*tf*
Required Area of Filter	309	*ft^2*	*Af*

Area of Filter

Width	10	*ft*
Length	170	*ft*
Area Provided	1700	*ft^2*
Volume Provided	6800	

Runoff Reduction

Soil Type	D
Flow Through Planter?	*Yes*

Determine the Runoff Reduction

RRv	**1,236**	***ft^3***	
RRv Applied	**371**	***ft^3***	

Af=WQv*(df)/[k*(hf+df)(tf)]

MLK Jr. Park

Stormwater Planter Worksheet

where:

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft^3)
df	Depth of the Soil Medium (ft)
k	The Hyrdaulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil***
hf	Average Height of Water above planter bed (ft)
tf	The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Design Point:	**1**

Enter Site Data For Drainage Area to be Treated by Practice

Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft^3)	Precipitation (in)	Description
6	0.60	0.60	1.00	0.95	1862.61	0.90	Stormwater Planter

Calculate the Mimimum Filter Area

Parameter	Value	Units	
WQv	1,863	ft^3	*WQv*
Depth of Soil Media	3	*ft*	*df*
Hydraulic Conductivity	4	*ft/d*	*k*
Average Height of Ponding	0	*ft*	*hf*
Filter Time	1	*d*	*tf*
Required Area of Filter	466	ft^2	*Af*

Area of Filter

Width	10	*ft*
Length	165	*ft*
Area Provided	1650	ft^2
Volume Provided	6600	

Runoff Reduction

Soil Type	D
Flow Through Planter?	*Yes*

Determine the Runoff Reduction

RRv	**1,863**	ft^3
RRv Applied	**559**	ft^3

Af=WQv*(df)/[k*(hf+df)(tf)]

where:

Af	Required Surface Area (ft2)

Appendix D Cost Estimate

EDDIE DAWSON PARK - GREEN INFRASTRUCTURE IMPROVEMENTS
PRELIMINARY OPINION OF PROBABLE PROJECT COSTS

Item No.	Description	Preliminary Quantity	Unit	Unit Price	Line Item Total
Excavation and Earthwork					
1	SAWCUTTING EXISTING PAVEMENT	1,000	L.F.	$ 5	$ 5,000
2	UNCLASSIFIED EXCAVATION	80	C.Y.	$ 65	$ 5,200
3	EARTH EXCAVATION	430	C.Y.	$ 35	$ 15,050
4	SELECT FILL	30	C.Y.	$ 65	$ 1,950
Piping					
5	6-INCH HDPE PIPING	500	L.F.	$ 80	$ 40,000
6	12-INCH HDPE PIPING	50	L.F.	$ 140	$ 7,000
7	ANTI-SEEP COLLARS	4	EACH	$ 900	$ 3,600
Drainage Structures					
8	PRECAST CONCRETE RECEIVER	4	EACH	$ 4,400	$ 17,600
9	PRECAST CONCRETE JUNCTION BOX WITH UNDERDRAIN CONNECTION	1	EACH	$ 6,000	$ 6,000
10	MONITORING WELL	2	EACH	$ 2,900	$ 5,800
11	CLEANOUT	7	EACH	$ 900	$ 6,300
12	CONNECTION TO EXISTING INFRASTRUCTURE	4	EACH	$ 2,500	$ 10,000
Paving					
13	HMA WEARING COURSE	10	TONS	$ 300	$ 3,000
14	HMA BINDER COURSE	20	TONS	$ 225	$ 4,500
15	CONCRETE SIDEWALK WITH GRAVEL SUBBASE	270	S.Y.	$ 125	$ 33,750
16	CURBING	450	L.F.	$ 65	$ 29,250
Storage Media					
17	CLEAN-WASHED STONE	300	C.Y.	$ 75	$ 22,500
18	ENGINEERED SOIL MEDIA	120	C.Y.	$ 120	$ 14,400
19	GEOTEXTILE FABRIC	300	S.Y.	$ 6	$ 1,800
Landscaping and Vegetation					
20	MULCH	10	C.Y.	$ 45	$ 450
21	LOAM AND SEED	130	S.Y.	$ 26	$ 3,380
22	TREES	16	EACH	$ 500	$ 8,000
Geotechnical Testing					
23	GEOTECHNICAL TESTING	1	L.S.	$ 3,500	$ 3,500
Site Work					
24	POLICE DETAIL (ALLOWANCE)	1	L.S.	$ 12,000	$ 12,000
25	MAINTENANCE AND PROTECTION OF TRAFFIC	1	L.S.	$ 5,000	$ 5,000
26	EROSION AND SEDIMENTATION CONTROLS	1	L.S.	$ 3,500	$ 3,500
Mobilization					
27	MOBILIZATION (10%)	1	L.S.	$ 26,853	$ 26,853
Construction Cost Subtotal					
				2024 CONSTRUCTION COST SUBTOTAL	**$ 295,383**
Engineering, Contingency and Escalation Costs					
28	CONSTRUCTION CONTINGENCY (35%)	1	L.S.		$ 103,384
29	PLANNING COSTS (5%)	1	L.S.		$ 14,769
30	ENGINEERING DESIGN COSTS (15%)	1	L.S.		$ 44,307
31	ENGINEERING SERVICES DURING CONSTRUCTION COST (15%)	1	L.S.		$ 44,307
32	ESCALATION COSTS (7%)	1	L.S.		$ 20,677
EDDIE DAWSON PARK - Preliminary Opinion of Total Probable Project Costs					
				PRELIMINARY OPINION OF TOTAL PROBABLE PROJECT COSTS	**$ 522,828**

GENESEE GATEWAY TRIANGLE - GREEN INFRASTRUCTURE IMPROVEMENTS
PRELIMINARY OPINION OF PROBABLE PROJECT COSTS

Item No.	Description	Preliminary Quantity	Unit	Unit Price	Line Item Total
Excavation and Earthwork					
1	SAWCUTTING EXISTING PAVEMENT	180	L.F.	$ 5	$ 900
2	UNCLASSIFIED EXCAVATION	10	C.Y.	$ 65	$ 650
3	EARTH EXCAVATION	540	C.Y.	$ 35	$ 18,900
4	SELECT BACKFILL	30	C.Y.	$ 65	$ 1,950
Piping					
5	6-INCH HDPE PIPING	160	L.F.	$ 80	$ 12,800
6	12-INCH HDPE PIPING	220	L.F.	$ 140	$ 30,800
Drainage Structures					
7	PRECAST CONCRETE RECEIVER	5	EACH	$ 4,400	$ 22,000
8	PRECAST CONCRETE OUTLET STRUCTURE	1	EACH	$ 11,000	$ 11,000
9	MONITORING WELL	2	EACH	$ 2,900	$ 5,800
10	CLEANOUT	7	EACH	$ 900	$ 6,300
11	CONNECTION TO EXISTING INFRASTRUCTURE	4	EACH	$ 2,500	$ 10,000
Paving					
12	HMA WEARING COURSE	10	TONS	$ 300	$ 3,000
13	HMA BINDER COURSE	20	TONS	$ 225	$ 4,500
Storage Media					
14	CLEAN-WASHED STONE	130	C.Y.	$ 60	$ 7,800
15	ENGINEERED SOIL MEDIA	250	C.Y.	$ 120	$ 30,000
16	SAND	70	C.Y.	$ 95	$ 6,650
17	GEOTEXTILE FABRIC	370	S.Y.	$ 9	$ 3,330
Landscaping and Vegetation					
18	ROCK ENERGY DISSIPATERS	4	EACH	$ 3,500	$ 14,000
19	MULCH	4	C.Y.	$ 45	$ 180
20	BASIN MIX SEEDING	370	S.Y.	$ 25	$ 9,250
21	SHRUBS (#3 GALLON)	200	EACH	$ 150	$ 30,000
Geotechnical Testing					
22	GEOTECHNICAL TESTING	1	L.S.	$ 5,000	$ 5,000
Site Work					
23	POLICE DETAIL (ALLOWANCE)	1	L.S.	$ 15,000	$ 15,000
24	MAINTENANCE AND PROTECTION OF TRAFFIC	1	L.S.	$ 8,000	$ 8,000
25	EROSION AND SEDIMENTATION CONTROLS	1	L.S.	$ 5,000	$ 5,000
Mobilization					
26	MOBILIZATION (10%)	1	L.S.	$ 24,881	$ 24,881
Construction Cost Subtotal					
				2024 CONSTRUCTION COST SUBTOTAL	**$ 242,891**
Engineering, Contingency and Escalation Costs					
28	CONSTRUCTION CONTINGENCY (35%)	1	L.S.		$ 85,012
29	PLANNING COSTS (5%)	1	L.S.		$ 12,145
30	ENGINEERING DESIGN COSTS (15%)	1	L.S.		$ 36,434
31	ENGINEERING SERVICES DURING CONSTRUCTION COST (15%)	1	L.S.		$ 36,434
32	ESCALATION COSTS (7%)	1	L.S.		$ 17,002
GENESEE GATEWAY TRIANGLE - Preliminary Opinion of Total Probable Project Costs					
				PRELIMINARY OPINION OF TOTAL PROBABLE PROJECT COSTS	**$ 429,917**

HENNEPIN PARK - GREEN INFRASTRUCTURE IMPROVEMENTS PRELIMINARY OPINION OF PROBABLE PROJECT COSTS					
Item No.	**Description**	**Preliminary Quantity**	**Unit**	**Unit Price**	**Line Item Total**
Excavation and Earthwork					
1	SAWCUTTING EXISTING PAVEMENT	11,800	L.F.	$ 5	$ 59,000
2	UNCLASSIFIED EXCAVATION	1,200	C.Y.	$ 65	$ 78,000
3	EARTH EXCAVATION	2,120	C.Y.	$ 35	$ 74,200
4	LEDGE EXCAVATION	106	C.Y.	$ 150	$ 15,900
5	SELECT BACKFILL	1,530	C.Y.	$ 65	$ 99,450
Piping					
6	8-INCH HDPE PIPING	1,610	L.F.	$ 100	$ 161,000
7	12-INCH HDPE PIPING	2,440	L.F.	$ 140	$ 341,600
8	15-INCH HDPE PIPING	740	L.F.	$ 165	$ 122,100
Drainage Structures					
9	PRECAST CONCRETE RECEIVER	40	EACH	$ 4,400	$ 176,000
10	PRECAST CONCRETE OUTLET STRUCTURE	1	EACH	$ 11,000	$ 11,000
11	MONITORING WELL	1	EACH	$ 2,900	$ 2,900
12	CLEANOUT	16	EACH	$ 900	$ 14,400
13	CONNECTION TO EXISTING INFRASTRUCTURE	20	EACH	$ 2,500	$ 50,000
Paving					
14	TEMPORARY HMA	310	TONS	$ 110	$ 34,100
15	HMA WEARING COURSE	480	TONS	$ 240	$ 115,200
16	HMA BINDER COURSE	720	TONS	$ 180	$ 129,600
17	CONCRETE SIDEWALK WITH GRAVEL SUBBASE	900	S.Y.	$ 125	$ 112,500
18	CURBING	1,350	L.F.	$ 65	$ 87,750
Storage Media					
19	CLEAN-WASHED STONE	400	C.Y.	$ 75	$ 30,000
20	GEOTEXTILE FABRIC	1,590	S.Y.	$ 6	$ 9,540
21	SUBSURFACE STORMWATER SYSTEM W/ PRETREATMENT	1	L.S.	$ 215,000	$ 215,000
Landscaping and Vegetation					
22	LOAM AND SEED	140	S.Y.	$ 26	$ 3,640
23	REPLACE BASKETBALL COURT IN KIND	1	L.S.	$ 150,000	$ 150,000
Geotechnical Testing					
24	GEOTECHNICAL TESTING	1	L.S.	$ 35,000	$ 35,000
Site Work					
25	POLICE DETAIL (ALLOWANCE)	1	L.S.	$ 120,000	$ 120,000
26	MAINTENANCE AND PROTECTION OF TRAFFIC	1	L.S.	$ 45,000	$ 45,000
27	EROSION AND SEDIMENTATION CONTROLS	1	L.S.	$ 15,000	$ 15,000
Mobilization					
28	MOBILIZATION (10%)	1	L.S.	$ 230,788	$ 230,788
Construction Cost Subtotal					
				2024 CONSTRUCTION COST SUBTOTAL	**$ 2,538,668**
Engineering, Contingency and Escalation Costs					
29	CONSTRUCTION CONTINGENCY (35%)	1	L.S.		$ 888,534
30	PLANNING COSTS (5%)	1	L.S.		$ 126,933
31	ENGINEERING DESIGN COSTS (15%)	1	L.S.		$ 380,800
32	ENGINEERING SERVICES DURING CONSTRUCTION COST (15%)	1	L.S.		$ 380,800
33	ESCALATION COSTS (7%)	1	L.S.		$ 177,707
HENNEPIN PARK- Preliminary Opinion of Total Probable Project Costs					
				PRELIMINARY OPINION OF TOTAL PROBABLE PROJECT COSTS	**$ 4,493,442**

LINCOLN PARK - GREEN INFRASTRUCTURE IMPROVEMENTS
PRELIMINARY OPINION OF PROBABLE PROJECT COSTS

Item No.	Description	Preliminary Quantity	Unit	Unit Price	Line Item Total
Excavation and Earthwork					
1	SAWCUTTING EXISTING PAVEMENT	190	L.F.	$ 5	$ 950
2	UNCLASSIFIED EXCAVATION	10	C.Y.	$ 65	$ 650
3	EARTH EXCAVATION	320	C.Y.	$ 35	$ 11,200
4	LEDGE EXCAVATION	40	C.Y.	$ 150	$ 6,000
5	SELECT BACKFILL	30	C.Y.	$ 65	$ 1,950
Piping					
6	6-INCH HDPE PIPING	600	L.F.	$ 80	$ 48,000
7	12-INCH HDPE PIPING	100	L.F.	$ 140	$ 14,000
Drainage Structures					
8	PRECAST CONCRETE RECEIVER	6	EACH	$ 4,400	$ 26,400
9	PRECAST CONCRETE OUTLET STRUCTURE	1	EACH	$ 11,000	$ 11,000
10	MONITORING WELL	3	EACH	$ 2,900	$ 8,700
11	CLEANOUT	4	EACH	$ 900	$ 3,624
12	CONNECTION TO EXISTING INFRASTRUCTURE	2	EACH	$ 2,500	$ 5,000
Paving					
13	HMA WEARING COURSE	10	TONS	$ 300	$ 3,000
14	HMA BINDER COURSE	20	TONS	$ 250	$ 5,000
Storage Media					
15	CLEAN-WASHED STONE	160	C.Y.	$ 75	$ 12,000
16	ENGINEERED SOIL MEDIA	70	C.Y.	$ 120	$ 8,400
17	SAND	10	C.Y.	$ 68	$ 680
18	GEOTEXTILE FABRIC	450	S.Y.	$ 6	$ 2,700
Landscaping and Vegetation					
19	ROCK ENERGY DISSIPATERS	1	EACH	$ 3,500	$ 3,500
20	MULCH	10	C.Y.	$ 45	$ 450
21	BASIN MIX SEEDING	50	S.Y.	$ 20	$ 1,000
22	LOAM AND SEED	170	S.Y.	$ 22	$ 3,740
23	SHRUBS (#3 GALLON)	50	EACH	$ 150	$ 7,500
24	TREES	15	EACH	$ 550	$ 8,323
Geotechnical Testing					
25	GEOTECHNICAL TESTING	1	L.S.	$ 5,000	$ 5,000
Site Work					
26	POLICE DETAIL (ALLOWANCE)	1	L.S.	$ 10,000	$ 10,000
27	MAINTENANCE AND PROTECTION OF TRAFFIC	1	L.S.	$ 8,000	$ 8,000
28	EROSION AND SEDIMENTATION CONTROLS	1	L.S.	$ 3,500	$ 3,500
Mobilization					
29	MOBILIZATION (10%)	1	L.S.	$ 22,027	$ 22,027
Construction Cost Subtotal					
				2024 CONSTRUCTION COST SUBTOTAL	**$ 242,294**
Engineering, Contingency and Escalation Costs					
30	CONSTRUCTION CONTINGENCY (35%)	1	L.S.		$ 84,803
31	PLANNING COSTS (5%)	1	L.S.		$ 12,115
32	ENGINEERING DESIGN COSTS (15%)	1	L.S.		$ 36,344
33	ENGINEERING SERVICES DURING CONSTRUCTION COST (15%)	1	L.S.		$ 36,344
34	ESCALATION COSTS (7%)	1	L.S.		$ 16,961
LINCOLN PARK- Preliminary Opinion of Total Probable Project Costs					
				PRELIMINARY OPINION OF TOTAL PROBABLE PROJECT COSTS	**$ 428,860**

MARTIN LUTHER KING PARK - GREEN INFRASTRUCTURE IMPROVEMENTS
PRELIMINARY OPINION OF PROBABLE PROJECT COSTS

Item No.	Description	Preliminary Quantity	Unit	Unit Price	Line Item Total
Excavation and Earthwork					
1	SAWCUTTING EXISTING PAVEMENT	680	L.F.	$ 5	$ 3,400
2	UNCLASSIFIED EXCAVATION	1,150	C.Y.	$ 65	$ 74,750
3	EARTH EXCAVATION	4,350	C.Y.	$ 35	$ 152,250
4	LEDGE EXCAVATION	140	C.Y.	$ 150	$ 21,000
5	SELECT BACKFILL	90	C.Y.	$ 65	$ 5,850
Piping					
6	6-INCH HDPE PIPING	4,380	L.F.	$ 80	$ 350,400
7	12-INCH HDPE PIPING	260	L.F.	$ 140	$ 36,400
Drainage Structures					
8	PRECAST CONCRETE RECEIVER	13	EACH	$ 4,400	$ 57,200
9	PRECAST CONCRETE OUTLET STRUCTURE	1	EACH	$ 11,000	$ 11,000
10	MONITORING WELL	3	EACH	$ 2,900	$ 8,700
11	CLEANOUT	7	EACH	$ 900	$ 6,372
12	CONNECTION TO EXISTING INFRASTRUCTURE	5	EACH	$ 2,500	$ 12,500
Paving					
13	HMA WEARING COURSE	20	TONS	$ 300	$ 6,000
14	HMA BINDER COURSE	40	TONS	$ 250	$ 10,000
15	POROUS PAVEMENT TOP COURSE	770	TONS	$ 223	$ 171,710
16	POROUS PAVEMENT BINDER COURSE	1,540	TONS	$ 183	$ 281,820
17	POROUS PAVEMENT CHOKER COURSE	3,080	C.Y.	$ 60	$ 184,800
Storage Media					
18	CLEAN-WASHED STONE	2,830	C.Y.	$ 75	$ 212,250
19	ENGINEERED SOIL MEDIA	320	C.Y.	$ 120	$ 38,400
20	SAND	70	C.Y.	$ 68	$ 4,760
21	GEOTEXTILE FABRIC	930	S.Y.	$ 6	$ 5,580
Landscaping and Vegetation					
22	ROCK ENERGY DISSIPATERS	1	EACH	$ 3,500	$ 3,500
23	MULCH	10	C.Y.	$ 45	$ 450
24	BASIN MIX SEEDING	400	S.Y.	$ 20	$ 8,000
25	LOAM AND SEED	280	S.Y.	$ 26	$ 7,280
26	SHRUBS (#3 GALLON)	240	EACH	$ 150	$ 36,000
27	TREES	27	EACH	$ 550	$ 15,070
Geotechnical Testing					
28	GEOTECHNICAL TESTING	1	L.S.	$ 26,000	$ 26,000
Site Work					
29	POLICE DETAIL (ALLOWANCE)	1	L.S.	$ 160,000	$ 160,000
30	MAINTENANCE AND PROTECTION OF TRAFFIC	1	L.S.	$ 38,000	$ 38,000
31	EROSION AND SEDIMENTATION CONTROLS	1	L.S.	$ 22,000	$ 22,000
Mobilization					
32	MOBILIZATION (10%)	1	L.S.	$ 197,944	$ 197,944
Construction Cost Subtotal					
				2024 CONSTRUCTION COST SUBTOTAL	**$ 2,177,386**
Engineering, Contingency and Escalation Costs					
34	CONSTRUCTION CONTINGENCY (35%)	1	L.S.		$ 762,085
35	PLANNING COSTS (5%)	1	L.S.		$ 108,869
36	ENGINEERING DESIGN COSTS (15%)	1	L.S.		$ 326,608
37	ENGINEERING SERVICES DURING CONSTRUCTION COST (15%)	1	L.S.		$ 326,608
38	ESCALATION COSTS (7%)	1	L.S.		$ 152,417
MARTIN LUTHER KING PARK - Preliminary Opinion of Total Probable Project Costs					
				PRELIMINARY OPINION OF TOTAL PROBABLE PROJECT COSTS	**$ 3,853,974**

Stantec

Stantec is a global leader in sustainable architecture, engineering, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

Attachment E to the Semi-Annual Status Report: March 2025

Board Meeting Items for LTCP Projects

BSA Semi-Annual Report, Attachment E

LTCP-Related Board Meeting Items: July 1, 2024 - December 31, 2024

Meeting Month	Title	Project	Document Contents
July	Meeting Minutes	Primary Treatment Rehabilitation	Change Order No.3 - Greeley Hansen (rebidding and design services)
July	Meeting Minutes	Broadway/Oak RTC	Change Order No. 3 - CHA (Change order total was corrected from May Board meeting minutes)
July	Meeting Minutes	GIS Services - Bergmann	Change Order No. 1- Extension of GIS Environment Implementation and GIS & GPS Services
July	Meeting Minutes	Breckenridge	Submission of Lead Agency Declaration - SEQR
July	Meeting Minutes	Colorado and Scajaquada	Submission of Lead Agency Declaration - SEQR
July	Meeting Minutes	Genessee St.& Kerns	Submission of Lead Agency Declaration - SEQR
July	Meeting Minutes	SPP336B (Sidney Lark)	Submission of Lead Agency Declaration - SEQR
July	Meeting Minutes	Bailey & Michigan	Submission of Lead Agency Declaration - SEQR
July	Attachment G	Breckenridge	SEQR Part 1 - Project Description
July	Attachment H	Colorado and Scajaquada	SEQR Part 1 - Project Description
July	Attachment I	Genesee St	SEQR Part 1 - Project Description
July	Attachment J	SPP336B (Sidney Lark)	SEQR Part 1 - Project Description
July	Attachment K	Humboldt Pkwy	SEQR Part 1 - Project Description
July	Attachment L	South Bailey	SEQR Part 1 - Project Description
July	Attachment M	Michigan Ave	SEQR Part 1 - Project Description
September	Meeting Minutes	Fruit Belt	Change Order No. 2 - Erdman Anthony (addtl design coord)
December	Meeting Minutes	QCCW	Optimization of LTCP (Item 4) _Change Order No 2 - Xylem
December	Meeting Minutes	QCCW	RTC Program Management (Item 5) _Change Order No 2 - Xylem
December	Meeting Minutes	CPPM (5 yr guaranteed, plus 5 addtl 1 yr extensions)	Contract Extension for Greeley Hansen, A Tylin Company - Through Dec 31, 2025 - Budget amount extended
December	Meeting Minutes	Breckenridge	Adoption of Negative Declaration SEQR Review
December	Meeting Minutes	Genessee St.	Adoption of Negative Declaration SEQR Review
December	Meeting Minutes	Colorado and Scajaquada	Adoption of Negative Declaration SEQR Review
December	Meeting Minutes	East Delavan	Adoption of Negative Declaration SEQR Review
December	Meeting Minutes	Michigan Ave	Adoption of Negative Declaration SEQR Review
December	A-1	Breckenridge	Full Environmental Assessment Form (FEAF) - Determination of Significance

December	A-2	Breckenridge	SEQR Part 2 - Identification of Project Impacts
December	A-3	Breckenridge	SEQR Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
December	B-1	Genessee St.	Full Environmental Assessment Form (FEAF) - Determination of Significance
December	B-2	Genessee St.	SEQR Part 2 - Identification of Project Impacts
December	B-3	Genessee St.	SEQR Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
December	C-1	Colorado and Scajaquada	Full Environmental Assessment Form (FEAF) - Determination of Significance
December	C-2	Colorado and Scajaquada	SEQR Part 2 - Identification of Project Impacts
December	C-3	Colorado and Scajaquada	SEQR Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
December	D-1	South Bailey	Full Environmental Assessment Form (FEAF) - Determination of Significance
December	D-2	South Bailey	SEQR Part 2 - Identification of Project Impacts
December	D-3	South Bailey	SEQR Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
December	E-1	East Delavan	Full Environmental Assessment Form (FEAF) - Determination of Significance
December	E-2	Humboldt Pkwy	SEQR Part 2 - Identification of Project Impacts
December	E-3	Humboldt Pkwy	SEQR Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
December	F-1	SPP336B (Sidney Lark)	Full Environmental Assessment Form (FEAF) - Determination of Significance
December	F-2	SPP336B (Sidney Lark)	SEQR Part 2 - Identification of Project Impacts
December	F-3	SPP336B (Sidney Lark)	SEQR Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
December	G-1	Michigan Ave	Full Environmental Assessment Form (FEAF) - Determination of Significance
December	G-2	Michigan Ave	SEQR Part 2 - Identification of Project Impacts
December	G-3	Michigan Ave	SEQR Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
December	Supplemental Item 16-1		Bond Anticipation Note Resolution

MINUTES OF THE ANNUAL MEETING

OF THE

BUFFALO SEWER AUTHORITY

July 1, 2024

BUFFALO SEWER AUTHORITY
ANNUAL MEETING
July 1, 2024
9:00 A.M.

Buffalo City Hall, 65 Niagara Square Room 1038
Teleconference +1 917- 933-2166, ID #670 481 842#

ITEM NO.	CONTENTS	PAGE NO.
	Roll Call	
1	Motion to Adopt the Minutes of June 26, 2024	1
2	Election Of Officers	2
3	Election Of Members to Audit Committee	3
4	Election Of Members to Governance Committee	4
5	Adjournment Of Meeting	5

CALL OF THE ROLL

Present:	Herbert Bellamy, Jr.	Chairman of Board
	Christopher Roosevelt	Vice Chairman of the Board
	Eleanor Petrucci	Secretary of the Board
	Oluwole McFoy, P.E.	General Manager
	Gelea Y. James	Director of Employee Relations
	LaToya Cunningham	Special Assistant
	Charles Riley	Executive Secretary
	Adam Sassone	Secretary to General Manager
	Cheryl Colston	General Counsel
	Alexander Emmerson	Treatment Plant Superintendent
	Paul Harris	Superintendent of Mechanical Maintenance
	Rosaleen Nogle, P.E.	Principal Sanitary Engineer
	Desiree Briggs	Account Clerk Typist
	Delano Dowell	City of Buffalo Deputy Comptroller

The meeting was called to order at 9:12 A.M. A quorum was present.

ITEM NO. 1

Motion to Adopt the Minutes of the Meeting of June 26, 2024

MOTION TO ADOPT

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

ITEM NO. 2

ELECTION OF OFFICERS

	MOTION TO	APPROVE
CHAIRMAN	MADE BY	MRS. PETRUCCI
HERBERT L. BELLAMY, JR.	2ND BY	MR. ROOSEVELT
	AYES 3 NOES	0
	MOTION TO	APPROVE
VICE CHAIRMAN	MADE BY	MRS. PETRUCCI
CHRISTOPHER ROOSEVELT	2ND BY	MR. BELLAMY
	AYES 3 NOES	0
	MOTION TO	
ASSISTANT VICE CHAIRMAN	MADE BY	
VACANT	2ND BY	
	AYES NOES	
	MOTION TO	APPROVE
SECRETARY	MADE BY	MR. ROOSEVELT
ELEANOR PETRUCCI	2ND BY	MR. BELLAMY
	AYES 3 NOES	0
	MOTION TO	
ASSISTANT SECRETARY VACANT	MADE BY	
	2ND BY	
	AYES NOES	

ITEM NO. 3

ELECTION OF MEMBERS TO AUDIT COMMITTEE

	MOTION TO	APPROVE
CHAIRPERSON	MADE BY	MR. ROOSEVELT
ELEANOR PETRUCCI	2ND BY	MR. BELLAMY
	AYES 3	NOES 0
	MOTION TO	APPROVE
MEMBER	MADE BY	MRS. PETRUCCI
	2ND BY	MR. BELLAMY
CHRISTOPHER ROOSEVELT	AYES 3	NOES 0
	MOTION TO	APPROVE
MEMBER	MADE BY	MRS. PETRUCCI
HERBERT J. BELLAMY, JR.	2ND BY	MR. ROOSEVELT
	AYES 3	NOES 0

ITEM NO. 4

ELECTION OF MEMBERS TO GOVERNANCE COMMITTEE

	MOTION TO	APPROVE
CHAIRPERSON	MADE BY	MRS. PETRUCCI
CHRISTOPHER ROOSEVELT	2ND BY	MR. BELLAMY
	AYES 3	NOES 0
	MOTION TO	APPROVE
MEMBER	MADE BY	MR. ROOSEVELT
ELEANOR PETRUCCI	2ND BY	MR. BELLAMY
	AYES 3	NOES 0
	MOTION TO	APPROVE
MEMBER	MADE BY	MRS. PETRUCCI
HERBERT J. BELLAMY, JR.	2ND BY	MR. ROOSEVELT
	AYES 3	NOES 0

ITEM NO. 5

ADJOURNMENT OF MEETING

MOTION TO ADJOURN

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 1, 2024

BUFFALO
SEWER AUTHORITY

ATTACHMENT A

Capital Asset Guide

for

Buffalo Sewer Authority

Revised 7/31/2024

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I. Capital Asset Definitions and Guidelines

Capital Asset Classifications

Capital assets are assets purchased or constructed by the Buffalo Sewer Authority (the "Authority") that have a useable life of two or more years and that have a value equal to or greater than the established capitalization threshold. The following categories are used for Buffalo Sewer Authority.

- Land
- Land Improvements
- Buildings
- Building Improvements
- Machinery and Equipment
  - Office Equipment
  - Furniture
  - Computers
  - Vehicles
  - Heavy Equipment
  - Other
- Infrastructure
  - Roads
  - Sewer System
- Works of Art and Historical Treasures
- Construction in Progress

Capitalization Thresholds and Useful Lives

Class of Asset	Threshold Ending 6/30/2009*	Threshold Effective 7/1/2009*	Threshold Effective 7/1/2015*	Useful Life
Land	$5,000	$10,000	$10,000	Note 1
Land Improvements	$5,000	$10,000	$10,000	20
Buildings	$5,000	$10,000	$10,000	40
Building Improvements:	$5,000	$10,000	$10,000	20
Machinery and Equipment:	$5,000	$10,000	$10,000	
Office Equipment	$5,000	$10,000	$10,000	10
Furniture	$5,000	$10,000	$10,000	10
Computers	$5,000	$10,000	$10,000	3
Vehicles	$5,000	$10,000	$20,000	5
Heavy Equipment	$5,000	$10,000	$50,000	10
Other	$5,000	$10,000	$10,000	5
Infrastructure:	$5,000	$10,000	$10,000	
Roads	$5,000	$10,000	$10,000	20
Sewer System	$5,000	$10,000	$10,000	50
Works of Art and Historical Treasures	$5,000	$10,000	$10,000	Note 2
Construction in Progress	$5,000	$10,000	$10,000	Note 3

* The threshold for capitalization was increased from $5,000 to $10,000 on July 1, 2009.

The threshold for capitalization of Vehicles was increased from $10,000 to $20,000 on July 1, 2015.

The threshold for capitalization of Heavy Equipment was increased from $10,000 to $50,000 on July 1, 2015.

Note 1 – Assets are not depreciated.

Note 2 – Depreciation is not required for Works of Art and Historical Treasures that are inexhaustible. If collection/items are exhaustible, then depreciate over estimated useful life.

Note 3 – Depreciation will not be recorded on Construction in Progress. Upon completion the asset will be recorded in the appropriate asset classification and depreciation will begin.

Capital Asset Acquisition Cost

Capital assets should be recorded at their historical costs. The cost of a capital asset should include any ancillary costs that are necessary to place the asset in its intended condition for use. These include the vendor's invoice (plus the value of any trade-in, if reflected on the invoice), initial installation cost (excluding in-house labor), modifications, attachments, accessories or apparatus necessary to make the asset usable and render it into service. Historical costs also include charges such as freight and transportation charges, site preparation costs and professional fees. The costs of capital assets for government activities do not include capitalized interest.

Capital Asset Donations

Donated capital assets should be reported at fair value at the time of acquisition plus ancillary charges, if any. Donations are defined as voluntary contributions of resources to a governmental entity.

> **Note:** Fair value is the amount at which an asset could be exchanged in a current transaction between willing parties.

Modified Accrual Basis - Do not report revenue from the donation of a capital asset when using the modified accrual basis except in the following situation:

If the Authority receives a donation of a capital asset and intends to sell the asset immediately, revenue should be recognized in the period the asset is donated, and the capital asset should be reported in the same fund used to report the revenue as "Assets Held for Sale." Intent to sell should be evidenced by a sale of or contract to sell the capital asset before financial statements are issued.

Revenue should be measured at the amount at which the capital asset is sold or its contract price. If the Authority does not intend to sell the donated capital asset immediately or does not meet the criteria for intent to sell stated above, the donation should not be reported in the operations of the governmental funds.

Revenue from donations of financial resources such as cash, securities or capital assets should be recognized when the entity has an enforceable legal claim to the donation and when it is probable the donation will be received - regardless of when the financial resources are actually received. Revenue should be measured at the fair value of the financial resource donated.

Full Accrual Basis - According to GASB Statement No. 33, *Accounting and Financial Reporting for Non-Exchange Transactions* entities currently using proprietary fund accounting must recognize capital asset donations as revenues and not as contributed capital.

Governmental funds will have to meet the standards of GASB Statement No. 33. Donations must be recorded and reported at fair value on the date of acquisition. Recipients of donated capital assets will recognize the donation and related revenue when the transaction is complete and the assets are received, providing all eligibility requirements have been met. Promises of capital asset donations should be recognized as receivables and revenues (net of estimated uncollectible amounts) when all applicable eligibility requirements have been met, providing that the promise is verifiable and the resources are measurable and probable of collection.

In some cases, donated capital assets are given with the stipulation (time requirement) that the assets cannot be sold, disbursed or consumed until a specified number of years have passed or a specific event has occurred. For such cases, the capital asset should be reported in the statement of Net Assets as *"Net Assets -- Restricted"* as long as the restrictions or time requirements remain in effect.

Leased Equipment

Equipment should be capitalized if the lease agreement meets any one of the following criteria:

- The lease transfers ownership of the property to the lessee by the end of the lease term.
- The lease contains a bargain purchase option.
- The lease term is equal to 75 percent or more of the estimated economic life of the leased property.
- The present value of the minimum lease payments at the inception of the lease, excluding executory costs, equals at least 90 percent of the fair value of the leased property.

Leases that do not meet any of the above requirements should be recorded as an operating lease and reported in the notes of the financial statements.

Depreciating Capital Assets

Capital assets should be depreciated over their estimated useful lives unless they are inexhaustible.

The straight-line depreciation method (historical cost less residual value, divided by useful life) is method that will be used.

Depreciation will be calculated on an annual basis. The first year of depreciation will be included in the first year following the completion or acquisition of the asset. In the year of disposition, all assets will be depreciated for the entire year regardless of when the asset was disposed. Accumulated depreciation will be summarized and posted to the accounting general ledger

Residual Value

Residual value is the estimated fair value of a capital asset or infrastructure remaining at the end of its useful life. In order to calculate depreciation for an asset, the estimated residual value must be established before depreciation can be calculated. The use of historical sales information becomes a valuable method for determining the estimated residual value. Proceeds from sale of assets must be netted against residual value in computing net gain or loss from sale.

The Authority generally purchases assets with the intent to use such assets until its usefulness is exhausted. Therefore, the Authority will estimate residual value to be zero for all capital assets.

Sale or Disposal of Capital Assets

Approval of the Board of the Buffalo Sewer Authority (the "Board") is required prior to the sale or disposal of any capital asset. For accounting purposes, the date the Board approves a sale or disposal shall be deemed the event date for removing a capital asset from fixed asset inventory.

When an asset is sold, a gain or loss must be recognized when:

- Cash is exchanged and the amount paid does not equal the net book value of the asset.
- Cash is not exchanged and the asset is not fully depreciated or has a residual value.

A gain or loss **is not** reported when:

- Cash exchanged equals the net book value and the asset does not have a residual value.
- Cash is not exchanged and the asset is fully depreciated and has no residual value.

Computation of Gain and Loss from Sale of Assets

To compute a gain or loss, proceeds received must be subtracted from the asset's net book value.

Example:	Asset's Historical Cost	$ 10,000
	Less Accumulated Depreciation	7,000
	Net Book Value	$ 3,000
	Subtract Proceeds Received	2,000
	Loss from Sale of Asset	$ 1,000

If the asset has been fully depreciated and has a residual value, then the proceeds must be subtracted from the residual value to compute the gain or loss.

Example:	Asset's Historical Cost (residual value - $1,000)	$ 10,000
	Less Accumulated Depreciation	9,000
	Residual Value	$ 1,000
	Subtract Proceeds Received	2,000
	Gain from Sale of Asset	$ 1,000

II. Capital Asset Categories

Land

Land Definition

Land is the surface or crust of the earth, which can be used to support structures, and may be used to grow crops, grass, shrubs, and trees. Land is characterized as having an unlimited life (indefinite).

Depreciation Methodology

Land is an inexhaustible asset and is not depreciated.

Capitalization Threshold

The Capitalization threshold for land is $10,000.

Examples of Expenditures to be Capitalized as Land

- Purchase price or fair market value at time of acquisition.
- Commissions.
- Professional fees (title searches, architect, legal, engineering, appraisal, surveying, environmental assessments, etc.).
- Accrued and unpaid taxes at date of purchase.
- Other costs incurred in acquiring the land.
- Right-of-way.

Land Improvements

Land Improvement Definition

Land improvements consist of betterments, site preparation and site improvements (other than buildings) that ready land for its intended use. Land improvements include such items as excavation, non-infrastructure utility installation, driveways, sidewalks, parking lots, flagpoles, retaining walls, fences, and outdoor lighting. They can be exhaustible or non-exhaustible.

Non-Exhaustible land improvements – Expenditures for improvements that do not require maintenance or replacement. Expenditures to bring land into condition to commence erection of structures, and expenditures for land improvements that do not deteriorate with use or over the passage of time are additions to the cost of land and are generally not exhaustible and therefore not depreciated.

Exhaustible land improvements – Expenditures for improvements that are part of a site, such as parking lots, landscaping and fencing, are usually exhaustible and are depreciated.

Depreciation Methodology

Land improvements that are inexhaustible assets are not depreciated. Exhaustible land improvements are depreciated on a straight-line basis over 20 years. The straight-line depreciation method (historical cost less residual value, divided by useful life) will be used for exhaustible land improvements.

Capitalization Threshold

The Capitalization threshold for land improvements is $10,000.

Examples of Expenditures to be Capitalized as Land Improvements

- Site improvements such as excavation, fill, grading, and utility installation.
- Removal, relocation, or reconstruction of property of others (railroad, telephone and power lines).
- Fencing.
- Landscaping.
- Parking lots.
- Retaining walls.

Buildings

Building Definition

A building is a structure that is permanently attached to the land, has a roof, is partially or completely enclosed by walls, and is not intended to be transportable or moveable. Buildings that are an ancillary part of the Authority's system network, such as outlying stations will be reported as infrastructure rather than as buildings.

Depreciation Methodology

The straight-line depreciation method (historical cost less residual value, divided by useful life) will be used for buildings.

Capitalization Threshold

The capitalization threshold for buildings is $10,000.

Examples of Expenditures to be Capitalized as Buildings

Purchased Buildings

- Original purchase price.
- Expenses for remodeling, reconditioning or altering a purchased building to make it ready to use for the purpose for which it was acquired.
- Environmental compliance (i.e., asbestos abatement).
- Professional fees (legal, architect, inspections, title searches, etc.).
- Payment of unpaid or accrued taxes on the building to date of purchase.
- Cancellation or buyout of existing leases.
- Other costs required to place the asset into operation.

Constructed Buildings

- Completed project costs.
- Cost of excavation or grading or filling of land ***for a specific building.***
- Expenses incurred for the preparation of plans, specifications, blueprints, etc.
- Professional fees (architect, engineer, management fees for design and supervision, legal).
- Costs of temporary buildings used during construction.
- Unanticipated costs such as rock blasting, piling, or relocation of the channel of an underground stream.
- Permanently attached fixtures or machinery that cannot be removed without impairing the use of the building.
- Additions to buildings (expansions, extensions, or enlargements).

Building Improvements

Building Improvement Definition

Building improvements are capital events that materially extend the useful life of a building or increase the value of a building, or both. A building improvement should be capitalized as a betterment and recorded as an addition of value to the existing building if the expenditure for the improvement is at the capitalization threshold, or the expenditure increases the useful life or value of the building.

Depreciation Methodology

The straight-line depreciation method (historical cost less residual value, divided by useful life) will be used for building improvements and their components.

Capitalization Threshold

The capitalization threshold for building improvements is $10,000.

Examples of Expenditures to be Capitalized as Improvements to Buildings

> **Note:** For a replacement to be capitalized, it must be a part of a major repair or rehabilitation project, which increases the value, and/or useful life of the building. A replacement may also be capitalized if the new item/part is of significantly improved quality and higher value compared to the old item/part such as replacement of an old shingle roof with a new fireproof tile roof. Replacement or restoration to original utility level would not. Determinations must be made on a case-by-case basis.

- Conversion of attics, basements, etc., to usable office, clinic, research or classroom space.
- Structures ***attached*** to the building such as covered patios, sunrooms, garages, carports, enclosed stairwells, etc.
- Installation or upgrade of heating and cooling systems, including ceiling fans and attic vents.
- Original installation/upgrade of wall or ceiling covering such as carpeting, tiles, paneling, or parquet.
- Structural changes such as reinforcement of floors or walls, installation or replacement of beams, rafters, joists, steel grids, or other interior framing.
- Installation or upgrade of window or doorframe, upgrading of windows or doors, built-in closet and cabinets.
- Interior renovation associated with casings, baseboards, light fixtures, ceiling trim, etc.
- Exterior renovation such as installation or replacement of siding, roofing, masonry, etc.
- Installation or upgrade of plumbing and electrical wiring.

- Installation or upgrade of phone or closed circuit television systems, networks, fiber optic cable, wiring required in the installation of equipment (that will remain in the building).

Other costs associated with the above improvements

Maintenance Expense

The following are examples of expenditures ***not*** to capitalize as improvements to buildings. Instead, these items should be recorded as maintenance expense.

- Adding, removing and/or moving of walls relating to renovation projects that are not considered major rehabilitation projects and do not increase the value of the building.
- Improvement projects of minimal or no added life expectancy and/or value to the building.
- Plumbing or electrical repairs.
- Cleaning, pest extermination, or other periodic maintenance.
- Interior decoration, such as draperies, blinds, curtain rods, wallpaper.
- Exterior decoration, such as detachable awnings, uncovered porches, decorative fences, etc.
- Maintenance-type interior renovation, such as repainting, touch-up plastering, replacement of carpet, tile, or panel sections; sink and fixture refinishing, etc.
- Maintenance-type exterior renovation such as repainting, replacement of deteriorated siding, roof, or masonry sections.
- Replacement of a part or component of a building with a new part of the same type and performance capabilities, such as replacement of an old boiler with a new one of the same type and performance capabilities.
- Any other maintenance-related expenditure that does not increase the value of the building.

Machinery and Equipment

Machinery and Equipment Definition

Fixed or movable tangible assets to be used for operations, the benefits of which extend beyond one year from date acquired and rendered into service. Improvements or additions to existing personal property that constitute a capital outlay or increase the value or life of the asset should be capitalized as a betterment and recorded as an addition of value to the existing asset.

> **Note**: Costs of extended warranties and/or maintenance agreements, which can be separately identified from the cost of the equipment, should not be capitalized.

Categories of Machinery and Equipment

- Office equipment.
- Furniture.
- Computers.
- Vehicles.
- Heavy Equipment.
- Other

Capitalization Threshold

The capitalization threshold for machinery and equipment is $10,000, with the exception of vehicles, for which the capitalization threshold is $20,000, and heavy equipment, for which the capitalization threshold is $50,000.

Depreciation Methodology

The straight-line depreciation method (historical cost less residual value divided by useful life) will be used for machinery and equipment.

Examples of Expenditures to be Capitalized as Machinery and Equipment

- Original contract or invoice price.
- Freight charges.
- Handling and storage charges.
- In-transit insurance charges.
- Sales, use, and other taxes imposed on the acquisition.
- Charges for testing and preparation for use.
- Computer software and hardware.
- Parts and labor associated with the construction of equipment.
- Road Graders and other heavy construction equipment.
- Dump trucks and passenger cars.
- Lawn maintenance equipment, compressors, and tool kits.

Infrastructure

Infrastructure Definition

Assets that are long-lived capital assets that normally is stationary in nature and can be preserved for a significantly greater number of years than most capital assets. Infrastructure assets are often linear and continuous in nature.

Infrastructure Improvements

Infrastructure improvements are capital events that materially extend the useful life or increase the value of the infrastructure, or both. Infrastructure improvements should be

capitalized as a betterment and recorded as an addition of value to the infrastructure if the improvement or addition of value is at the capitalization threshold or increases the life or value of the asset.

Jointly Funded Infrastructure

Infrastructure paid for jointly by multiple governmental entities should be capitalized by the entity responsible for future maintenance.

Maintenance Costs

Maintenance costs are recurring costs that allow an asset to continue to be used during its originally established useful life. Maintenance costs are expensed in the period incurred.

Preservation Costs

Preservation costs are generally considered to be those outlays that extend the useful life of an asset beyond its original estimated useful life, but do not increase the capacity or efficiency of the asset. Preservation costs should be capitalized under the depreciation approach.

Additions and Improvements

Additions and improvements are those capital outlays that generally increase the capacity or efficiency of the asset. A change in capacity increases the level of service provided by an asset. For example, additional lanes can be added to a highway or the weight capacity of a bridge could be increased. A change in efficiency maintains the same service level, but at a reduced cost. The cost of additions and improvements should be capitalized..

Depreciation Methodology

The straight-line depreciation method (historical cost less residual value, divided by useful life) will be used for infrastructure assets.

Capitalization Threshold

The capitalization threshold for infrastructure is $10,000.

Infrastructure Classifications

- Bridges (includes culverts).
- Roads.
- Sewer System.

Examples of Expenditures to be Capitalized as Infrastructure

- Roads, streets, curbs, gutters, sidewalks, fire hydrants.
- Bridges, culverts, trestles.
- Dams, drainage facilities.
- Electric, water and gas (main lines and distribution lines, tunnels).
- Fiber optic and telephone distribution systems (between buildings).
- Light system (outdoor, street, etc.).
- Signage.
- Sewer systems (sanitary sewer lines, storm drainage lines, receivers, pump stations, retention basins, etc.).
- Water systems.

Works of Art and Historical Treasures

Works of Art and Historical Treasures Definition

Collections or individual items of significance that are owned which are not held for financial gain, but rather for public exhibition, education or research in furtherance of public service. Collections or individual items that are protected and cared for or preserved and subject to an organizational policy that requires the proceeds from sales of collection items to be used to acquire other items for collections.

Exhaustible collections or items - items whose useful lives are diminished by display or educational or research applications.

Inexhaustible collection or items - where the economic benefit or service potential is used up so slowly that the estimated useful lives are extraordinarily long. Because of their cultural, aesthetic, or historical value, the holder of the asset applies efforts to protect and preserve the asset in a manner greater than that for similar assets without such cultural, aesthetic, or historical value.

Depreciation Methodology

The straight-line depreciation method (historical cost less residual value, divided by useful life) will be used for exhaustible collections. Inexhaustible items are not depreciated.

Capitalization Threshold

All works of art and historical treasures acquired or donated will be capitalized.

If a collection is held for financial gain and not capitalized, disclosures must be made in the notes that provide a description of the collection and the reasons these assets are not capitalized. When donated collection items are added to noncapitalized collections, program expense equal to the amount of revenues should be recognized.

Examples of Expenditures to be capitalized as Works of Art and Historical Treasures:

- Collection of rare books, manuscripts.
- Maps, documents and recordings.
- Works of art such as paintings, sculptures, and designs.
- Artifacts, memorabilia, exhibits.
- Unique or significant structures.

Construction in Progress

Construction in Progress Definition

Construction in Progress reflects the economic construction activity status of buildings and other structures, infrastructure (highways, energy distribution systems, pipelines, etc.), additions, alterations, reconstruction, installation, and maintenance and repairs, which are incomplete.

The Board shall approve the Certificate of Occupancy, indicating that the project is complete. The date the Certificate of Occupancy is approved by the Board shall be the date that project costs and related soft costs (engineering, legal, and architectural costs, etc.) are moved from construction in progress to fixed asset infrastructure inventory for accounting purposes.

Depreciation Methodology

Depreciation is not applicable while assets are accounted for as Construction in Progress. Upon asset completion and placement into service, the value of such asset is removed from Construction in progress. Depreciation then begins based upon depreciation life of the appropriate asset category. See appropriate capital asset category when asset is capitalized.

Capitalization Threshold

Construction in progress assets should be capitalized to their appropriate capital asset categories upon the earlier occurrence of execution of substantial completion contract documents, occupancy, or when the asset is placed into service.

BUFFALO
SEWER AUTHORITY

ATTACHMENT B

BUFFALO SEWER AUTHORITY

PURCHASING GUIDELINES
POLICIES AND PROCEDURES

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I. INTRODUCTION

Scope:

General Municipal Law §104-b requires that goods and services which are not required by law to be procured through competitive bidding must be procured in a manner which assures the prudent and economical use of public monies in the best interest of the taxpayers. It further requires that every political subdivision and any district therein, by resolution, shall adopt internal policies and procedures governing all procurements of goods and services which are not required to be made pursuant to the competitive bidding requirements of General Municipal Law §103. It also requires that such policies and procedures identify the individual(s) responsible for purchasing. The General Manager is responsible for the purchasing of the Buffalo Sewer Authority. The following guidelines are for governing the procurement of goods and services for the use of the Buffalo Sewer Authority.

Intent:

It is the Authority's intent to implement and strictly enforce purchasing guidelines to openly promote fair competition, to acquire goods and services that provide the best product from a responsible vendor at the most reasonable price, to provide greater opportunities for disadvantaged businesses to provide goods and services for the Authority, and to guard against favoritism, improvidence, extravagance, fraud and corruption.

Budget:

The procurement of goods and services shall be limited to those necessary to operate, maintain and/or improve the sewer system of the Authority. In no case shall the amounts expended exceed the allocations for these goods and services as provided for in the Authority's Annual Budget or subsequent amendments.

Board Approval:

The process of purchase approval shall move to the General Manager of the Authority for presentation to the Board of the Buffalo Sewer Authority for the purchase of goods over $20,000 and the purchase of services over $35,000.

II. POLICY

Mission Statement:

The Buffalo Sewer Authority purchases goods and services according to its enabling legislation granted by the State of New York.

The purpose of the Guidelines is to facilitate each department in procurement direction, while protecting the Buffalo Sewer Authority and its ratepayers by promoting fairness in contracting with the business community.

The Authority maintains an Open Vendor policy and welcomes all potential bidders.

The Authority's Purchase Office maintains a bidding process for purchases and supervises all purchasing. The Authority's Capital Projects group supervises bidding processes for projects at the Authority's Wastewater Treatment Plant, and the Authority's Engineering Department maintains and supervises a bidding process for other formal construction projects.

The Authority welcomes purchases through contracts let by the City of Buffalo, the County of Erie and State of New York Office of General Services and will consider all such business interests.

The Guidelines are a deliberate effort to balance the need to preserve open and fair competition with the goal of allowing each department flexibility to procure in a manner that contributes to the fulfillment of their operational mission.

Open Vendor Policy:

The Buffalo Sewer Authority invites all vendors to bid in an open-competitive environment.

A vendor may forward to the Purchase Office, by way of mail or fax, all relevant information pertaining to his enterprise.

Vendors remain on our vendor list indefinitely. Requests for bids or quotes may be received off this list. Failure to respond following three separate requests generally will result in the removal from our bidders' list.

Freedom of Information

The Buffalo Sewer Authority maintains and adheres to all related Freedom of Information laws. To ensure proper response, requests should be submitted online at https://buffalosewer.org/how-we-can-help-you/data-or-freedom-of-information-request/, or made in writing to the General Manager of the Authority.

Telephone or written requests on results of informal purchases may be made to the Purchase Office. Response by this method is at the convenience of the Authority.

III. TYPES OF CONTRACTS

Construction Contracts:

Authority estimates for construction contracts with an anticipated total cost of $7,000.00 and above must be bid and advertised as a Formal Contract. Contracts estimated at less than $7,000.00 may be bid as a Goods and Services.

Goods and Services Contract:

Purchases are made in accordance with the Standard Monetary Guidelines set forth below:

STANDARD MONETARY GUIDELINES

Petty Cash
Limited to purchases less than $200.00 per voucher.
Proper receipts must accompany request.

< $1,000.00 - Small Purchases (Occasional)
From one responsible source at a reasonable price.
Accumulative units may require Informal purchase.
Verbal quotes may be solicited.

$1,000.00 < $20,000.00 for the Purchase of Goods and
$1,000.00 < $35,000.00 for the Purchase of Services - Informal
Requires faxed, e-mail or mailed response to Request for Quotation from at least three (3) vendors. Dated, time stamped with price, and associated Quotation Request number affixed. Authority generated Request for Quotations form is preferred.

>$20,000.00 for the Purchase of Goods and
>$35,000.00 for the Purchase of Services - Formal
Formal, sealed bidding procedure (see Formal Contracts)

Emergency, Sole Source and Professional Services Purchases
The methods of solicitations for these types of procurements may vary depending on the circumstances encountered. The policies and procedures should ensure that the procurement and method of seeking competition is in the best interest of the Authority.

IV. FORMAL CONTRACTS:

Formal Contracts are to be in the Authority's approved contract format and must contain all necessary inclusions as designated. Executed formal contracts for construction projects and services that are not routine in nature are forwarded to the Engineering Department or Capital Projects group, as appropriate for creation of a Contract Order. Executed formal contracts for the purchase of goods and services that are routine in nature are forwarded to the Purchase Office for the creation of a Blanket Purchase Order. A Regular Purchase Order may be created for those requiring a one-time payment.

Formal Contract Procedures

1. The department requiring the project, goods or service composes the specifications and sends it to either the Engineering Department, the Capital Projects group, or the Purchase Office for review and approval of contents. For new projects or services, the specifications may be forwarded to the City of Buffalo Law Department for approval as to form.

2. The General Manager authorizes to advertise for invitation for bids.

3. An advertisement date, pre-bid meeting date (if required) and bid opening date are coordinated between the Engineering Department, the Capital Projects group, or Purchase Office and the department head requiring the goods or service.

   In accordance with General Municipal Law §103, the advertisement for bids shall be published in the official newspaper or other form of media, if any, or otherwise in a newspaper or media designated for such purpose by the Board of the Buffalo Sewer Authority.

   At least five days shall elapse between the first publication of such advertisement and the date so specified for the bid opening and must contain the following:

   a. Specifics of the commodity, service or project needed.
   b. Deadlines and the time and place where the sealed bids and pre-bid meeting (if applicable) are to be received.
   c. The deposit, if any, required for bid consideration.
   d. Any other requirements for bid submission.

4. The Formal Proposal packages are prepared where the bidders pick up the package (after the ad is published). All bidders may be required to give security for the faithful performance of the contract, and such other security as the Authority may require.

5. Pre-bid meeting is held (if applicable).

6. Bid opening is held.

7. The bid bond(s) or cashier's check(s) that was submitted with the bid is held in the Authority's safe. Required security will be returned to all but the contracted vendor after award is made.

8. Bid openings may be held at the Authority's Administrative Offices located at 1038 City Hall, Buffalo, New York, 14202 or its wastewater treatment facility located at the Foot of West Ferry Street, Buffalo, New York, 14213.

9. The department requiring the commodity or service reviews all the bids and, for bids for construction contracts and bids for purchase contracts necessary to complete construction contacts, determines who, in its opinion, is the lowest responsible bidder. For other bids, the responsible department will determine who, in its opinion, is the lowest responsible bidder, after accounting for any adjustments made to determine best value, as described in these Guidelines. The recommendation of the responsible department is forwarded to either the Engineering Department, the Capital Projects group, or Purchase Office.

10. The bid-opening tabulation sheet (which consists of the bidders and amounts) is prepared and copies are sent to various individuals. The department head receives copies of the bidder's proposal.

11. Proposal packages from the three lowest bidders, or the three bids determined to have the best value, as appropriate, may be forwarded to the City of Buffalo Law

Department for recommendation.,

12. A board resolution is prepared and forwarded to the General Manager and Executive Secretary for approval.

13. An "Award of Contract" resolution goes through the Board.

14. Once the resolution is passed, the Executive Secretary's Office forwards the approved resolution to the Engineering Department, the Capital Projects group, or Purchase Office notifying them that the resolution was passed at the Authority's Board meeting.

15. The Engineering Department, the Capital Projects group, or Purchase Office assembles required quantity of contracts for the contractor to execute. When the formal bid was for a one-time purchase of a commodity where a warranty is required, contracts are not needed. A Standard Purchase Order is required.

16. The Engineering Department, the Capital Projects group, or Purchase Office sends out a letter to the contractor notifying them that they have been awarded the contract. Contract documents and blank Bonds are included, if needed. The contractor may be requested to come to the Authority's offices to obtain the contract documents.

    The contractor is requested to supply all required insurance and bond forms and submit them to the Authority with signed contract documents. The contractor will send the executed contracts back (with bonds and insurance) to the Authority.

    If the successful bidder neglects or refuses to accept the contract within five days after written notice that it has been awarded to him/her, or if he/she accepts but does not execute the contract and give proper security, the Authority shall have the right to declare his/her deposit forfeited, or it may redeem the proposal bond submitted with the bid, and the invitation for bids will be re-advertised. Alternately, his/her deposit may be returned and the contract awarded to the next lowest bidder, or the next best value bid, as appropriate.

17. After the contractor has executed the contracts, the Authority sends them to the City of Buffalo Law Department for approval as to form. Once approved a contract or blanket purchase order number is assigned.

18. Contracts are forwarded to the City of Buffalo Division of Audit for approval as to sufficiency.

19. Once approved by Law and Audit, the contracts are given to the General Manager of the Authority for signature.

20. The General Manager executes the contracts and they are notarized.

21. Notification may be sent to contractor for a pre-construction meeting when applicable.

22. A "Notice to Proceed" letter is sent to the contractor with the duly executed contract. Various individuals receive a copy of this letter.

23. Contracts are distributed to: Files, Contractor, Law Department, Division of Audit, Department overseeing the project, and Consultant if applicable.

V. BEST VALUE DETERMINATIONS

Description of Best Value

General Municipal Law §103 provides that purchase and service contracts, other than purchase contracts necessary to complete construction contracts, may be awarded on the basis of best value, as defined in State Finance Law §163, to a responsive and responsible bidder.

The State Finance Law describes "best value" as the basis for awarding contracts that optimizes quality, cost, and efficiency. The law notes that such basis shall reflect, wherever possible, objective and quantifiable analysis. Additionally, the law specifically provides that such basis may also identify a quantitative factor for bidders that are certified minority- or women-owned business enterprises or service-disabled veteran-owned business enterprises.

The use of a best value methodology offers the Authority flexibility in determining the award of any contract that was properly designated as a best value contract during the bid process.

Considerations

In determining best value, the Authority may consider factors including, but not limited to, the following: reliability of products; responsibility of the supplier; efficiency and/or ease of use; useful lifespan; ability to meet the Authority's needs regarding timeliness of delivery or performance; durability; availability of replacement parts or maintenance contractors; quality of craftsmanship; warranty; and the vendor's status as a certified minority or woman-owned business enterprise (M/WBE) or service-disabled veteran-owned business (SDVOB).

In any offering where the Authority intends to use a best value methodology, the Authority will clearly specify in the bidding documents the factor(s) that will be considered in determining best value, and how those factors will be analyzed. Whenever feasible, the described analysis should include a quantitative factor. Whenever any contract is awarded on the basis of best value instead of lowest responsible bidder, the basis for determining best value will be thoroughly and accurately documented.

M/WBEs and SDVOBs

For all purchase and service contracts where a best value methodology could be utilized, bids from businesses that are certified as a minority or woman-owned business by New York State and/or by the Erie County/City of Buffalo joint Certification Committee and/or are certified by New York State as an SDVOB will be evaluated as if their bid price were 10%-20% lower. The specific percentage used will depend on the anticipated contract

price, and will be included in the bid announcement. Businesses must include proof of their certification as an M/WBE or SDVOB at the time they submit their bid for the bid to be evaluated at the lower price.

VI. GUIDELINES

Categories

Agreement:

An understanding of the parties by implication including, course of dealing or usage of trade or course of performance (i.e. utilities). While all contracts are agreements, all agreements are not contracts.

Emergency:

An emergency condition may be declared when something is acquired under conditions deemed emergency or exigency due to an unavoidable situation where there is a threat of harm to life, health, safety, environment, or property.

The prospect of interruption of sewer service to a community, and/or the disruption of the efficient operation of the Authority arising from an unforeseen circumstance may also be declared an exigency condition. Lack of proper planning may not constitute such conditions. Declaration may be authorized by any of the following individuals: Treatment Plant Superintendent, Treatment Plant Administrator, Superintendent of Mechanical Maintenance, Director of Sewer Maintenance or the Principal Sanitary Engineer. Documentation and justification of such declaration should be provided to the General Manager. The Emergency Declaration will be referred to the Board of the Buffalo Sewer Authority.

Leases:

Entering into any true lease for goods or services requires competitive proposals attached to the requisition. It is important to distinguish between an installment purchase (which provides for Authority ownership at the lease term end) and a "true lease", which provides for regular payments over a set time for use of property, but upon termination of the lease, the property must revert to the lessor and cannot be retained by the Authority.

Maintenance or Service Contracts:

For service contracts, time and materials or full service can be acquired. The original manufacturer or manufacturer's representative vendor or other source may offer such contracts.

Negotiated Contracts:

Procurement by negotiation is preferred where one or more of the following conditions prevail:

1. The desired goods or services cannot be precisely defined or standardized.
2. A cost reimbursement type contract is contemplated.
3. Discussion with contractor regarding technical aspects is intended.
4. Where market is best by dollar negotiation.
5. Offerors are given the opportunity to revise price or technical aspects.
6. Artistic or aesthetic value supersedes price as primary selection criteria.

Negotiated contracts should be identified as such. Documented justification, meeting one or more of the above conditions, should be affixed to the contract. Solicitation of *Requests for Proposals* (*RFP*) should be submitted.

Preferred Contract Purchasing:

Municipal authorized contracts may be a source for non-competitive purchasing. New York State Office of General Services (OGS), County of Erie (Erie), City of Buffalo (City) and contracts established by the Authority are currently approved. Contract type and number should be affixed in appropriate fields on requisition. Vendors are required to provide written or faxed documentation of such award if not available to the Authority. This documentation must specifically identify all purchases and accompany the requisition. Date range of contract is required. Such contracts eliminate the necessity to bid. Contracts may be found in the Purchasing office. Authorized contracts may not always be the best price, so requisitioners should review market.

Elective, custom, and/or non-contract options, not listed in authorized contract but available from vendor must be maintained as a separate purchase, and therefore subject to purchasing guidelines. Related, non-contracted additions should be purchased on a separate Purchase Order or Blanket Purchase Order release identifying the relation to the contracted purchase.

Professional Service Contracts:

The Board of the Buffalo Sewer Authority may declare and authorize a contract to provide services to the Authority outside the guidelines when such acquisitions are required for confidentiality; specialized or technical services, training or expertise unobtainable but from one source; specialized knowledge; lack of responsible competition; nature or magnitude; complexity of services; lack of resources or staff equipment and or facility; short term or infrequent need; emergency or exigency condition; or where possible, service is best obtained by decision founded on competitive Request for Proposals. The requesting department should be prepared to justify the procurement and provide documentation as to how the particular services were acquired.

Sole Source:

Award where competition is waivable or is not feasible under the circumstances. Documentation justifying such conditions should accompany the requisition and be on file in the Purchase Office. This would include single bid, emergency, expediency and single-source purchasing.

Goods and services that may be procured from only one source are defined as “sole

source" items. It is important to note that there must be, without question, a single supplier of the item or service. Sole source situations generally exist when an item is manufactured by only one firm, and a vendor has an exclusive franchise or distributorship for an item.

To initiate a sole source purchase, the requisitioner must be confident that such conditions exist in the marketplace, that the requested goods or services are available from only one supplier and no substantial equivalent is available.

Even though there is only one source of supply, the requisitioner must receive a written quotation from the vendor. Upon receipt of a properly executed quotation, the requisitioner will then proceed to write the purchase order.

Since market conditions change over the years, a previously substantiated sole source may find new entrants to a formerly monopolized market. All sole sources should be verified. It can be a situation where the requisitioner knows the marketplace or it simply may be the need to verify that the marketplace has not changed.

General Guidelines For Contract Administration

Award:

The Purchase Office selects the best vendor after prices are obtained, based on lowest bid or, where permissible and appropriate, best value. Selection criteria should be documented and justified when other than low bid. Within thirty (30) days of the deadline for receipt of responses, the quote may be awarded or all bids rejected.

Consideration for award should include the following, as well as any factors used to determine best value, if appropriate:

a. *Lowest bidder* means the bidder that offers the lowest net price for the item specified, who bids quality merchandise, and can deliver according to specifications.
b. *Responsible bidder* means bidder who has proven historically that the company can meet all terms.
c. *Responsive bidder* means that the bidder has responded as mandated.

Blanket Purchase Orders:

Blanket Purchase Orders may have a term and/or dollar ceiling assigned and releases allowed through a release approval system. Release approvals may be different than initial approval scheme. Blanket Purchase Orders (BPO's) may be created to contain costs to a vendor and/or provide complete contracted services.

Documentation and justification should be made to the Purchase Office for BPO creations. The contract monitor will supervise the use of BPO's and the releases against their established budget.

Brand Name or "Authority Approved Equal":

Descriptions may be used to define performance or other important requirements of procurement where other descriptions would be impractical or uneconomical. Such language should be included in all requests for proposals.

Delivery Requirements:

When obtaining quotes, be sure to quote "F.O.B. Destination" delivered whenever possible.

Discounts

The Authority will include language in its bid documents for vendors to offer discounts in connection with purchases. The Authority will seek to take advantage of any and all discounts offered by vendors within the parameters of said offer, including, but not limited to their consent of electronic payment.

Insurance

Policies of insurance for the Authority are not considered purchases and therefore are not subject to competitive bidding.

Materials Contracts:

The Authority's authorized contracts for the purchasing of goods used in high volumes during the year. Contracts to cover multiple items priced individually.

Prevailing Wages:

Prevailing wages may be required for services rendered. Requirements should be consulted.

Purchase Orders:

A Purchase Order (P.O.) is a legal document which sets conditions, describes, contracts to deliver and to pay. Giving out pending P.O. number information to a vendor over the phone is not allowed, unless authorized by the Department Head.

Quotes:

Responsive bidder means that the bidder has responded as mandated. All Requests for Quotations must arrive by allotted time and be received by fax, e-mail or mail only. Verbal quotes may be accepted for small purchases and may be necessary for emergency purchases. When possible, verbal quotes shall be followed by written quotations. All verbal quotes must be documented by person obtaining quotation. Fax and e-mail quotes will be accepted 24 hours a day, seven days per week. The Purchase Office cannot make a recommendation to award until after the allotted time for vendors to respond has passed.

Quotes, together with supporting documentation, will be forwarded to the Purchase Office. Fax quotes time stamped and dated with vendor information, purchase order requisition number and price, must be affixed. The Purchase Office should send a Request for Quotation to as many vendors as necessary in order to receive a

minimum of three responses. The Purchase Office with proper justification may allow deviations on three-bid minimum. Quotes are valid for a time frame not to exceed one procurement or for thirty (30) days if an additional procurement is needed.

Standardization:

Requisitioners should refer to standardization areas when documenting or justifying purchases. The following areas of circumstances under which standardization provisions might be appropriate under General Municipal Law §103 are:

1. Compatibility - Items from one manufacturer are not compatible with present equipment without incurring additional expense.
2. Design and Construction - The design, plan or method of construction is not suitable to an operation without alteration.
3. Economics - Service facilities are adapted to the handling of a particular make of equipment and cannot be converted economically.
4. Endangerment - Changes would endanger ratepayers or employees.
5. Inventory - Spare part inventory already in stock, makes equipment change uneconomical for inventory purposes.
6. Local Conditions - Require a particular type of equipment.
7. Trained Employees - A great expense would be incurred to train or retrain employees.
8. Uniformity - A substantial amount of Authority equipment is one type, make or manufacturer making change impractical or uneconomical.

VII. PROCEDURES

Purchasing Office - Administration Department:

Purchasing is responsible for establishing purchasing policy and administering purchasing services for all departments of the Authority. Responsibilities include:

1. Manage Purchasing System and operation
2. Analyze prices paid for materials, equipment and services
3. Act as a center of information, maintain vendor catalog library
4. Coordinate and consolidate interdepartmental purchasing
5. Assign approval processes
6. Chronicle vendor activities
7. Manage Authority-wide service maintenance contracts.
8. Manage clerical process, receive quotes, print and send awards
9. Execute Service Agreements under $20,000

Purchasing System:

An information system designed to electronically monitor and facilitate the flow of documentation, approvals, and other requirements so that the Authority maintains a permanent record of the acquisition of goods and services.

Purchases begin with user request and flow through the Purchasing System electronically driven by information and approvals. Documents and justifications in the form of attachments are forwarded to the Purchase Office to validate all purchases for audit purposes. The Purchasing System may be viewed throughout the process for validation of procedure.

Requisitioners should review projected purchases and their costs prior to the request for proposals to assure that required funds are available for the purpose.

Receivers:

Departmental receivers should accept and inspect purchases and forward all packing slips or invoices to the Accounting Department for prompt payment.

Vendors:

Authority staff should not make commitments to vendors until approvals are completed. Purchases prior to requisition (confirming orders) are subject to denial and may not be paid.

Unacceptable vendor activity or influence could be grounds for being banned from future Authority business.

VIII. DEFINITIONS

Advertisement: Publication of Notice to Bidders in newspaper of general circulation in the Buffalo area; trade journals e.g. Dodge Report.

Agreement: An understanding of the parties by implication, including course of dealing or usage of trade or course of performance (i.e. utilities). While all contracts are agreements, all agreements are not contracts.

Amendments: All amendments, the modification of an existing contract, require Board approval.

Blanket Purchase Orders: Allows periodic requisition of contract items over the period designated until the quantity/value is exhausted. Action approved by Department Head.

Board: Buffalo Sewer Authority Board.

Change Orders: Variation to contracts for goods or services exceeding 15% of the contract's dollar amount and within the prescribed limits for each contract. Board approval required.

Claim: A vendor's request for payment for materials or services rendered.

Competitive Range: All proposals with a reasonable chance of being selected for award.

Consultant: An individual or firm employed for specific purposes that brings specialized expertise to the Authority. Usually involves a high degree of creativity, significant relationship of trust and confidence. Qualifies as a professional service. Does not require formal bidding.

Contract for Goods/Services: Any authorized written agreement including contracts, purchase orders, letter agreements or memoranda which creates a mutually binding legal relationship, which obligates the seller to furnish products and services and obligates the Authority to pay for same.

Contractor: Any person, firm or entity obligated to sell, furnish, provide, or render goods or services to the Authority pursuant to a contract.

Emergency: Danger of threat or harm to life, health, safety, environment or property which requires immediate preventative action.

FOB: "Free on Board" designates point of delivery to the Authority. Supplier pays cost of delivery to FOB point at which time delivery is accepted and becomes Authority responsibility. FOB should always be Authority site when practical.

Formal Contract: Must use approved contract format. Procedure includes specifications, advertisement, public bid opening, departmental and administrative review and then bid award.

Negotiation: Procurement by evaluation of proposals in the competitive range on the basis of pre-established and published selection criteria, which criteria must be evaluated with price as fair.

Petty Cash: Limited to purchases of less than $200.00 per voucher. Receipts must accompany requests.

Procurement: The acquisition of products and services by purchaser, excepting: (1) purchase of periodicals, conference materials, treatises or professional research tools; (2) the payment of fees or tuition associated with continuing education, training courses, conferences, seminars, symposiums; (3) the purchase of advertising space or advertising time in any medium.

Professional Services: Are not generally considered contracts for public work, as used in bidding statutes, therefore are not subject to competitive bidding. They include specialized expertise and/or a high degree of creativity. May be directed to particular individuals. Courts have noted that such services often involve a relationship of personal trust and confidence.

Purchase: The receipt of products, services or public works in exchange for money, property or other valuable consideration.

Purchase Order: A legal document, which sets conditions, describes contracts to deliver and contracts to pay. Wording must be such as to eliminate any questions as to what is ordered, delivery, location, terms and timing. Once accepted, it is a binding contract.

Quotation: An informal notice (fax or mail returned) by a vendor, which sets the terms under which goods or services will be rendered.

Receiver, Departmental: Designated person who accepts and inspects purchases and forwards accompanying packing slips or invoices to the Accounting Department for payment.

Request for Proposals: Requests for Proposals (Information, Bid) are used as a foundation of a future purchase or contract and are reviewed to be properly solicited and consistently administered. RFPs must include a general description of the project, scope, requirements, description of how the proposal is to be presented, request for prices, cost estimates or financial proposals and an exact due date with destination. All documents returned should be time stamped and recorded. The RFP must include a definite statement that the RFP is not to be construed as a formal request for pricing, and that no purchase order will be placed directly as this is a request for information only. A prospective vendor shall not be allowed to write any RFP and then be allowed to bid. All RFPs should be sent to a sufficient targeted audience that will result in a competitive list of returned proposals. Request for Proposals often become the foundation of a purchase, therefore the General Manager must approve all RFPs prior to solicitation.

Once the RFP is returned a committee of the Buffalo Sewer Authority or consultants of the Authority will review it and make a recommendation. The purchasing process should then proceed with a proper categorical purchase (See V Guidelines). That may include one of the following: Preferred Contract Purchase, Sole Source, Emergency, Professional Services Contract, Lease, Maintenance or Service Contract, or a Negotiated contract.

Request for Qualifications: Written solicitation to prospective vendors requesting qualifications of providing services or products. RFQs may be used to design a prospective list of qualified vendors to purchase through a later submitted Request for Proposals. RFQs may not require specific financial pricing of a described service or product.

Request for Quotation: A Request for Quotation is a specific request for a product or service with a requirement for pricing. The RFQ is used in all informal purchases (under $10,000). All conditions should be posted. RFQs should be faxed or mailed and returned directly to the Purchase Office for entry. Time stamped returns must be in accordance with the required due date. RFQs without time stamping are not to be used. Purchase Office staff must not offer any information on returning quotations until the purchase has been awarded.

Requisition: A written request to the Purchasing Agent for one or more items or services necessary to carry out or improve a function.

Requisitioner: Designated person who generates requisitions on construction and goods and services directly reflecting departmental needs and budget -- separate from receiver.

Responsible: A potential contractor is responsible if he can demonstrate that he has the ability to perform successfully under the terms of the proposed contract, taking into account the offeror's technical and financial capacities.

Responsive: A bid is responsive if it complies with the terms of the solicitation in all material respects and it is completed, executed and submitted in accord with the instructions in the solicitation.

Scrap: Materials that have no functional value to the Authority but retain intrinsic value due to their composition (i.e. copper, brass, aluminum).

Sealed Bidding: A competitive method under which a contract is awarded to the lowest priced responsible bidder.

Services: A professional, consulting, technical or other function including, but not limited to, legal, testing, accounting, bookkeeping, secretarial, management consulting, audit, investment banking, planning, training, statistical research, insurance, advertising, public relations, architectural, engineering, appraisal, janitorial, surveying, housekeeping, and waste disposal performed for a fee, commission, or other compensation.

Single Source: The goods or services to be procured and available from only one responsible source or no other goods or services will satisfy the Authority's requirements.

Small Purchase: The acquisition of goods or services under a one-time agreement to purchase having a retail price under $1,000.00.

Solicitation: The process by which the Authority contacts prospective vendors, suppliers or consultants to provide notice of a procurement opportunity and ensure the submission of quotes, bids, or statements of qualifications.

Sole Source: A general category of award where competition is waivable or not feasible in certain circumstances. The included categories are: exigency, emergency, expediency, and single source.

Specifications: A written description of needed supplies, materials, equipment or services setting forth in a clear and concise manner the characteristics of the items and/or services to be purchased and the conditions under which the purchase will be made.

Statement of Qualifications: Request for project qualifications to perform duties and tasks specifically outlined. RFQ should not be used to substitute for an RFP or bidding.

Surplus: Materials or items that retain functional value, and may or may not have an intrinsic value, may be considered surplus, if all areas of the Authority reject use of the item based on obsolescence, maintenance costs or need (i.e. desks, chairs, vehicles).

Vendor: A supplier of goods or services.

Waste: Materials or items which have no functional value to the Authority or known intrinsic value (i.e. sludge, paper).

BUFFALO
SEWER AUTHORITY

ATTACHMENT C

Fund Balance Policy

Definitions.

Fund balance - The excess of assets over liabilities in a governmental fund.

Nonspendable fund balance - Amounts that are not in a spendable form (such as inventory) or are required to be maintained intact (such as the corpus of an endowment fund).

Restricted fund balance - Amounts constrained to specific purposes by their providers (such as grantors, bondholders, and higher levels of government) through constitutional provisions, enabling legislation, bond resolutions adopted by the Authority or other contractual obligations of the Authority. Any amounts in the following funds established pursuant to the Authority's Amended and Restated Sewer System Revenue Bond Resolution adopted May 26, 2021 (the "Bond Resolution"), constitute restricted fund balances: the Construction Fund, Net Revenue Fund, Debt Service Fund, Debt Reserve Fund, Redemption Fund, Subordinated Indebtedness Fund and Rebate Fund (all of which are held by M&T Bank as Trustee under the Bond Resolution) and the Operating Fund and Capital Improvement Fund (both of which are held by the Authority pursuant to the Bond Resolution).

Committed fund balance - Amounts constrained to specific purposes by the Authority itself using its highest level of decision-making authority; to be reported as committed, amounts cannot be used for any other purpose unless the Authority takes the same highest-level action to remove or change the constraint.

Assigned fund balance - Amounts the Authority intends to use for a specific purpose; intent can be expressed by the Board or by an official or body to which the Board delegates the authority. Any amounts in the Rate Stabilization Fund established pursuant to the Bond Resolution would constitute assigned fund balances.

Unassigned or unrestricted fund balance - Amounts that are available for any purpose; these amounts are reported only in the General Fund, which is designated in the Bond Resolution as the Surplus Fund.

Policy Statement

The fund balance of the Authority's General Fund has been accumulated to meet this purpose, to provide stability and flexibility to respond to unexpected adversity and/or opportunities.

The target is to maintain an unrestricted fund balance of not less than 15% of annual operating expenditures for the fiscal year.

The Authority's basic goal is to maintain annual expenditure increases at a growth rate, and to limit expenditures to anticipated revenue in order to maintain a balanced budget. The decision to retain an unrestricted fund balance of not less than 15% of operating expenditures stems from the following:

- This amount provides adequate funding to cover approximately two (2) months of operating expenses.

- This amount provides the liquidity necessary to accommodate the Authority's uneven cash flow, which is inherent in its periodic sewer rent collection schedule.

- This amount provides the liquidity to respond to contingent liabilities.

- The Government Finance Officers Association recommends the minimum General Fund unrestricted fund balance to be maintained should be no less than either two (2) months of regular operating revenues or expenditures.

The Board will set aside certain amounts for capital projects as committed fund balance. Amounts to be determined by the General Manager based on the amounts available, the planned projects and other financing sources. In accordance with the Bond Resolution, the Board will designate in the Annual Budget a Renewal and Extension Requirement, which will be funded annually for capital projects from available funds in the Net Revenue Fund.

The Board will set aside committed fund balances to cover the amount of outstanding purchase orders or encumbrances that have been approved by the Board.

The Board will set aside certain amounts for future insurance claims. Amounts to be determined by the General Manager based on availability of fund balance, claim trends and potential for future claims.

The Board will allow the General Manager to determine the proper amounts to be assigned for purposes as they determine necessary.

The Board will allow the General Manager to determine the amount to be assigned for capital asset replacements (or other issue).

Beginning in the year ending June 30, 2011, unassigned fund balance shall be any remaining amounts.

This policy may be amended from time to time per the Board.

To the extent available in accordance with all constitutional provisions, laws, bond resolutions and other contractual obligations of the Authority, the Authority will spend the most restricted dollars before less restricted in the following order:

a) Nonspendable (if funds becomes spendable)
b) Restricted
c) Committed
d) Assigned
e) Unassigned

BUFFALO
SEWER AUTHORITY

ATTACHMENT D

Investment Guidelines

Section 1. Definitions.

In this Resolution the following terms shall have the following meanings unless the context otherwise requires:

"Authority" shall mean the Buffalo Sewer Authority, a body corporate and politic constituting a public benefit corporation of the State of New York and any body, board, authority, agency, or political subdivision or instrumentality of the State which shall hereafter succeed to the powers, duties, and functions thereof.

"Investment Securities" shall mean and include any of the following securities, if and to the extent the same are at the time legal investments by the Authority of the funds to be invested therein:

(1) Direct obligations of the United States of America and securities fully and unconditionally guaranteed as to the timely payment of principal and interest by the United States of America, provided, that the full faith and credit of the United States of America must be pledged to any such direct obligation or guarantee ("Direct Obligations");

(2) Direct obligations and fully guaranteed certificates of beneficial interest of the Export-Import Bank of the United States; consolidated debt obligations and letter of credit-backed issues of the Federal Home Loan Banks; participation certificates and senior debt obligations of the Federal Home Loan Mortgage Corporation ("FHLMCS"); debentures of the Federal Housing Administration; mortgage-backed securities (except stripped mortgage securities which are valued greater than par on the portion of unpaid principal) and senior debt obligations of the Federal National Mortgage Association ("FNMAs"); participation certificates of the General Services Administration; guaranteed mortgage-backed securities and guaranteed participation certificates of the Government National Mortgage Association ("GNMAs"); guaranteed participation certificates and guaranteed pool certificates of the Small Business Administration; debt obligations and letter of credit-backed issues of the Student Loan Marketing Association; local authority bonds of the U.S. Department of Housing & Urban Development; guaranteed Title XI financings of the U.S. Maritime Administration; guaranteed transit bonds of the Washington Metropolitan Area Transit Authority; Resolution Funding Corporation securities;

(3) Direct obligations of any state of the United States of America or any subdivision or agency thereof whose unsecured, uninsured, and unguaranteed general obligation debt is rated, at the time of purchase, "A" or better by Moody's Investors Service and "A" or better by Standard & Poor's Corporation, or any obligation fully and unconditionally guaranteed by any state, subdivision, or agency whose unsecured, uninsured, and unguaranteed general obligation debt is rated, at the time of purchase "A" or better by Moody's Investors Service and "A" or better by Standard & Poor's Corporation;

(4) Federal funds, unsecured certificates of deposit, time deposits, or bankers acceptances (in each case having maturities of not more than 365 days) of any domestic bank including a branch office of a foreign bank which branch office is located in the United States, provided legal opinions are received to the effect that fully and timely payment of such deposit or similar obligation is enforceable against the principal office or any branch of such bank, which, at the time of purchase, has a short-term "Bank Deposit" rating of "P-1" by Moody's and a "Short-Term CD" rating of "A-l" or better by S&P;

(5) Deposits of any bank or savings and loan association which has combined capital, surplus, and undivided profits of not less than $3 million, provided such deposits are continuously and fully insured by the Bank Insurance Fund or the Savings Association Insurance Fund of the Federal Deposit Insurance Corporation;

(6) Investments in money-market funds rated "AAAm" or "AAAm-G" by Standard & Poor's Corporation;

(7) Repurchase agreements collateralized by Direct Obligations, GNMAs, FNMAs, or FHLMCs with any registered broker/dealer subject to the Securities Investors' Protection Corporation jurisdiction or any commercial bank insured by the FDIC, if such broker/dealer or bank has an uninsured, unsecured and unguaranteed obligation rated "P-l" or "A3" or better by Moody's Investors Service, and "A-1" or "A-" or better by Standard & Poor's Corporation, provided:
(a) master repurchase agreement or specific written repurchase agreement governs the transaction.
(b) the securities are held free and clear of any lien by the Trustee or an independent third party acting as agent ("Agent") for the Trustee, and such third party is (i) a Federal Reserve Bank, (ii) a bank which is a member of the Federal Deposit Insurance Corporation and which has combined capital, surplus and undivided profits of not less than $50 million or (iii) a bank approved in writing for such purpose by Financial Guaranty Insurance Company, and the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Trustee; and
(c) a perfected first security interest under the Uniform Commercial Code, or book entry procedures prescribed at 31 C.F.R. 306.1 et seq. or 31 C.F.R. 350.0 et seq. in such securities, is created for the benefit of the Trustee; and
(d) the repurchase agreement has a term of 10 years of less, and the Trustee or the Agent will value the collateral securities no less frequently than weekly and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within two business days of such valuation; and
(e) the fair market values of the securities in relation to the amount of the repurchase obligation, including principal and interest, is equal to at least 103%.

(8) Commercial paper (having original maturities of not more than 270 days) rated, at the time of purchase, "P-1" by Moody's Investors Service and "A-1" or better by Standard & Poor's Corporation;

"Trustee" shall mean Manufacturers and Traders Trust Company, Buffalo, New York, and its successor or successors and any other person which may at the time be substituted in its place.

Section 2. Collateral

Certificates of Deposit (CD), Time Deposit Accounts (TDA), and Negotiable Order of Withdrawal Accounts (NOW) shall be fully secured by insurance of the Federal Deposit Insurance Corporation, obligations of New York State, obligations of the United States, obligations of federal agencies the principal and interest of which are guaranteed by the United States, or obligations of New York State local governments.

The market value of collateral shall at all times equal or exceed the principal amount of the certificate of deposit, time deposits, or NOW accounts. Market value shall mean the bid or closing price as quoted in the Wall Street Journal or as quoted by another recognized pricing service. The Supervising Accountant shall monitor the collateral no less frequently than monthly.
Securities purchased through a Repurchase Agreement shall be valued to market once during the tenure of the agreement and no less than once a month.

Collateral shall not be required with respect to the direct purchase of obligations of New York State, obligations of the United States, and obligations of federal agencies the principal and interest of which are guaranteed by the United States Government.

Section 3. Funds

In accordance with the Authority's Sewer System Revenue Bond Resolution adopted June 29, 1977, and as amended May 3, 1993, the following special trust funds were established:
1. Construction Fund
2. Net Revenue Fund
3. Debt Reserve Fund
4. Redemption Fund
5. Surplus Fund
6. Rebate Fund

All of said Funds are held by the Trustee.

In addition to the Funds held by the Trustee, the Authority established an Operating Fund and a Construction and Capital Improvement Fund held by a Depositary designated by and under the supervision of the Authority.

Section 4. Investments

Moneys in any Fund held by the Trustee or the Authority shall be continuously invested and reinvested or deposited and redeposited on terms which in the judgment of the Authority provide reasonable liquidity, in the highest yield Investment Securities that may be reasonably known, with a view toward maximizing yield (with proper preservation of principal) and minimizing the instances of uninvested funds. The Authority shall consult with the Trustee from time to time as to the investment of amounts in the Funds. The Authority through an Authorized Officer may direct the Trustee to or, in the absence of direction, the Trustee shall invest and reinvest the moneys in any such Fund held by it in Investment Securities so that the maturity date or dates of redemption at the option of the holder thereof shall coincide as nearly as practicable with the times at which moneys are needed to be so expended. The Trustee shall sell at the best price obtainable, or present for redemption, any Investment Securities purchased by it as an investment whenever it shall be necessary in order to provide moneys to meet any payment or transfer from the Fund for which such investment was made.

Investment Securities purchased as an investment of moneys in any Fund shall be deemed at all times to be a part of such Fund but the income or interest earned and gains realized in excess of losses suffered by a Fund due to the investment thereof shall be deposited in the Operating Fund as Revenues or shall be reinvested and credited to the Operating Fund; except that any such excess amount in the Debt Reserve Fund shall be deposited in or credited to the Debt Reserve Fund.

Moneys in any Fund held by the Trustee may be invested in common with the moneys held in any other such Fund.

The Authority may utilize the service of the office of the Comptroller of the City of Buffalo to obtain the highest available investment yield.

Section *5.* Deposits

In lieu of Investment Securities, the Trustee shall at the written direction of an Authorized Officer of the Authority deposit amounts or cause amounts to be deposited from any Fund held by the Trustee in interest bearing time deposits or certificates of deposit, or shall make other similar banking arrangements with itself or a member bank or banks of the Federal Reserve System or a bank, the deposits of which are insured by the Federal Deposit Insurance Corporation or its successor, or a savings and loan association, the deposits of which are insured by the Federal Savings and Loan Insurance Corporation or its successor. Each such interest bearing time deposit or certificate of deposit or other similar banking arrangement shall permit the moneys so placed to be available at the times at which moneys are needed to be expended, and, except to the extent that any such deposit shall be less than $5,000 or be insured by the United States of America or the federal corporations enumerated above, all moneys in each such interest bearing time deposit or certificate of deposit or other similar banking arrangement shall be continuously and fully secured as stated in Section 2.

In order to permit such amounts to be available for use at the time when needed, any amounts held by any Fiduciary, as such, any, if and as directed by an Authorized Officer of the Authority, be deposited in the commercial banking department of such Fiduciary which may honor checks and drafts on such deposit with the same force and effect as if it were not such Fiduciary. Any such Fiduciary shall allow and credit on such amounts at least such interest, if any, as it customarily allows upon similar funds of similar size and under similar conditions or as required by law.

All amounts of more than $5,000 deposited by any Fiduciary pursuant to the paragraph above shall be continuously and fully secured by lodging with the Trustee as custodian, as collateral security, investment securities having a market value not less than the amount of such deposit plus accrued interest.

Moneys in any fund held by the Authority which are not required for immediate expenditure may also be invested temporarily in deposits insured by the Federal Deposit Insurance Corporation in accordance with the requirements of Section 2927 of the Public Authorities Law of the State of New York.

All amounts so deposited by any Fiduciary shall be credited to the particular Fund from which such amounts were derived, but any income derived in connection with such deposits shall be credited to, and shall be deposited as received in, the Operating Fund; except that any income derived in connection with deposits in the Debt Reserve Fund shall be credited to and deposited as received in the Debt Reserve Fund. Whenever on any valuation date, as provided in the bond resolution as amended on May 3, 1993**,** the amount in the Debt Reserve Fund exceeds the Debt Reserve requirement, the Trustee may, if directed by the Certificate of an authorized officer of the Authority, withdraw from the Debt Reserve Fund the amount of any excess therein over the Debt Reserve Requirement as of the date of such withdrawal and deposit the moneys so withdrawn into the Operating Fund.

BUFFALO
SEWER AUTHORITY

ATTACHMENT E

Credit Card Policy

Purpose: To establish the Policy and Procedures for the use of Buffalo Sewer Authority corporate credit cards.

I. Introduction:

It is commonplace for organizations to use credit cards for the convenience of making purchases on behalf of the organization. In some instances, purchases can only be made via a credit card as manual checks are not accepted (i.e. hotel and airline reservations). In order to simplify the process for purchasing certain items on behalf of the Buffalo Sewer Authority (BSA), the following policy outlines the use of credit cards.

II. Authorization

A resolution will be presented to the board prior to the issuance of the credit card that authorizes:

- Establish custody of the cards when not in use.
- The uses of the card.
- The appropriate internal control structure for monitoring the use of the card.
- The approval process for payment of the charges.
- Establish a means to recoup any unauthorized expenditures.

The use of a BSA credit card(s) shall be in accordance with, and is not intended to circumvent, the BSA's Procurement Policy.

The Board shall approve the issuance of all credit cards, identify all authorized users, and set appropriate credit limits for each credit card.

The credit cards will be issued to specific employees in order to help maintain accountability. If an individual is no longer designated as a cardholder, and/or leaves BSA employment, the card issued to this individual will be cancelled. As determined by the resolution of the Board of the BSA, only authorized personnel of the BSA may be assigned and use the BSA Credit Card.

III. Use of Cards

All purchases made on the BSA's credit card must comply with the BSA's Procurement Policy. The BSA credit card may be used only for official business of the BSA to pay for actual and necessary expenses incurred in the performance of work-related duties for the BSA. The card may be used only for the following purchases:

- Hotel reservations.
- Rental car reservations.
- Airline reservations.
- Training, conference, and seminar registrations.
- Membership fees.
- Internet purchases where a vendor will not accept a check

Personal expenses on the BSA's credit card are strictly prohibited. A credit card that allows cash advances or cash back from purchases is also prohibited. The card will be issued in the name and liability of the BSA with the name of the individual authorized on the card.

The employee issued the credit card is responsible for its protection and custody and shall immediately notify the Executive Secretary and card issuer if the card is lost or stolen. Employees must immediately surrender the BSA credit card upon termination of employment. The BSA reserves the right to withhold the final payroll check and payout of accrued leave until the card is surrendered.

IV. Recordkeeping

The use of the BSA credit card may be substantiated with a Board item, purchase order, receipts and documentation detailing the goods or services purchased, cost, date of the purchase and the official business explanation. Receipts and documentation must be submitted to the Executive Secretary following the purchase to reconcile against the monthly credit cards statement.

At the end of the each month, the Accounting Department is to review the monthly card statement and reconcile it with the receipts and documentation received for that month. The Accounting Department should determine that all purchases are supported by documentation. Any variances are to be investigated. Any purchase/charge without appropriate supporting documentation requires a detailed explanation and description and the written approval of the General Manager or BSA Board approval. Unauthorized or improper purchases will result in credit card revocation and discipline of the employee. The BSA shall also take appropriate action to recoup unauthorized or improper expenditures.

Once the credit card has been reconciled, payment via check, wire, or ACH will be made. All purchases made with the credit cards shall be paid for within the grace period so that no interest charges or penalties will accrue.

ATTACHMENT: F

ITEM NO. 6

REPORT ON BIDS RECEIVED – FORMAL BID OPENING FOR SECURITY GUARD SERVICES

WHEREAS: Formal bids were advertised and solicited for Security Guard Services for a one-year period, July 1, 2024 through June 30, 2025, with an option to renew for four (4) one-year periods; and

WHEREAS: The following bids were received and opened by the Purchasing Department on May 28, 2024:

VENDOR	COST PER HOUR	NUMBER OF GUARDS	TOTAL ANNUAL COST BASED ON 8,760 HOURS PER GUARD
Shield Protective Group Inc.	$35.00	3	$919,800.00
Don's Security Services Inc.	$40.25	3	$1,057,770.00
Allied Security Services LLC	$42.82	3	$1,125,309.60

; and

WHEREAS: The Treatment Plant Superintendent, Safety Officer and staff reviewed the bids received and recommend this service be awarded to the lowest bidder, Shield Protective Group, Inc. at a total cost of $35.00 per hour for a total amount not to exceed $919,800.00, for the period July 1, 2024 through June 30, 2025; and

WHEREAS: Due to time constraints, the Board was polled on June 6, 2024, and verbally authorized acceptance of this proposal; and

WHEREAS: It is now necessary to formally ratify that authorization.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to enter into and execute a contract with Shield Protective Group Inc., for Security Guard Services at a total cost not to exceed $919,800.00 for the period July 1,2024 through June 30, 2025, with an option to renew for four (4) one-year periods. Expenses for this contract will be charged to account no. 00200106-434000.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of June 26, 2024

BUFFALO
SEWER AUTHORITY

ATTACHMENT G

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Buffalo Sewer Authority - Breckenridge St. Combined Sewer Overflow (CSO) Control Project		
Project Location (describe, and attach a general location map): The site is located on Breckenridge St between West Ave and Herkimer St and Herkimer St from Breckenridge St to Lafayette Ave in the City of Buffalo		
Brief Description of Proposed Action (include purpose or need): This gravity sewer project will include rebuilding the existing brick sewer on Breckenridge Street, installing a new sewer on West Avenue and a new drop-pipe manhole at the intersection of West Avenue and Lafayette Avenue. The existing Breckenridge Street sewer between West Avenue and Herkimer Street will be rebuilt to convey flow west to West Avenue and to separate flow from the existing brick, sewer west of the diversion point. The new West Avenue sewer will receive flow from the rebuilt Breckenridge Street sewer. Existing collection sewers along West Avenue will be abandoned and house connections along West Avenue and Breckenridge Street will be reconnected to the new sewer. A new drop-pipe manhole will be constructed at the intersection of West Avenue and Lafayette Avenue to convey the West Avenue flow to the Scajaquada Tunnel.		
Name of Applicant/Sponsor: Buffalo Sewer Authority	Telephone: E-Mail:	
Address: 65 Niagara Square # 1038		
City/PO: Buffalo	State: NY	Zip Code: 14202
Project Contact (if not same as sponsor; give name and title/role): Rosaleen B. Nogle, PE, BCEE, PMP, Principal Sanitary Engineer	Telephone: 716-851-5664 Ext. 4203 E-Mail: rnogle@buffalosewer.org	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☑Yes ☐No	City of Buffalo Common Council Niagara District	
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	City of Buffalo Office of Strategic Planning	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	City of Buffalo Department of Public Works, Parks & Streets, See attached sheet for additional involv	
e. County agencies ☑Yes ☐No	Erie County Department of Health	
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	SHPO/ Cultural Resources Determination, See attached sheet for additional involved agencies	
h. Federal agencies ☑Yes ☐No	USFWS, Section 7 Endangered Species Act	

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes ☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):

NYS Heritage Areas:West Erie Canal Corridor

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
N-2R Residential

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Buffalo Public Schools

b. What police or other public protection forces serve the project site?
Buffalo Police Department

c. Which fire protection and emergency medical services serve the project site?
Buffalo Fire Department

d. What parks serve the project site?
None

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Municipal - sewer work

b. a. Total acreage of the site of the proposed action? 1.8 acres
b. Total acreage to be physically disturbed? 1.6 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? All ex ROW acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 6-7 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐Yes ☑No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No
If Yes,
i. Purpose of the impoundment: _____
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:
_____
iii. If other than water, identify the type of impounded/contained liquids and their source.
_____
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☑Yes ☐No
If Yes:
i. What is the purpose of the excavation or dredging? Sewer Work
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): 180,000 cubic feet
- Over what duration of time? 6-7 months

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
Excavated materials will be properly characterized and disposed of at an off site permitted facility
_____
iv. Will there be onsite dewatering or processing of excavated materials? ☑Yes ☐No
If yes, describe. dewatering method to be determined by contractor
_____
v. What is the total area to be dredged or excavated? 1.6 acres acres
vi. What is the maximum area to be worked at any one time? 4500 SF acres
vii. What would be the maximum depth of excavation or dredging? 55-60 feet
viii. Will the excavation require blasting? ☐Yes ☑No
ix. Summarize site reclamation goals and plan: _____
_____
_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____
_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No
If Yes, describe:

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No
If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☑No
If Yes:

- Name of district or service area:
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☐No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☐No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No
If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: Bird Island WWTF
- Name of district: Niagara
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

- Do existing sewer lines serve the project site? ☑Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☑Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

New Sewer line to be installed between Breckenridge and Lafayette along West Avenue to increase capacity of the system

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

N/A

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

N/A

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☐No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8 am - 4 pm
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☐ No

Describe:

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☐ No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☐ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces			
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: 0	0	0	0

c. Is the project site presently used by members of the community for public recreation? ☐Yes ☑No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑Yes ☐No
If Yes,
i. Identify Facilities:
West Buffalo Charter School

e. Does the project site contain an existing dam? ☐Yes ☑No
If Yes:
i. Dimensions of the dam and impoundment:
- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes ☑No
If Yes:
i. Has the facility been formally closed? ☐Yes ☐ No
- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes ☑No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐Yes ☑ No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes ☑No
☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____
☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____
☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑Yes ☐No
If yes, provide DEC ID number(s): 915176, E915213, C915302, C915277, 915284, C915...

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):
Sites located 0.25 mi NW of project area. Remediation complete at all parcels. Sites under SMP.

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 5-10 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: Urban land-lima complex 100 %
_____ %
_____ %

d. What is the average depth to the water table on the project site? Average: _____ feet

e. Drainage status of project site soils:
☑ Well Drained: ____% of site
☑ Moderately Well Drained: 50 % of site
☐ Poorly Drained ____% of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 100 % of site
☐ 10-15%: ____% of site
☐ 15% or greater: ____% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☑ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☑ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site:
Northern bats

n. Does the project site contain a designated significant natural community? ☐Yes ☑No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation):
ii. Source(s) of description or evaluation:
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐No
If Yes:
i. Species and listing (endangered or threatened):
Lake Sturgeon

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No
If Yes:
i. Species and listing:

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No
If yes, give a brief description of how the proposed action may affect that use:

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No
If Yes, provide county plus district name/number:

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☐No
i. If Yes: acreage(s) on project site?
ii. Source(s) of soil rating(s):

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No
If Yes:
i. CEA name:
ii. Basis for designation:
iii. Designating agency and date:

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☑ Historic Building or District

ii. Name: Eligible property:Commercial Building at 1225 Niagara St, Eligible property:Commercial Building at 1233 Niagara Stree...

iii. Brief description of attributes on which listing is based:

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☑ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

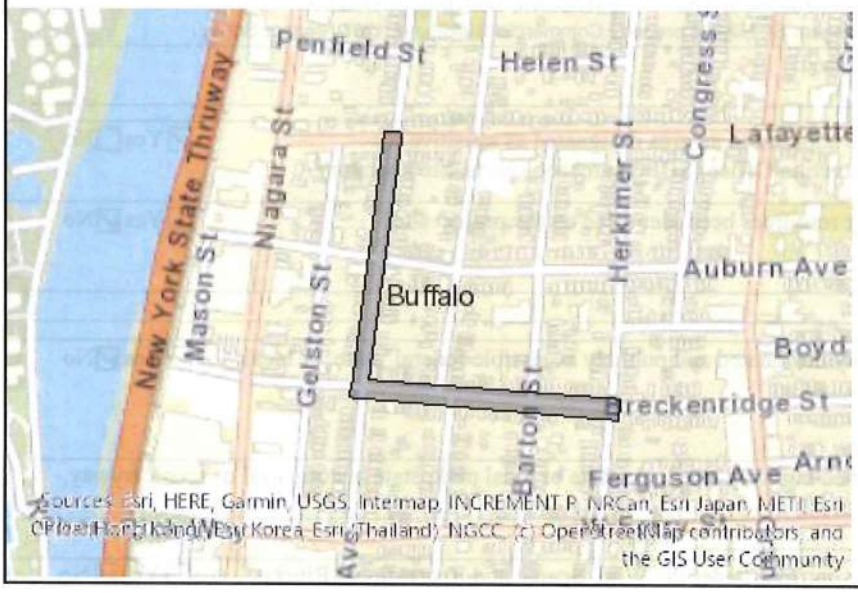
Applicant/Sponsor Name Rosaleen Nogle. PE Date _____

Signature _____ Title _____

PRINT FORM

EAF Mapper Summary Report

Thursday, July 11, 2024 4:08 PM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	915176, E915213, C915302, C915277, 915284, C915330, C915284A, C915330A, C915382, C915364, C915367
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	No
E.2.h.iii [Surface Water Features]	No
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No

E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Lake Sturgeon
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Eligible property:Commercial Building at 1225 Niagara St, Eligible property:Commercial Building at 1233 Niagara Street, Eligible property:Commercial Building at 1239 Niagara Street, Eligible property:Manufacturing Building at 1245 Niagara Street, Eligible property:Residence at 1273 Niagara Street, Eligible property:Former American Body Company, Eligible property:Residence at 1277 Niagara Street
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Involved/Interested Agencies

City of Buffalo Common Council Niagara District
David Rivera(via email)
darivera@city-buffalo.com

City of Buffalo Department of Public Works, Parks & Streets – Parks
Andrew Rabb, Deputy Commissioner for Parks and Recreation (via email)
arabb@city-buffalo.com

City of Buffalo Department of Public Works, Parks & Streets
Nolan Skipper, City Engineer (via email)
nskipper@buffalony.gov

New York State Department of State
Coastal Management Program
99 Washington Avenue
Albany, NY 12231-0001

New York State Department of Transportation
Sanjyot Vaidya, P.E., Region 5 Regional Design Engineer
100 Seneca Street
Buffalo, NY 14203

New York State Department of Environmental Conservation
Julie Barrett O'Neil, Regional Director - Region 9
region9@dec.ny.gov

City of Buffalo Office of Strategic Planning
Brendan R. Mehaffy, Executive Director (via email)
bmehaffy@buffalony.gov

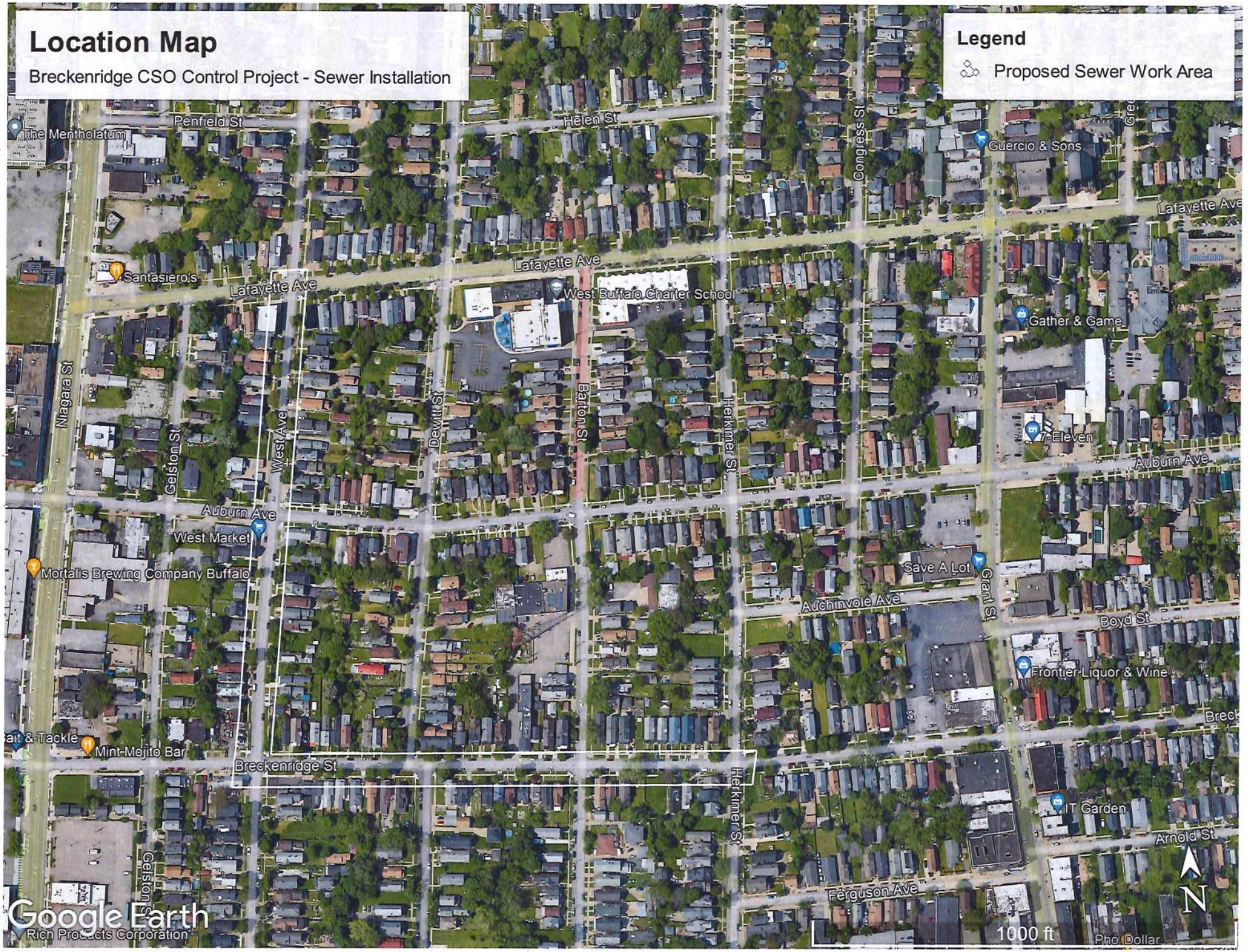
City of Buffalo Water Authority
Oluwole McFoy – Chairperson, Water Board
281 Exchange St, Buffalo, NY 14204

Erie County Department of Health
95 Franklin Street
Buffalo, NY 14202

Buffalo Environmental Management Commission
920 City Hall
65 Niagara Square
Buffalo, NY 14202

New York State Historic Preservation Office (consultation completed online)
1 Delaware Avenue North, Cohoes, NY 12047

U.S. Fish and Wildlife Service (consultation completed online)
1849 C Street, NW
Washington, DC 20240


Location Map
Breckenridge CSO Control Project - Sewer Installation
Legend
Proposed Sewer Work Area
Penfield St
Helen St
Congress St
Lafayette Ave
Niagara St
Gelston St
West Ave
DeWitt St
Barton St
Herkimer St
Auburn Ave
Auchinvole Ave
Boyd St
Grant St
Breckenridge St
Ferguson Ave
Arnold St
Guercio & Sons
Santasiero's
West Buffalo Charter School
Gather & Game
7-Eleven
West Market
Mortalis Brewing Company Buffalo
Save A Lot
Frontier Liquor & Wine
Mint Mojito Bar
IT Garden
Google Earth
Rich Products Corporation
1000 ft
N

BUFFALO
SEWER AUTHORITY

ATTACHMENT H

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Colorado Ave - CSO053_2.5 SPP337 Modification		
Project Location (describe, and attach a general location map): Colorado Avenue, Buffalo, NY 14211 at the intersection of Scajaquada Street		
Brief Description of Proposed Action (include purpose or need): For this project, SPP337 would be modified by incorporating an additional 30-inch diameter underflow pipe. This modification would reduce overflows at CSO053 and would benefit from the installation of the Schiller Park Offline Storage (OLS) or the Sidney OLS to free up additional capacity within the Scajaquada Tunnel. To obtain the necessary flow capacity, a new sewer diversion chamber and drop shaft connection to the Scajaquada Tunnel Interceptor will be constructed. The new drop shaft will be connected directly to a new diversion chamber constructed in line with the existing sewer along Colorado Avenue. Flow will enter the diversion chamber and be directed towards the drop shaft as the primary flow path. Any high flow event that exceeds the 48 MGD flow for the new drop shaft connection will pass over a weir in the structure and continue down the sewer in Colorado Avenue which outlets to the Scajaquada Drain.		
Name of Applicant/Sponsor: Buffalo Sewer Authority	Telephone: E-Mail:	
Address: 5 Niagara Square # 1038		
City/PO: Buffalo	State: NY	Zip Code: 14202
Project Contact (if not same as sponsor; give name and title/role): Rosaleen B. Nogle, PE, BCEE, PMP, Principal Sanitary Engineer	Telephone: 716-851-5664 Ext. 4203 E-Mail: rnogle@buffalosewer.org	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☑Yes ☐No	City of Buffalo Common Council Masten District	
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	City of Buffalo Office of Strategic Planning	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	City of Buffalo Department of Public Works, Parks & Streets, See attached sheet for additional involv	
e. County agencies ☑Yes ☐No	Erie County Department of Health	
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	SHPO/ Cultural Resources Determination, See attached sheet for additional involved agencies	
h. Federal agencies ☑Yes ☐No	USFWS, Section 7 Endangered Species Act	

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes ☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):

NYS Heritage Areas:West Erie Canal Corridor

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
D-IL (Light Industrial)

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site?

C.4. Existing community services.

a. In what school district is the project site located? Buffalo City School District

b. What police or other public protection forces serve the project site?
Buffalo Police Department

c. Which fire protection and emergency medical services serve the project site?
Buffalo Fire Department

d. What parks serve the project site?
None

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Municipal - sewer work

b. a. Total acreage of the site of the proposed action? 0.15 acres
b. Total acreage to be physically disturbed? 0.15 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? N/A acres project located within existing ROW

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 20 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

f. Does the project include new residential uses? ☐Yes ☑No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No
If Yes,
i. Purpose of the impoundment: _____
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:
_____
iii. If other than water, identify the type of impounded/contained liquids and their source.
_____
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☑Yes ☐No
If Yes:
i. What is the purpose of the excavation or dredging? Modification of SPP 337 sewer described in project scope
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): 1713 cubic yards
- Over what duration of time? 6 moths

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
Excavated material will be properly characterized and disposed of at a permitted facility.
_____
iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☑No
If yes, describe. _____
_____
v. What is the total area to be dredged or excavated? 0.15 acres
vi. What is the maximum area to be worked at any one time? 0.15 acres
vii. What would be the maximum depth of excavation or dredging? 18 feet
viii. Will the excavation require blasting? ☐Yes ☑No
ix. Summarize site reclamation goals and plan: _____
Clean fill will be brought in as required for back fill. No landscaped areas in project site.
_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____
_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☑No
If Yes, describe:

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☑No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No
If Yes:
i. Total anticipated water usage/demand per day: _____ gallons/day
ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☑No
If Yes:

- Name of district or service area:
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☑No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No
If Yes:
i. Total anticipated liquid waste generation per day: _____ gallons/day
ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: Bird Island WWTP
- Name of district: Buffalo
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

- Do existing sewer lines serve the project site? ☑Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☑No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☑No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐Morning ☐Evening ☐Weekend ☐Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☑No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe: _____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☑No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☑No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other): _____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☑No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8 AM - 4 PM
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe:

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☑ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☑ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.15	0.15	0
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: _____	0	0	0

c. Is the project site presently used by members of the community for public recreation? ☐Yes ☑No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐Yes ☑No

If Yes,

i. Identify Facilities:

_____

_____

e. Does the project site contain an existing dam? ☐Yes ☑No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes ☑No

If Yes:

i. Has the facility been formally closed? ☐Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes ☑No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☑Yes ☐ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☑Yes ☐No

☑ Yes – Spills Incidents database — Provide DEC ID number(s): 2208143

☑ Yes – Environmental Site Remediation database — Provide DEC ID number(s): C915196B

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑Yes ☐No

If yes, provide DEC ID number(s): C915196B, 915152

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

This site is undergoing active remediation. See attached table. .

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☑ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6.5 ft feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:

Ud (Urban Land)	80 %
Getzville and Mardin	10 %
Udorthents and Odessa	10 %

d. What is the average depth to the water table on the project site? Average: >6.5 ft feet

e. Drainage status of project site soils:
☐ Well Drained: ____ % of site
☑ Moderately Well Drained: 100 % of site
☐ Poorly Drained ____ % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: ____ % of site
☐ 10-15%: ____ % of site
☐ 15% or greater: ____ % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name Scajaquada Creek (drain) Classification C
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

n. Does the project site contain a designated significant natural community? ☐Yes ☑No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation): _____
ii. Source(s) of description or evaluation: _____
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐Yes ☑No
If Yes:
i. Species and listing (endangered or threatened): _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No
If Yes:
i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No
If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No
If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☐No
i. If Yes: acreage(s) on project site? _____
ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No
If Yes:
i. CEA name: _____
ii. Basis for designation: _____
iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☑ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☐ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

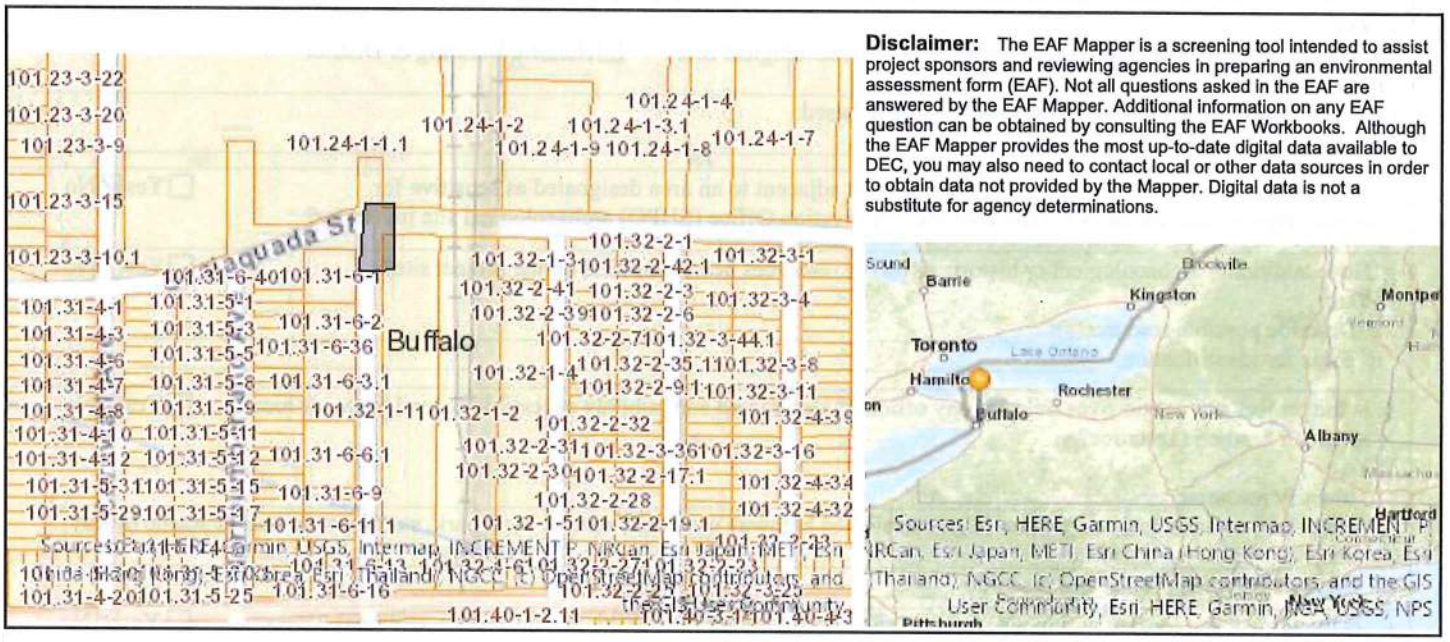
Applicant/Sponsor Name Rosaleen Nogle Date _____

Signature _____ Title _____

PRINT FORM

EAF Mapper Summary Report

Wednesday, May 15, 2024 8:59 AM



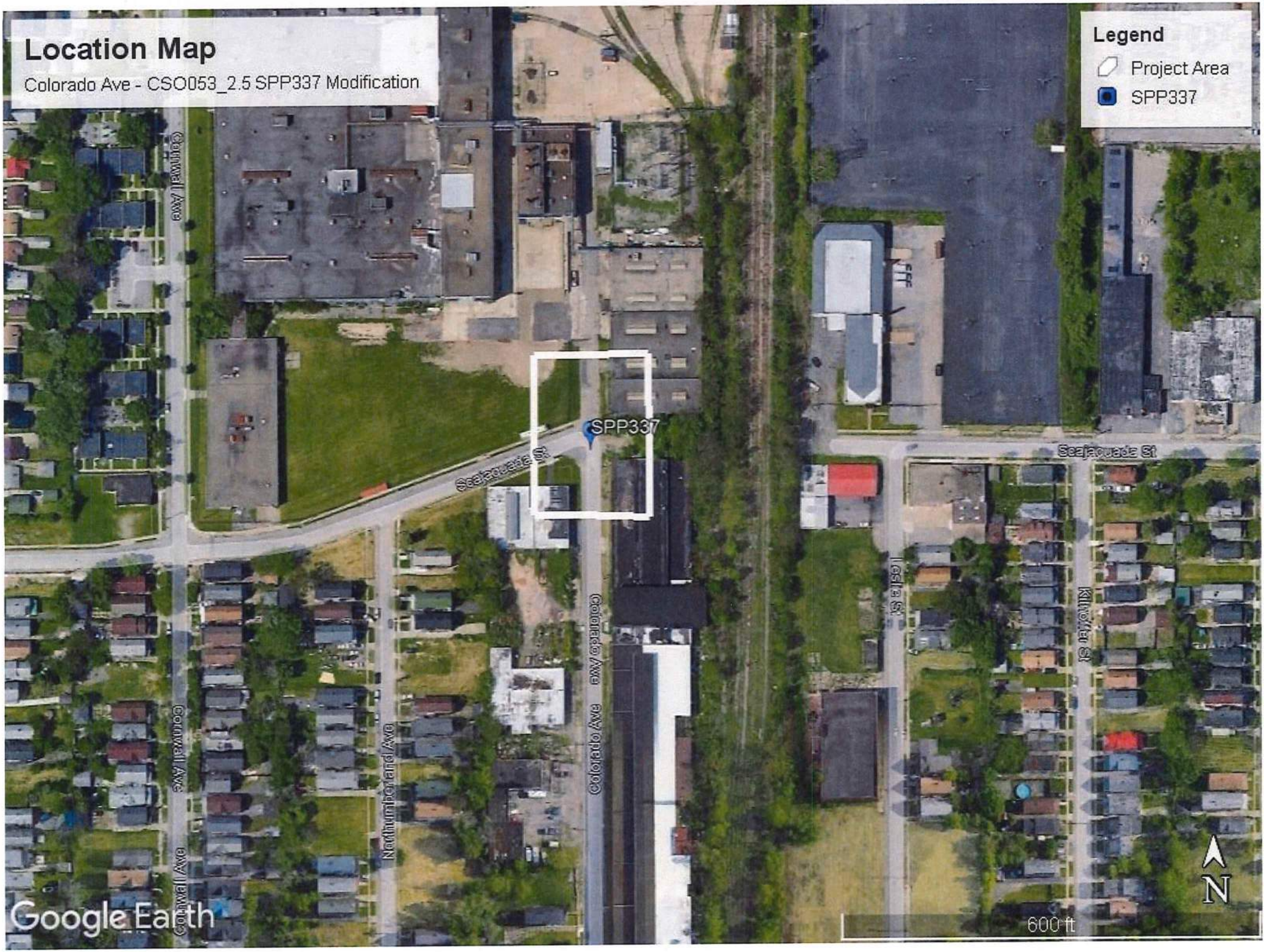
Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	Remediaton Sites:C915196B, NYS Heritage Areas:West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Yes - Digital mapping data for Spills Incidents are not available for this location. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Yes
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Yes
E.1.h.i [DEC Spills or Remediation Site - DEC ID Number]	C915196B
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	C915196B, 915152
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No

E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

Table 1
Buffalo Sewer Authority
Capital Priority Projects
Colorado Ave - CSO053_2.5 SPP337 Modification - Proximate NYSDEC Listed Remediation Sites

Site Name	Distance to Project Site	Site Environmental Assessment	Site Health Assessment	Status
Site Name: 1001 East Delavan Avenue Site Site Code: C915196B Program: Brownfield Cleanup Program	Immediately north of the project area	The 1001 East Delavan Avenue site in Buffalo, Erie County, spans approximately 32.884 acres, primarily covered by pavement and buildings, including former GM and American Axle Manufacturing structures. It includes a 2.54-acre Class 2 New York State Inactive Hazardous Waste Site and is bordered by Scajaquada Creek to the south. The site is zoned for industrial use, with surrounding areas featuring a mix of residential, commercial, and light industrial properties. Originally used by GM for vehicle assembly and later for axle manufacturing, the facility ceased operations in 2008, and the site was acquired and partially redeveloped by East Delavan Properties (EDP). Site geology includes mixed fill with various debris and clay layers overlying Onondaga Limestone bedrock. Groundwater flows inward towards the sewer and former creek channel, with the flow direction influenced by the site's geological features.	1001 East Delevan Street Parcel: Contamination was due to oil from the GM and American Axle plant operations (spills and potentially leaks from pits and trenches) and possibly leakage of PCBs from capacitors or transformers. The draft June 2009 Supplemental Remedial Investigation (RI) for the listed hazardous waste site concluded that the BCP area adjoining listed hazardous waste site are also contaminated with PCB contaminated oil. A Brownfield Cleanup Agreement was executed in March 2018. Additional investigation commenced in 2021 and the assessment will be updated when the investigation has been completed.	The site is undergoing active remec and investigation.
Site Name: Saginaw - Buffalo Site Code: 915152 Program: State Superfund Program		Location: The Saginaw-Buffalo site is an approximately 7.248-acre site, located in an urban area, at 320 Scajaquada Street in the City of Buffalo, Erie County. The site consists of the former Parking Lot #4 of the inactive manufacturing facility. Site Features: The site consists of a paved parking area. It is surrounded by industrial and residential properties. An electrical substation borders the site to the east. Current Zoning and Land Use: This site is zoned for industrial use. Past Use of the Site: Scajaquada Creek originally flowed through the southern portion of the site. The creek was rerouted through an underground concrete conduit, below what is now Scajaquada Street, in the mid 1920s. The former creek bed and adjacent low-lying areas were subsequently used for the disposal of ash by the City of Buffalo. A concrete plant operated on portions of the site from 1947 to 1966. General Motors (GM) purchased several parcels in the mid 1960s and constructed Parking Lot #4. The site was sold to American Axle Manufacturing in 1994, along with the main facility west of the railroad right-of-way. In November 1994, American Axle Manufacturing began construction of a parts coating facility on the northern third of Parking Lot #4. Operations at the facility ceased in December 2007. The property was sold to East Delavan Property, LLC in October 2008. In 1989, during a spill cleanup of industrial oil, excavated soil was found to contain polychlorinated biphenyls (PCBs). Site Geology and Hydrogeology: The bedding material underneath the asphalt pavement is approximately one foot deep. Below the bedding material is a layer of ash/slag type black or brown fill intermixed with other materials which varies in thickness from 2 to 7 feet across the site. Below this fill is a thin layer of black organic silt up to one foot in thickness. The thickness of the silty clay layer below the black organic silt ranges from 10 to 12 feet. This is underlain by Onondaga limestone bedrock which is approximately 17 to 19 feet below ground surface (fbgs). The groundwater is found at a depth of 3 to 4 fbgs and is believed to be due to perched water conditions. The general direction of groundwater flow in the overburden appears to be to the south towards the Scajaquada Creek Drain. Based upon the regional hydrogeology, it is assumed that groundwater in the bedrock flows towards the west-northwest.	There is little potential for exposure to contaminated soils because access to the site is restricted and the contaminated soils are covered by a paved parking lot. The existing deed restriction prevents use of the site property for purposes other than industrial uses, thereby preventing the use of groundwater for drinking. The area is served by public water so exposures via drinking water are not expected. The remedy which included the removal of contaminated soils, maintenance of existing pavement, and deed restrictions will reduce the potential for exposure to site-related contaminants.	Remediation of the site is complete to remediation, the primary contam of concern were polychlorinated bi (PCBs) and lead in soil, groundwat sewer sediments. Remedial action successfully achieved soil cleanup objectives for industrial use. Resid contamination in soil and groundwa being managed under a Site Mana Plan.


Location Map
Colorado Ave - CSO053_2.5 SPP337 Modification
Legend
Project Area
SPP337
SPP337
Seaja Wada St
Cornwall Ave
Northumberland Ave
Colorado Ave
Tesla St
Kilauea St
N
600 ft
Google Earth

Involved/Interested Agencies

City of Buffalo Common Council Masten District
Zeneta B. Everhart (via email)
zeverhart@buffalony.gov

City of Buffalo Department of Public Works, Parks & Streets – Parks
Andrew Rabb, Deputy Commissioner for Parks and Recreation (via email)
arabb@city-buffalo.com

City of Buffalo Department of Public Works, Parks & Streets
Nolan Skipper, City Engineer (via email)
nskipper@buffalony.gov

City of Buffalo Office of Strategic Planning
Brendan R. Mehaffy, Executive Director (via email)
bmehaffy@buffalony.gov

City of Buffalo Department of Public Works, Parks & Streets
Nate Marton, Commissioner
nmarton@city-buffalo.com

City of Buffalo Water Authority
Fouad Arab (via email)
farab@ch.ci.buffalo.ny.us
281 Exchange St, Buffalo, NY 14204

Buffalo Environmental Management Commission
Jason Paananen (via email)
jpaananen@buffalony.gov
920 City Hall
65 Niagara Square
Buffalo, NY 14202

Erie County Department of Health
Jack Tomani (via email)
John.tomani@erie.gov
95 Franklin Street
Buffalo, NY 14202

New York State Department of State
Coastal Management Program
99 Washington Avenue
Albany, NY 12231-0001

New York State Department of Transportation
Sanjyot Vaidya, P.E., Region 5 Regional Design Engineer
100 Seneca Street
Buffalo, NY 14203

New York State Department of Environmental Conservation
Julie Barrett O'Neil, Regional Director - Region 9
region9@dec.ny.gov

New York State Historic Preservation Office (consultation completed online)
1 Delaware Avenue North, Cohoes, NY 12047

U.S. Fish and Wildlife Service (consultation completed online)
1849 C Street, NW
Washington, DC 20240

BUFFALO
SEWER AUTHORITY

ATTACHMENT I

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Genesee St - CSO053_8 SPP341A Modification		
Project Location (describe, and attach a general location map): Genesee Street, Buffalo, NY 14211 at intersection of Kerns Ave		
Brief Description of Proposed Action (include purpose or need): This project is a Sewer Patrol Point (SPP) modification to incorporate an additional 18-inch diameter underflow pipe and raising the overflow weir to 55.60 ft to achieve a new total flow of 26.4 million gallons per day (MGD) reducing overflows at CSO-053. The existing drop shaft connection to the Scajaquada Tunnel Interceptor at SPP 341A was reviewed and determined to be undersized for the proposed flow, with an original design flow of only 4.43 MGD. A vortex style drop structure is proposed to achieve the desired increased capacity. The small footprint of the vortex plunge design combined with its ability to reuse the existing tunnel connection from the existing drop shaft make this style drop shaft the preferred alternative. The drop shaft replacement would be constructed next to the existing drop shaft and completed offline.		
Name of Applicant/Sponsor: Buffalo Sewer Authority	Telephone: E-Mail:	
Address: 5 Niagara Square # 1038		
City/PO: Buffalo	State: NY	Zip Code: 14202
Project Contact (if not same as sponsor; give name and title/role): Rosaleen B. Nogle, PE, BCEE, PMP	Telephone: 716-851-5664 Ext. 4203 E-Mail: rnogle@buffalosewer.org	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☑Yes☐No	City of Buffalo Common Council	
b. City, Town or Village Planning Board or Commission ☑Yes☐No	City of Buffalo Office of Strategic Planning	
c. City, Town or Village Zoning Board of Appeals ☐Yes☑No		
d. Other local agencies ☑Yes☐No	City of Buffalo Department of Public Works, Parks & Streets, See attached sheet for additional involv	
e. County agencies ☑Yes☐No	Erie County Department of Health	
f. Regional agencies ☐Yes☑No		
g. State agencies ☑Yes☐No	SHPO/ Cultural Resources Determination, See attached sheet for additional involved agencies	
h. Federal agencies ☑Yes☐No	USFWS, Section 7 Endangered Species Act	

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes☐No

If Yes, identify the plan(s):

NYS Heritage Areas:West Erie Canal Corridor

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
D-IL (Light Industrial)

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site?

C.4. Existing community services.

a. In what school district is the project site located? Buffalo City School District

b. What police or other public protection forces serve the project site?
Buffalo Police Department

c. Which fire protection and emergency medical services serve the project site?
Buffalo Fire Department

d. What parks serve the project site?
None

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Municipal - sewer work

b. a. Total acreage of the site of the proposed action? 0.40 acres
b. Total acreage to be physically disturbed? 0.005 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 0.27 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 20 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

f. Does the project include new residential uses? ☐Yes ☑No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No
If Yes,
i. Purpose of the impoundment: _____
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:
_____
iii. If other than water, identify the type of impounded/contained liquids and their source.
_____
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☑Yes ☐No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
If Yes:
i. What is the purpose of the excavation or dredging? SPP341A sewer modification listed in project scope
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): 1500 cubic yards
- Over what duration of time? 6 months

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
Excavated material will be properly characterized and disposed of at a permitted facility.
_____
iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☑No
If yes, describe. _____
_____
v. What is the total area to be dredged or excavated? 0.05 acres
vi. What is the maximum area to be worked at any one time? 0.05 acres
vii. What would be the maximum depth of excavation or dredging? 50 feet
viii. Will the excavation require blasting? ☐Yes ☑No
ix. Summarize site reclamation goals and plan: _____
Clean fill will be brought in as required for backfill. No landscaped areas on this project site.
_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____
_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☑No
If Yes, describe:

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☑No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No
If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☑No
If Yes:

- Name of district or service area:
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☑No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No
If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: Bird Island WWTP
- Name of district: Buffalo
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

- Do existing sewer lines serve the project site? ☑Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☑No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☑No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☑No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☑No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☑No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☑No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8 AM - 4 PM
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe:

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☑ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☑ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.40	0.40	0
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	00
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: _____			

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☑ No

If Yes,

i. Identify Facilities:

_____

_____

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☑ Yes ☐ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☑ No

☑ Yes – Spills Incidents database — Provide DEC ID number(s): 9504258 - 2134 Genessee St tank failure

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): Spill closed 10/26/1995

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☑ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6.5 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site: Urban land-Odessa complex 100 %
_____ %
_____ %

d. What is the average depth to the water table on the project site? Average: >6.5 feet

e. Drainage status of project site soils:
☐ Well Drained: _____ % of site
☑ Moderately Well Drained: 100 % of site
☐ Poorly Drained _____ % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 100 % of site
☐ 10-15%: _____ % of site
☐ 15% or greater: _____ % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name 837-117 Classification C
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

n. Does the project site contain a designated significant natural community? ☐Yes ☑No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐Yes ☑No

If Yes:

i. Species and listing (endangered or threatened): _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☐No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☑ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

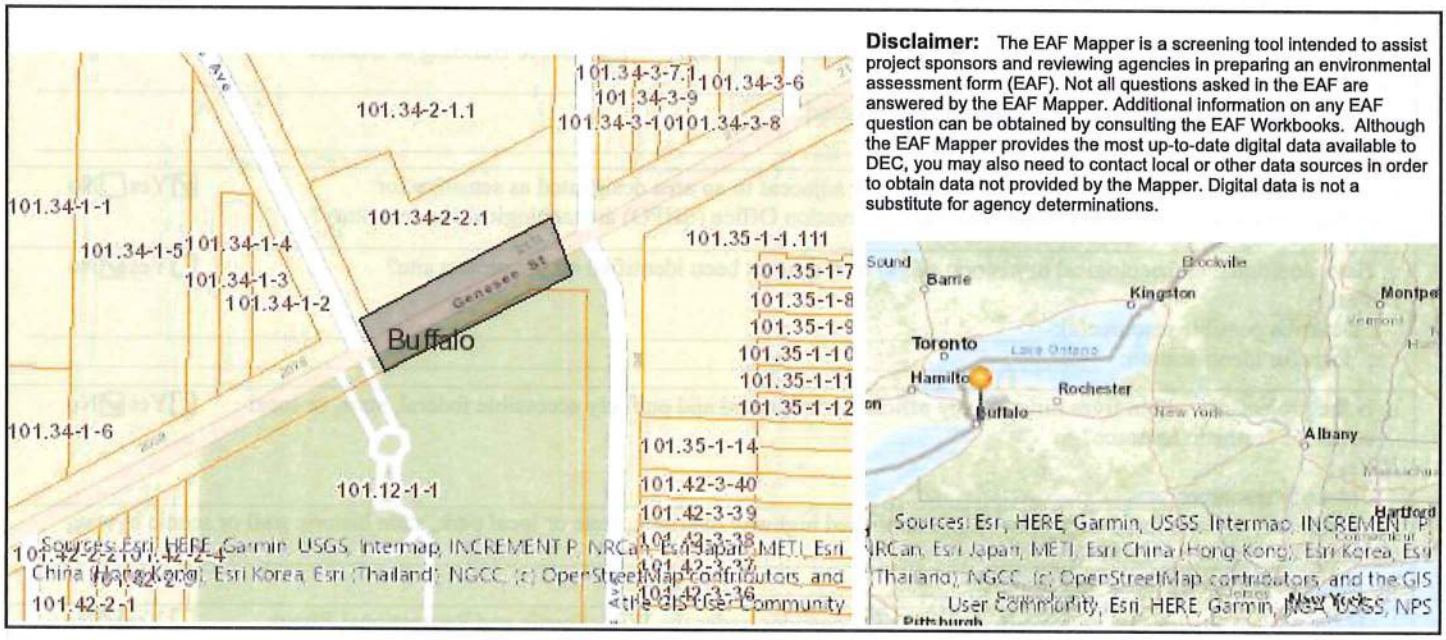
Applicant/Sponsor Name Rosaleen Nogle, PE Date _____

Signature _____ Title Principal Sanitary Engineer

PRINT FORM

EAF Mapper Summary Report

Thursday, May 16, 2024 7:45 AM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	837-117
E.2.h.iv [Surface Water Features - Stream Classification]	C
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No

E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Location Map
Genesee Street – CSO053_8 SPP341A Modification
Legend
Project Area
SPP341A
Kerns Ave
Rogers Ave
Genesee St
Hagen St
Newburgh Ave
Sprenger Ave
Crossman Ave
Countess Ave
Zelmer St
SPP341A
Google Earth
600 ft
N

Involved/Interested Agencies

City of Buffalo Common Council Lovejoy District
Bryan J. Bollman (via email)
bbollman@city-buffalo.com

City of Buffalo Department of Public Works, Parks & Streets
Nate Marton, Commissioner
nmarton@city-buffalo.com

City of Buffalo Department of Public Works, Parks & Streets – Parks
Andrew Rabb, Deputy Commissioner for Parks and Recreation (via email)
arabb@city-buffalo.com

City of Buffalo Department of Public Works, Parks & Streets
Nolan Skipper, City Engineer (via email)
nskipper@buffalony.gov

City of Buffalo Office of Strategic Planning
Brendan R. Mehaffy, Executive Director (via email)
bmehaffy@buffalony.gov

City of Buffalo Water Authority
Fouad Arab (via email)
farab@ch.ci.buffalo.ny.us
281 Exchange St, Buffalo, NY 14204

Buffalo Environmental Management Commission
Jason Paananen (via email)
jpaananen@buffalony.gov
920 City Hall
65 Niagara Square
Buffalo, NY 14202

Erie County Department of Health
Jack Tomani (via email)
John.tomani@erie.gov
95 Franklin Street
Buffalo, NY 14202

New York State Department of State
Coastal Management Program
99 Washington Avenue
Albany, NY 12231-0001

New York State Department of Transportation
Sanjyot Vaidya, P.E., Region 5 Regional Design Engineer
100 Seneca Street
Buffalo, NY 14203

New York State Department of Environmental Conservation
Julie Barrett O'Neil, Regional Director - Region 9
region9@dec.ny.gov

New York State Historic Preservation Office (consultation completed online)
1 Delaware Avenue North, Cohoes, NY 12047

U.S. Fish and Wildlife Service (consultation completed online)
1849 C Street, NW
Washington, DC 20240

BUFFALO
SEWER AUTHORITY

ATTACHMENT J

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: CSO053_1.5 SPP336B Modification		
Project Location (describe, and attach a general location map): SPP336B in the Kensington Expressway, north of Hamlin Road.		
Brief Description of Proposed Action (include purpose or need): SPP336B will be modified by removing the underflow orifice plate, reducing overflows at CSO-053.		
Name of Applicant/Sponsor: Buffalo Sewer Authority	Telephone: E-Mail:	
Address: 5 Niagara Square # 1038		
City/PO: Buffalo	State: NY	Zip Code: 14202
Project Contact (if not same as sponsor; give name and title/role): Rosaleen B. Nogle, PE, BCEE, PMP	Telephone: 716-851-5664 Ext. 4203 E-Mail: mogle@buffalosewer.org	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☑Yes ☐No	City of Buffalo Common Council	
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	City of Buffalo Office of Strategic Planning	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	City of Buffalo Department of Public Works, Parks & Streets, See attached sheet for additional involv	
e. County agencies ☐Yes ☑No	Erie County Department of Health	
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	SHPO/ Cultural Resources Determination, See attached sheet for additional involved agencies	
h. Federal agencies ☑Yes ☐No	USFWS, Section 7 Endangered Species Act	

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes ☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):

NYS Heritage Areas:West Erie Canal Corridor

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Project area is surrounded by N3R - Residential properties through the City of Buffalo Property viewer

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site?

C.4. Existing community services.

a. In what school district is the project site located? Buffalo City School District

b. What police or other public protection forces serve the project site?
City of Buffalo Police District E

c. Which fire protection and emergency medical services serve the project site?
Buffalo Fire Department

d. What parks serve the project site?

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Utilities Imrovement

b. a. Total acreage of the site of the proposed action? 0.10 acres
b. Total acreage to be physically disturbed? 0 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 0 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 19 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

f. Does the project include new residential uses? ☐Yes ☑No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No
If Yes,
i. Purpose of the impoundment: _____
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:
_____
iii. If other than water, identify the type of impounded/contained liquids and their source.
_____
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐Yes ☑No
If Yes:
i. What is the purpose of the excavation or dredging? _____
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
_____
_____
iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No
If yes, describe. _____
_____
v. What is the total area to be dredged or excavated? _____ acres
vi. What is the maximum area to be worked at any one time? _____ acres
vii. What would be the maximum depth of excavation or dredging? _____ feet
viii. Will the excavation require blasting? ☐Yes ☐No
ix. Summarize site reclamation goals and plan: _____
_____
_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____
_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☐No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☐No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes ☐No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No

- Do existing sewer lines serve the project? ☐Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☐No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐Morning ☐Evening ☐Weekend ☐Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8 am - 4 pm
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☐ No

Describe:

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☐ No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0	0	0
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: _____	0	0	0

c. Is the project site presently used by members of the community for public recreation? ☐Yes ☑No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐Yes ☑No
If Yes,
i. Identify Facilities:

_____
_____

e. Does the project site contain an existing dam? ☐Yes ☑No
If Yes:
i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

_____
_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes ☑No
If Yes:
i. Has the facility been formally closed? ☐Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____
_____

iii. Describe any development constraints due to the prior solid waste activities: _____
_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes ☑No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____
_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐Yes ☑ No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes ☐No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____
☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____
☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____
_____
_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑Yes ☐No
If yes, provide DEC ID number(s): 915165, C915392
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

See attached table.
_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6.5 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: Uc (Udorthents Smoothed) _____%
_____%
_____%

d. What is the average depth to the water table on the project site? Average: 3-6 ft feet

e. Drainage status of project site soils:
☐ Well Drained: _____% of site
☑ Moderately Well Drained: 100 % of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: _____% of site
☑ 10-15%: _____% of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name 837-117 Classification C
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

n. Does the project site contain a designated significant natural community? ☐Yes ☑No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑No

If Yes:

i. Species and listing (endangered or threatened): _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☑No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☑ Historic Building or District

ii. Name: Hamlin Park Historic District, Faith Missionary Baptist Church

iii. Brief description of attributes on which listing is based:

Hamlin Park: 1860-1975 Architecture, Faith Missionary Baptist Church: 1924-1964 Architecture and Social History

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☑ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

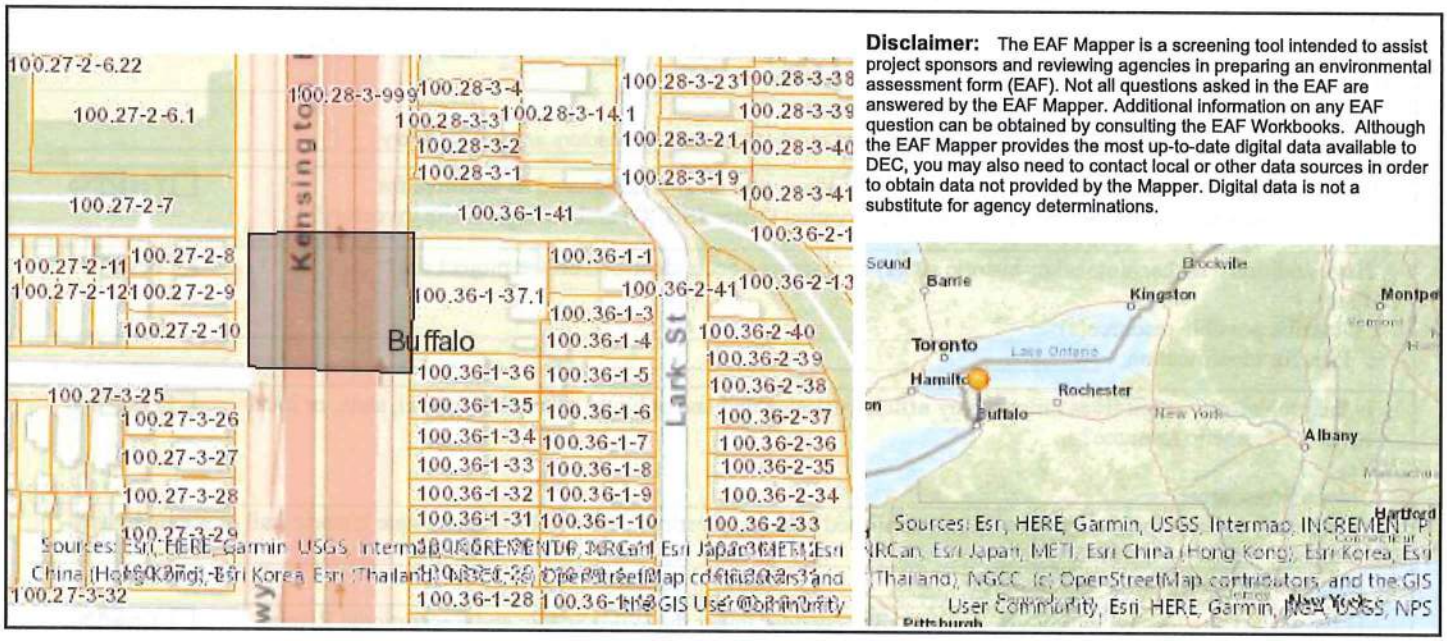
Applicant/Sponsor Name Rosaleen Nogle, PE Date _____

Signature _____ Title Principal Sanitary Engineer

PRINT FORM

EAF Mapper Summary Report

Friday, July 19, 2024 9:45 AM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	915165, C915392
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No

E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Hamlin Park Historic District, Faith Mission Baptist Church
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

Project Location Map
SPP336B Modification (CSO053_1.5)
Legend
SPP336B
Work Area
SPP336B
Hamlin Rd
Hamlin Rd
Brunswick Blvd
Humboldt Pkwy
Lark St
N
400 ft
Google Earth

Table 1
Buffalo Sewer Authority
Capital Priority Projects
SPP336B - Proximate NYSDEC Listed Remidiation Sites

Site Name	Distance to Project Site	Site Environmental Assessment	Site Health Assessment	Status
Buffalo Foundry & Machine Park of Innovation Site Code: C915392 Program: Brownfield Cleanup Program	0.25 miles to the east	The 14.53-acre Buffalo Foundry & Machine Park of Innovation site, located at 750 East Ferry Street in Buffalo, Erie County, features several abandoned industrial buildings and asphalt surfaces. A portion of Scajaquada Creek runs underground in a concrete tunnel beneath the main buildings. The site is zoned for heavy industrial use, with surrounding parcels used for industrial, commercial, residential, and utility purposes. Historically, the site has been used for manufacturing since before 1900, with Buffalo Foundry & Machine Co. specializing in industrial evaporators. The site geology includes fill material over clayey silts on Onondaga Limestone bedrock, with groundwater flow influenced by the Scajaquada Creek Drain.	Based on the information included in the BCP application, the primary contaminants of concern are polycyclic aromatic hydrocarbons (PAHs) in soil.	The applicant withdrew their application on June 30, 2023, and the Brownfield Cleanup Agreement was never executed.The last investigation completed at the site was in 2022.
Vibratech Inc. Site Code: 915165 Program: State Superfund Program	0.35 miles to the northeast	The Vibratech site, a 10.522-acre property at 537 East Delavan Avenue in Buffalo, features one- and two-story brick and steel-frame buildings, with most structures demolished in 2017. The site now consists of exposed concrete slabs, asphalt parking areas, access roads, and small grassy areas. Historically, it housed significant operational features like underground storage tanks, above-ground fuel oil tanks, and a deep sump well. Currently zoned for light industrial use, the northern buildings are being renovated, and the southwestern buildings are leased for storage/commercial purposes. The site was previously used by Houdaille Industries for manufacturing vibration dampeners and rotary shock absorbers from 1927 to the mid-1990s, followed by various other industrial and commercial occupants. The geology includes sandy gravel fill with ash and cinders, underlain by fine-textured natural soils and fractured Onondaga Limestone bedrock, with groundwater flowing to the south-southwest.	Direct contact with contaminants in the soil is unlikely because the majority of the site is covered with buildings and pavement. No off-site soil impacts have been identified to-date. People are not expected to come into direct contact with contaminated groundwater unless they dig below the ground surface. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not contaminated by the site. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion in the on-site building. Sampling indicates soil vapor intrusion is not a concern for off-site buildings.	Investigation and remediation is ongoing at this site.

Involved/Interested Agencies

City of Buffalo Common Council Masten District
Zeneta B. Everhart (via email)
zeverhart@buffalony.gov

City of Buffalo Department of Public Works, Parks & Streets – Parks
Andrew Rabb, Deputy Commissioner for Parks and Recreation (via email)
arabb@city-buffalo.com

City of Buffalo Department of Public Works, Parks & Streets
Nolan Skipper, City Engineer (via email)
nskipper@buffalony.gov

City of Buffalo Office of Strategic Planning
Brendan R. Mehaffy, Executive Director (via email)
bmehaffy@buffalony.gov

City of Buffalo Department of Public Works, Parks & Streets
Nate Marton, Commissioner
nmarton@city-buffalo.com

City of Buffalo Water Authority
Fouad Arab (via email)
farab@ch.ci.buffalo.ny.us
281 Exchange St, Buffalo, NY 14204

Buffalo Environmental Management Commission
Jason Paananen (via email)
jpaananen@buffalony.gov
920 City Hall
65 Niagara Square
Buffalo, NY 14202

Erie County Department of Health
Jack Tomani (via email)
John.tomani@erie.gov
95 Franklin Street
Buffalo, NY 14202

New York State Department of State
Coastal Management Program
99 Washington Avenue
Albany, NY 12231-0001

New York State Department of Transportation
Sanjyot Vaidya, P.E., Region 5 Regional Design Engineer
100 Seneca Street
Buffalo, NY 14203

New York State Department of Environmental Conservation
Julie Barrett O'Neil, Regional Director - Region 9
region9@dec.ny.gov

New York State Historic Preservation Office (consultation completed online)
1 Delaware Avenue North, Cohoes, NY 12047

U.S. Fish and Wildlife Service (consultation completed online)
1849 C Street, NW
Washington, DC 20240

BUFFALO
SEWER AUTHORITY

ATTACHMENT K

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Buffalo Sewer Authority - Capital Project Program - Humboldt Parkway		
Project Location (describe, and attach a general location map): Humboldt Parkway between East Delevan Street and Northland Avenue		
Brief Description of Proposed Action (include purpose or need): This Sewer Patrol Point (SPP) Modification involves the replacement of approximately 1,000 linear feet of 24-inch pipe on Humboldt Parkway between East Delavan Avenue and Northland Avenue will be replaced with a 36-inch diameter pipe to accommodate conveyance of the peak flow of 11.3 million gallons per day (MGD) through the underflow sewer. The overflow weir will also be raised to 54.81 (city datum). Due to the small size of the existing junction chamber at East Delavan Avenue, where the 24-inch pipe currently connects to the 46-inch brick sewer under East Delavan Avenue, a new flow channel will be constructed to the pipe, to accommodate a larger orifice plate so that junction chamber will also be replaced and upsized. These modifications would reduce overflows at CSO-053 and would benefit from the installation of the Sidney OLS project to make more capacity available in the Scajaquada Tunnel. These modifications would reduce overflows at CSO-053.		
Name of Applicant/Sponsor: Buffalo Sewer Authority	Telephone: E-Mail:	
Address: 65 Niagara Square #1038		
City/PO: Buffalo	State: NY	Zip Code: 14202
Project Contact (if not same as sponsor; give name and title/role): Rosaleen B. Nogle, PE, BCEE, PMP	Telephone: 716-851-5664 Ext. 4203 E-Mail: rnogle@buffalosewer.org	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☑Yes ☐No	City of Buffalo Common Council	
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	City of Buffalo Office of Strategic Planning	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	City of Buffalo Department of Public Works, Parks & Streets, See attached sheet for additional involv	
e. County agencies ☑Yes ☐No	Erie County Department of Health	
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	SHPO/ Cultural Resources Determination, See attached sheet for additional involved agencies	
h. Federal agencies ☑Yes ☐No	USFWS, Section 7 Endangered Species Act	

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes ☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):

NYS Heritage Areas:West Erie Canal Corridor

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
D-IL (Light Industrial)

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site?

C.4. Existing community services.

a. In what school district is the project site located? Buffalo City School District

b. What police or other public protection forces serve the project site?
Buffalo Police Department

c. Which fire protection and emergency medical services serve the project site?
Buffalo Fire Department

d. What parks serve the project site?
None

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Municipal - sewer work

b. a. Total acreage of the site of the proposed action? 0.90 acres
b. Total acreage to be physically disturbed? 0.12 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? Within ROW acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 20 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

f. Does the project include new residential uses? ☐Yes ☑No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No
If Yes,
i. Purpose of the impoundment: _____
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:
_____
iii. If other than water, identify the type of impounded/contained liquids and their source.
_____
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☑Yes ☐No
If Yes:
i. What is the purpose of the excavation or dredging? Pipe replacement along Humboldt Parkway described in project scope
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): 1200 cubic yards
- Over what duration of time? 6 months

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
Fill material will be removed and the plan for material disposal is for the excavated material to be taken to a MSW landfill.
iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☑No
If yes, describe. _____
v. What is the total area to be dredged or excavated? 0.12 acres
vi. What is the maximum area to be worked at any one time? 0.12 acres
vii. What would be the maximum depth of excavation or dredging? 20 feet
viii. Will the excavation require blasting? ☐Yes ☑No
ix. Summarize site reclamation goals and plan: _____
Clean fill will be brought in to be used as required for backfill. No landscaped areas on this project site.

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☑No
If Yes, describe:

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☑No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No
If Yes:
i. Total anticipated water usage/demand per day: _____ gallons/day
ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☑No
If Yes:

- Name of district or service area:
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☑No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No
If Yes:
i. Total anticipated liquid waste generation per day: _____ gallons/day
ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: Bird Island WWTP
- Name of district: Buffalo
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

- Do existing sewer lines serve the project site? ☑Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☑No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☑No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☑No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☑No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☑No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☑No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8 AM - 4 PM
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe:

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☑ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☑ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.90	0.90	0
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: 0	0	0	0

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

Hamlin Park Middle School, Buffalo Public School 74

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑ Yes ☐ No

If yes, provide DEC ID number(s): 915165, B00083, C915310, C915279, C915392

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

See attached Table. Sites do not represent an recognized environmental concern in association with project site.

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6.5 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:

Udorthents, smoothed	27 %
Urban land-Cayuga complex	63 %
Urban land-Wassaic complex	10 %

d. What is the average depth to the water table on the project site? Average: >6.5 feet

e. Drainage status of project site soils:
☐ Well Drained: ____ % of site
☑ Moderately Well Drained: 100 % of site
☐ Poorly Drained ____ % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 100 % of site
☐ 10-15%: ____ % of site
☐ 15% or greater: ____ % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.
i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No
ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No
If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.
iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No
iv. For each identified regulated wetland and waterbody on the project site, provide the following information:
- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☑ Yes ☐ No
If yes, name of impaired water body/bodies and basis for listing as impaired: _____
Name - Pollutants - Uses:Scajaquada Creek, Middle, and tribs – Pathogens;Nutrients;D.O./Oxygen Demand;Aesthetics – Recreation;A...

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:
i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

n. Does the project site contain a designated significant natural community? ☐Yes ☑No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐Yes ☑No

If Yes:

i. Species and listing (endangered or threatened): _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☐No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☐No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: Hamlin Park Historic District, Faith Mission Baptist Church

iii. Brief description of attributes on which listing is based:

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Rosaleen Nogle, PE Date _____

Signature _____ Title Principal Sanitary Engineer

PRINT FORM

EAF Mapper Summary Report

Wednesday, May 22, 2024 7:31 AM

Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	915165, B00083, C915310, C915279, C915392
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	Yes
E.2.h.v [Impaired Water Bodies - Name and Basis for Listing]	Name - Pollutants - Uses:Scajaquada Creek, Middle, and tribs – Pathogens;Nutrients;D.O./Oxygen Demand;Aesthetics – Recreation;Aquatic Life
E.2.i. [Floodway]	No

E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Hamlin Park Historic District, Faith Mission Baptist Church
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

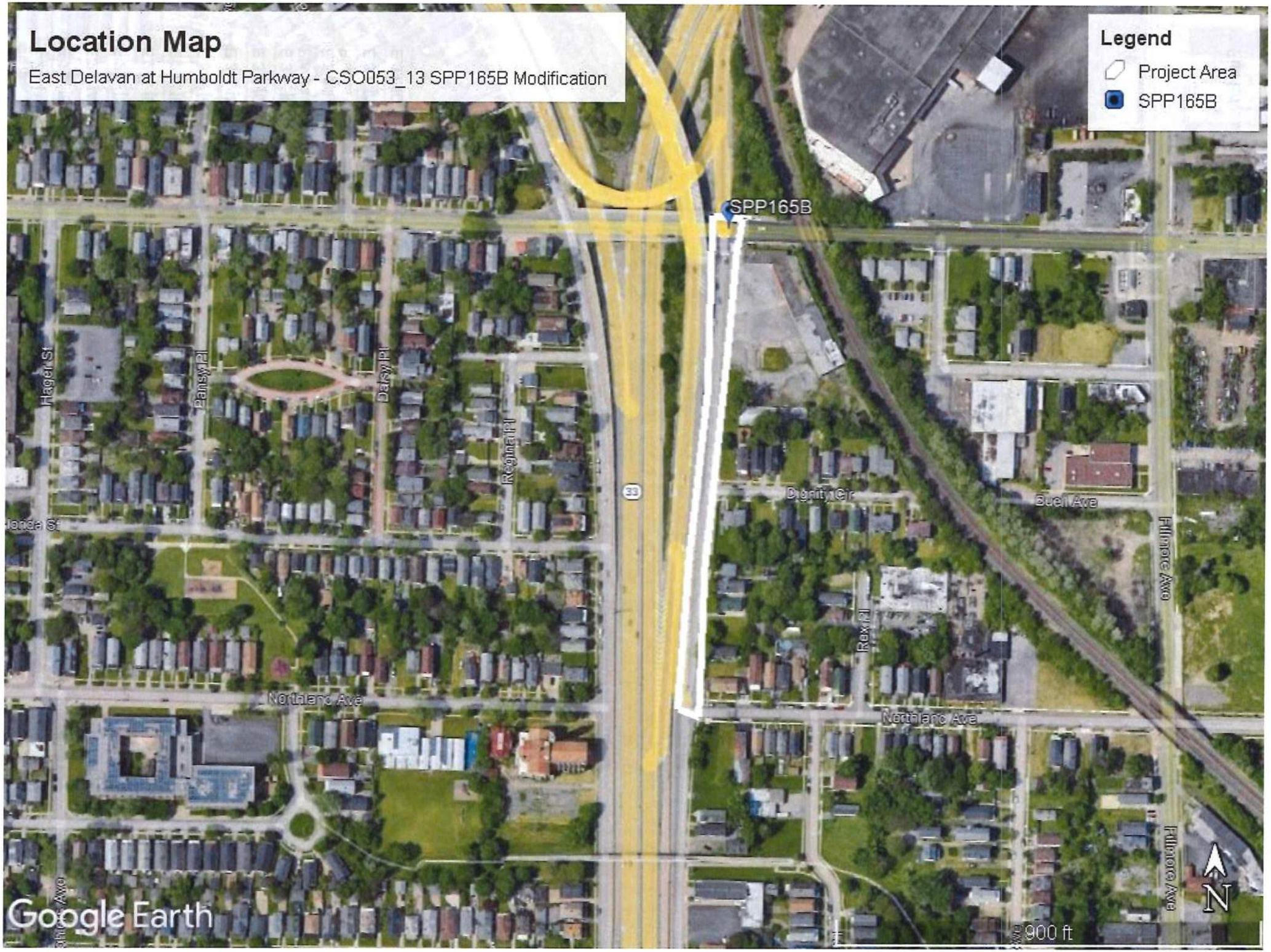

Location Map
East Delavan at Humboldt Parkway - CSO053_13 SPP165B Modification
Legend
Project Area
SPP165B
SPP165B
Hager St
Pansy Pl
Daisy Pl
Regina Pl
Dignity Cir
Buell Ave
Hillmore Ave
Rex Pl
Northland Ave
Northland Ave
Hillmore Ave
Google Earth
900 ft
N

Table 1
Buffalo Sewer Authority
Capital Priority Projects
Humboldt Parkway Site - Proximate NYSDEC Listed Remidiation Sites

Site Name	Distance to Project Site	Site Environmental Assessment	Site Health Assessment
Vibratech Inc. (915165) - State Superfund Site	0.3 miles to the east	Nature and Extent of Contamination: Based on investigations completed to date, the primary contaminants of concern are: chlorinated solvents (trichloroethene [TCE] and 1,1,1-trichloroethane and their daughter products) and 1,4-dioxane in the southern two-thirds of the site; and free-phase petroleum products (oil) in the southwestern corner of the site. Solvent contaminated soil containing TCE and petroleum was remediated along a former rail spur on the southern portion of the site in the mid-1990s. Groundwater concentrations of TCE initially decreased following this soil remediation action. However, chlorinated solvents concentrations subsequently rebounded in the eastern portion of the site and free-phase product (oil) rebounded in the southwest portion of the site. After an Emerging Contaminant sampling program, 1,4-Dioxane was identified in onsite groundwater. A separate removal action was undertaken by USEPA to remove asbestos and PCBs from light ballasts, capacitors and associated contamination throughout the facility structures. Additionally, mercury containing switches and lamps were removed and disposed. The removal action was complete on September 9, 2009. A supplemental investigation completed in 2010 identified additional TCE contamination in groundwater north of the previously impacted groundwater plume. Additional investigations are being performed to determine the nature and extent of this contamination. Subsurface petroleum products have been identified in multiple onsite monitoring wells in the southwestern portion of the site. A specific source of the petroleum has not been determined, however, it is likely the result of numerous spills and leakage over the life of the facility. Significant dissolved phase petroleum contamination has not been identified in the groundwater. An off-site soil vapor intrusion investigation (indoor air and sub-slab), completed in the spring of 2012, found no significant off-site impacts due to existing groundwater contamination. A re-evaluation is necessary if reuse of onsite buildings or new construction occurs. A passive soil gas survey completed in the fall of 2015 helped to identify potential source areas under the central eastern (former degreaser storage room) and central western (deep sump) of the former main plant building requiring additional investigation/remediation.	Direct contact with contaminants in the soil is unlikely because the majority of the site is covered with buildings and pavement. No off-site soil impacts have been identified to-date. People are not expected to come into direct contact with contaminated groundwater unless they dig below the ground surface. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not contaminated by the site. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion in the on-site building. Sampling indicates soil vapor intrusion is not a concern for off-site buildings.
Western New York Workforce Training Center (C915310) - Brownfield Cleanup Program	0.375 miles to the east	Remediation at the site is complete. Prior to remediation, the primary contaminants of concern were semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals in soil and trichloroethylene in soil vapor. Additionally, petroleum product (hydraulic oil) is present in some areas of the on-site bedrock. Remedial actions have successfully achieved site specific soil cleanup objectives for commercial use. Residual contamination in the soil, bedrock, and soil vapor is being managed under a Site Management Plan	Measures are in place to properly manage human exposures to residual site contaminants.
Trinidad Park (B00083) - Environmental Restoration Program	0.3 miles to the north	Remediation at the site is complete. Prior to remediation the primary contaminants of concern were polycyclic aromatic hydrocarbons (PAHs)in soil and groundwater. Remedial actions have successfully achieved soil cleanup objectives for restricted-residential use. Residual contamination in soil and groundwater is being managed under a Site Management Plan.	The site was remediated, and the park has reopened. The area is served by the City of Buffalo public water supply. Therefore, there are no site-related exposure concerns.
1827 Fillmore Avenue (C915279) - Brownfield Cleanup Program	0.375 miles to the northeast	Remediation at the site is complete. Prior to remediation, the primary contaminants of concern were metals, including arsenic, barium, cadmium, copper, lead, mercury, manganese and sodium, and semi-volatile organic compounds (SVOCs) in soil and groundwater. Remedial actions have successfully achieved soil cleanup objectives for commercial use. Residual contamination in soil and groundwater is being managed under a Site Management Plan.	Measures are in place to control the potential for coming in contact with residual contamination remaining at the site
Buffalo Foundry & Machine Park of Innovation (C915392) - Brownfield Cleanup Program	0.375 miles to the southeast	Based on the information included in the BCP application, the primary contaminants of concern are polycyclic aromatic hydrocarbons (PAHs) in soil. The applicant withdrew their application on June 30, 2023 and the Brownfield Cleanup Agreement was never executed.	Information submitted with the BCP application regarding the conditions at the site are currently under review and will be revised as additional information becomes available.

Involved/Interested Agencies

City of Buffalo Common Council Masten District
Zeneta B. Everhart (via email)
zeverhart@buffalony.gov

City of Buffalo Department of Public Works, Parks & Streets – Parks
Andrew Rabb, Deputy Commissioner for Parks and Recreation (via email)
arabb@city-buffalo.com

City of Buffalo Department of Public Works, Parks & Streets
Nolan Skipper, City Engineer (via email)
nskipper@buffalony.gov

City of Buffalo Office of Strategic Planning
Brendan R. Mehaffy, Executive Director (via email)
bmehaffy@buffalony.gov

City of Buffalo Department of Public Works, Parks & Streets
Nate Marton, Commissioner
nmarton@city-buffalo.com

City of Buffalo Water Authority
Fouad Arab (via email)
farab@ch.ci.buffalo.ny.us
281 Exchange St, Buffalo, NY 14204

Buffalo Environmental Management Commission
Jason Paananen (via email)
jpaananen@buffalony.gov
920 City Hall
65 Niagara Square
Buffalo, NY 14202

Erie County Department of Health
Jack Tomani (via email)
John.tomani@erie.gov
95 Franklin Street
Buffalo, NY 14202

New York State Department of State
Coastal Management Program
99 Washington Avenue
Albany, NY 12231-0001

New York State Department of Transportation
Sanjyot Vaidya, P.E., Region 5 Regional Design Engineer
100 Seneca Street
Buffalo, NY 14203

New York State Department of Environmental Conservation
Julie Barrett O'Neil, Regional Director - Region 9
region9@dec.ny.gov

New York State Historic Preservation Office (consultation completed online)
1 Delaware Avenue North, Cohoes, NY 12047

U.S. Fish and Wildlife Service (consultation completed online)
1849 C Street, NW
Washington, DC 20240

BUFFALO
SEWER AUTHORITY

ATTACHMENT L

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: South Bailey ILS - CSO053_3.1 SPP338 Modification		
Project Location (describe, and attach a general location map): Bailey Avenue near Kerns Avenue and Scajaquada Street		
Brief Description of Proposed Action (include purpose or need): The Bailey Avenue near Kerns Avenue and Scajaquada Street Sewer Patrol Point (SPP) Modification involves the installation of a new labyrinth weir to increase weir length from 15 ft to 30-ft and raise the height of the weir by 1.83 ft in the structure that diverts flow to the existing drop shaft connection to the Scajaquada Tunnel Interceptor away from the Scajaquada Drain. For this project, the SPP338 underflow orifice would be enlarged. This project would reduce overflows at CSO-053. The addition of an orifice plate upstream from the SPP will also be required to store flow in the upstream sewers during wet weather.		
Name of Applicant/Sponsor: Buffalo Sewer Authority	Telephone: E-Mail:	
Address: 5 Niagara Square # 1038		
City/PO: Buffalo	State: NY	Zip Code: 14202
Project Contact (if not same as sponsor; give name and title/role): Rosaleen B. Nogle, PE, BCEE, PMP	Telephone: 716-851-5664 Ext. 4203 E-Mail: rnogle@buffalosewer.org	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☑Yes ☐No	City of Buffalo Common Council	
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	City of Buffalo Office of Strategic Planning	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	City of Buffalo Department of Public Works, Parks & Streets, See attached sheet for additional involv	
e. County agencies ☑Yes ☐No	Erie County Department of Health	
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	SHPO/ Cultural Resources Determination, See attached sheet for additional involved agencies	
h. Federal agencies ☑Yes ☐No	USFWS, Section 7 Endangered Species Act	

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes ☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):

NYS Heritage Areas:West Erie Canal Corridor

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
D-IL (Light Industrial) to the northwest and southeast of site, D-OG (Green) to the southeast, and D-S (Retail Strip) to the west of site

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site?

C.4. Existing community services.

a. In what school district is the project site located? Buffalo City School District

b. What police or other public protection forces serve the project site?
Buffalo Police Department District E

c. Which fire protection and emergency medical services serve the project site?
Buffalo Fire Department

d. What parks serve the project site?
None

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Municipal- Sewer work

b. a. Total acreage of the site of the proposed action? 0.08 acres
b. Total acreage to be physically disturbed? N/A acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? Within ROW acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % Units:

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed?
iv. Minimum and maximum proposed lot sizes? Minimum Maximum

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 38 months
ii. If Yes:
- Total number of phases anticipated
- Anticipated commencement date of phase 1 (including demolition) month year
- Anticipated completion date of final phase month year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

f. Does the project include new residential uses? ☐Yes ☑No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No
If Yes,
i. Purpose of the impoundment: _____
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:
_____
iii. If other than water, identify the type of impounded/contained liquids and their source.
_____
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐Yes ☑No
If Yes:
i. What is the purpose of the excavation or dredging? _____
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
_____
_____
iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No
If yes, describe. _____
_____
v. What is the total area to be dredged or excavated? _____ acres
vi. What is the maximum area to be worked at any one time? _____ acres
vii. What would be the maximum depth of excavation or dredging? _____ feet
viii. Will the excavation require blasting? ☐Yes ☐No
ix. Summarize site reclamation goals and plan: _____
_____
_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____
_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☐No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☐No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes ☑No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☐No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8 AM - 4 PM
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☐ No

Describe:

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☐ No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.08	0.08	0
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: _____	0	0	0

c. Is the project site presently used by members of the community for public recreation? ☐Yes ☑No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐Yes ☑No
If Yes,
i. Identify Facilities:

e. Does the project site contain an existing dam? ☐Yes ☑No
If Yes:
i. Dimensions of the dam and impoundment:
- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes ☑No
If Yes:
i. Has the facility been formally closed? ☐Yes ☐ No
- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:
iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes ☑No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐Yes ☑ No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes ☐No
☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____
☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____
☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____
iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑Yes ☐No
If yes, provide DEC ID number(s): C915196B, 915152
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):
See attached table

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6.5 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:

Ud (Urban Land)	46.8 %
Ut (Urban Land- Odessa Complex)	25.0 %
Uw (Urban Land- Teel Complex)	27.0 %

d. What is the average depth to the water table on the project site? Average: >6.5 feet

e. Drainage status of project site soils:
☐ Well Drained: ____ % of site
☑ Moderately Well Drained: 27 % of site
☑ Poorly Drained 25 % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: ____ % of site
☐ 10-15%: ____ % of site
☐ 15% or greater: ____ % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.
i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No
ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No
If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.
iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No
iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name 837-117 Classification C
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No
If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:
i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑ No

If Yes:

i. Species and listing (endangered or threatened): _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☐ No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☐ No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☑ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Rosaleen Nogle, PE Date _____

Signature _____ Title Principal Sanitary Engineer

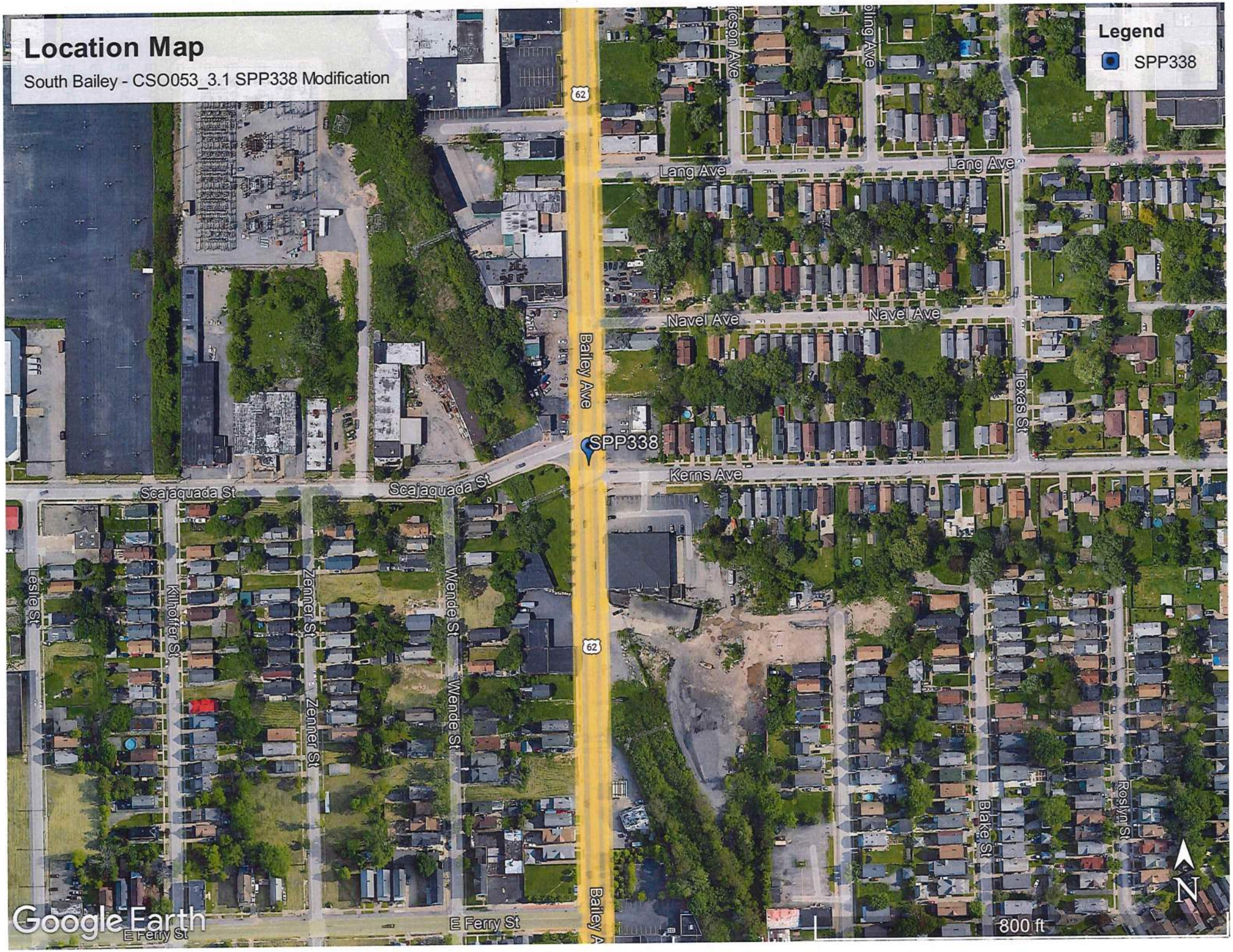
PRINT FORM

EAF Mapper Summary Report

Monday, July 1, 2024 9:07 AM

Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	C915196B, 915152
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	837-117
E.2.h.iv [Surface Water Features - Stream Classification]	C
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No


Location Map
South Bailey - CSO053_3.1 SPP338 Modification
Legend
SPP338
Lang Ave
Navel Ave
Bailey Ave
SPP338
Texas St
Kerns Ave
Scajaquada St
Leslie St
Kithofer St
Zenner St
Wende St
E Ferry St
Blake St
Rosyln St
62
N
800 ft
Google Earth

E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

Involved/Interested Agencies

City of Buffalo Common Council Ellicott District
Leah M. Halton-Pope (via email)
lhaltonpope@buffalony.gov

City of Buffalo Department of Public Works, Parks & Streets
Nate Marton, Commissioner (via email)
nmarton@city-buffalo.com

City of Buffalo Department of Public Works, Parks & Streets – Parks
Andrew Rabb, Deputy Commissioner for Parks and Recreation (via email)
arabb@city-buffalo.com

City of Buffalo Department of Public Works, Parks & Streets
Nolan Skipper, City Engineer (via email)
nskipper@buffalony.gov

New York State Department of State
Coastal Management Program
99 Washington Avenue
Albany, NY 12231-0001

New York State Department of Transportation
Sanjyot Vaidya, P.E., Region 5 Regional Design Engineer
100 Seneca Street
Buffalo, NY 14203

New York State Department of Environmental Conservation
Julie Barrett O'Neil, Regional Director - Region 9
region9@dec.ny.gov

City of Buffalo Office of Strategic Planning
Brendan R. Mehaffy, Executive Director (via email)
bmehaffy@buffalony.gov

City of Buffalo Water Authority
Fouad Arab (via email)
farab@ch.ci.buffalo.ny.us
281 Exchange St, Buffalo, NY 14204

Buffalo Environmental Management Commission
Jason Paananen (via email)
jpaananen@buffalony.gov
920 City Hall
65 Niagara Square
Buffalo, NY 14202

Erie County Department of Health
Jack Tomani (via email)
John.tomani@erie.gov
95 Franklin Street
Buffalo, NY 14202
New York State Historic Preservation Office (consultation completed online)
1 Delaware Avenue North, Cohoes, NY 12047

U.S. Fish and Wildlife Service (consultation completed online)
1849 C Street, NW
Washington, DC 20240

BUFFALO
SEWER AUTHORITY

ATTACHMENT M

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Michigan Ave - CSO053_14 SPP175 Modification		
Project Location (describe, and attach a general location map): Michigan Avenue, Buffalo, NY 14209 between Dodge Street and Glenwood Avenue		
Brief Description of Proposed Action (include purpose or need): SPP175 at Dodge Street and Michigan Avenue would be raised to 56.10 ft (City datum). SPP 176 at Michigan Avenue and Riley Street and SPP177 at Michigan Avenue and Glenwood Avenue would both be raised to 52.85 ft (City datum).		
Name of Applicant/Sponsor: Buffalo Sewer Authority	Telephone: E-Mail:	
Address: 5 Niagara Square # 1038		
City/PO: Buffalo	State: NY	Zip Code: 14202
Project Contact (if not same as sponsor; give name and title/role): Rosaleen B. Nogle, PE, BCEE, PMP	Telephone: 716-851-5664 Ext. 4203 E-Mail: rnogle@buffalosewer.org	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)		
Government Entity	**If Yes: Identify Agency and Approval(s) Required**	**Application Date (Actual or projected)**
a. City Counsel, Town Board, or Village Board of Trustees ☑Yes☐No	City of Buffalo Common Council	
b. City, Town or Village Planning Board or Commission ☑Yes☐No	City of Buffalo Office of Strategic Planning	
c. City, Town or Village Zoning Board of Appeals ☐Yes☑No		
d. Other local agencies ☑Yes☐No	City of Buffalo Department of Public Works, Parks & Streets, See attached sheet for additional involv	
e. County agencies ☑Yes☐No	Erie County Department of Health	
f. Regional agencies ☐Yes☑No		
g. State agencies ☑Yes☐No	SHPO/ Cultural Resources Determination, See attached sheet for additional involved agencies	
h. Federal agencies ☑Yes☐No	USFWS, Section 7 Endangered Species Act	

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes☐No

If Yes, identify the plan(s):

NYS Heritage Areas:West Erie Canal Corridor

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
D-IL (Light Industrial)

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site?

C.4. Existing community services.

a. In what school district is the project site located? Buffalo City School District

b. What police or other public protection forces serve the project site?
Buffalo Police Department

c. Which fire protection and emergency medical services serve the project site?
Buffalo Fire Department

d. What parks serve the project site?
None

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Municipal - sewer work

b. a. Total acreage of the site of the proposed action? 0.1 acres
b. Total acreage to be physically disturbed? 0 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? existing ROW acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 20 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

f. Does the project include new residential uses? ☐Yes ☑No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No
If Yes,
i. Purpose of the impoundment: _____
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:
_____
iii. If other than water, identify the type of impounded/contained liquids and their source.
_____
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐Yes ☑No
If Yes:
i. What is the purpose of the excavation or dredging? _____
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
_____
_____
iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☑No
If yes, describe. _____
_____
v. What is the total area to be dredged or excavated? _____ acres
vi. What is the maximum area to be worked at any one time? _____ acres
vii. What would be the maximum depth of excavation or dredging? _____ feet
viii. Will the excavation require blasting? ☐Yes ☑No
ix. Summarize site reclamation goals and plan: _____
_____
_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____
_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☑No
If Yes, describe:

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☑No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No
If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☑No
If Yes:

- Name of district or service area:
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☑No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No
If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: Bird Island WWTP
- Name of district: Buffalo
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

- Do existing sewer lines serve the project site? ☑Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☑No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☑No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☑No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☑No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☑No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☑No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8 AM - 4 PM
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe:

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☑ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☑ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.1	0.1	0
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: _____	0	0	0

c. Is the project site presently used by members of the community for public recreation? ☐Yes ☑No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐Yes ☑No
If Yes,
i. Identify Facilities:

e. Does the project site contain an existing dam? ☐Yes ☑No
If Yes:
i. Dimensions of the dam and impoundment:
- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes ☑No
If Yes:
i. Has the facility been formally closed? ☐Yes ☑ No
- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes ☑No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐Yes ☑ No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes ☑No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____
☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____
☑ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑Yes ☐No
If yes, provide DEC ID number(s): 915143, C915294, C915341, C915143, C915362, C91...

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

See attached table

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☑ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6.5 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site:

Ut -Urban Land, Odessa Complex	_____%
Uo- Urban Land, Cosand Complex	_____%
Us- Urban Land, Niagara Complex	_____%
Uo- Urban Land, Cosand Complex	_____%

d. What is the average depth to the water table on the project site? Average: >6.5 feet

e. Drainage status of project site soils:
☐ Well Drained: _____% of site
☑ Moderately Well Drained: _____% of site
☑ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: _____% of site
☐ 10-15%: _____% of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☑ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☑ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

n. Does the project site contain a designated significant natural community? ☐Yes ☑No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐Yes ☑No

If Yes:

i. Species and listing (endangered or threatened): _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☐No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☑No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☑ Historic Building or District

ii. Name: Eligible property:Dorothy J. Collier Community Center, Laurel and Michigan Avenues Row, Woodlawn Avenue Row, 33--61 E...

iii. Brief description of attributes on which listing is based:

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☑ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

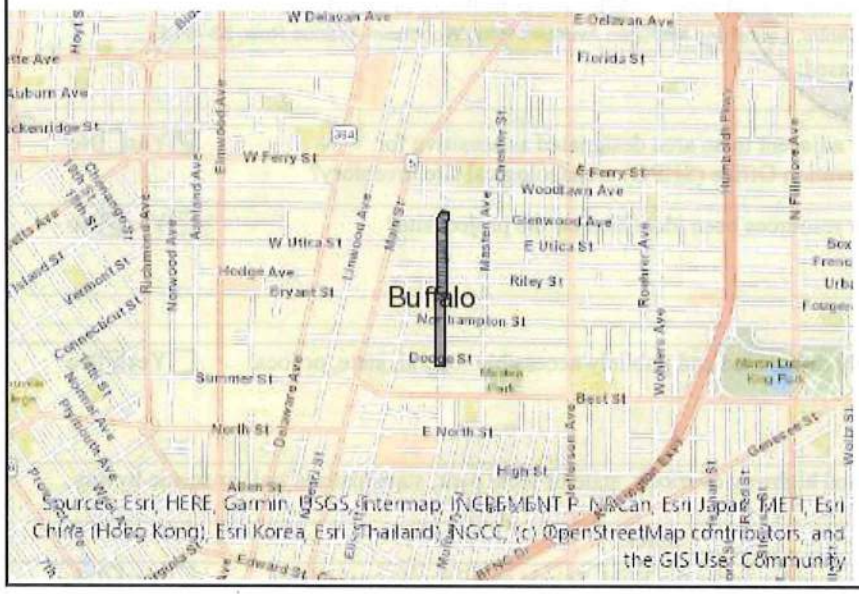
Applicant/Sponsor Name Rosleen Nogle, PE Date _____

Signature _____ Title Principal Sanitary Engineer

PRINT FORM

EAF Mapper Summary Report

Tuesday, May 28, 2024 11:08 AM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	915143, C915294, C915341, C915143, C915362, C915363, C915375, 915278
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	No
E.2.h.iii [Surface Water Features]	No
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No

E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Eligible property:Dorothy J. Collier Community Center, Laurel and Michigan Avenues Row, Woodlawn Avenue Row, 33--61 Emerson Place Row
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Involved/Interested Agencies

City of Buffalo Common Council Elicott District
Leah M. Halton-Pope (via email)
lhaltonpope@buffalony.gov

City of Buffalo Department of Public Works, Parks & Streets – Parks
Andrew Rabb, Deputy Commissioner for Parks and Recreation (via email) arabb@city-buffalo.com

City of Buffalo Department of Public Works, Parks & Streets
Nolan Skipper, City Engineer (via email)
nskipper@buffalony.gov

City of Buffalo Office of Strategic Planning
Brendan R. Mehaffy, Executive Director (via email)
bmehaffy@buffalony.gov

City of Buffalo Department of Public Works, Parks & Streets
Nate Marton, Commissioner
nmarton@city-buffalo.com

City of Buffalo Water Authority
Fouad Arab (via email)
farab@ch.ci.buffalo.ny.us
281 Exchange St, Buffalo, NY 14204

Buffalo Environmental Management Commission
Jason Paananen (via email)
jpaananen@buffalony.gov
920 City Hall
65 Niagara Square
Buffalo, NY 14202

Erie County Department of Health
Jack Tomani (via email)
John.tomani@erie.gov
95 Franklin Street
Buffalo, NY 14202

New York State Department of State
Coastal Management Program
99 Washington Avenue
Albany, NY 12231-0001

New York State Department of Transportation
Sanjyot Vaidya, P.E., Region 5 Regional Design Engineer
100 Seneca Street
Buffalo, NY 14203

New York State Department of Environmental Conservation
Julie Barrett O'Neil, Regional Director - Region 9
region9@dec.ny.gov

New York State Historic Preservation Office (consultation completed online)
1 Delaware Avenue North, Cohoes, NY 12047

U.S. Fish and Wildlife Service (consultation completed online)
1849 C Street, NW
Washington, DC 20240

Table 1
Buffalo Sewer Authority
Capital Priority Projects
Michigan Ave - CSO053_14 SPP175 Modification - Proximate NYSDEC Listed Remediation Sites

Site Name	Distance to Project Site	Site Environmental Assessment	Site Health Assessment	Status
Site Name: Osmose Wood Preserving Site Code: 915143 Program: State Superfund Program	1000-feet west of project area	The Osmose Wood Preserving site is an approximately 0.533-acre site, located in a mixed commercial and residential area, at 980 Ellicott Street in the City of Buffalo, Erie County. Site Features: The site contains multiple buildings and asphalt parking areas. Current Zoning and Land Use: This site is zoned for industrial manufacturing use and is currently unoccupied. Past Use of the Site: In 1989, underground storage tanks (USTs) used for storage of creosote, No.2 Fuel Oil and other chemicals at the site were found to be leaking. Soil surrounding the tanks was contaminated as a result. Site Geology and Hydrology: The site geology consists of approximately 60 feet of unconsolidated clay, silt, sand and gravel deposits, which is underlain by the Onondaga limestone bedrock. Fill mixed with silt and clay varies up to 5 feet below ground surface (fbgs), followed by low permeability silty clay from 7 to 12 fbgs. This is followed by highly permeable strata of sands and a mix of sands and gravel down to the bedrock. Depth to groundwater varies across the property and with the seasons. The groundwater at the site flows east toward Ellicott Street.	Exposures via drinking water are not expected because homes in the area are served by public water and no known private wells exist in the immediate area. Direct contact exposure to site-related contaminants by community members is not expected because the remaining contaminants are located below a paved parking lot and public access to the site is restricted by security guards. A deed restriction is in place to control future digging on the site.	Remediation at the site is complete to remediation the primary contami concern were polycyclic aromatic hydrocarbons (PAHs) and petroleu hydrocarbons in soil and groundwa Remedial activities have successfu achieved soil cleanup objectives fo commercial use. Residual contamir soil and groundwater is being mani under a Site Management Plan.
Site Name: 1155 Main Street Site Code: C915341 Program: Brownfield Cleanup Program	1000-feet west of project area	Location: The 1155 Main Street site is an approximately 1.551-acre site, located in a highly developed urban area, at 1155 Main Street in the City of Buffalo, Erie County. The site is bordered by Dodge Street to the north, Main Street to the west, a parking lot and the Summer-Best Transit Station to the south and Osmose Utility Services to the east. Site Features: The site has been redeveloped with a mixed use commercial and residential building. Zoning and Land Use: The site is zoned N-1C, which is mixed use mid-rise development at the edge of downtown. The site has been redeveloped with a five-story mixed use building which is occupied by commercial retail and offices on the first floor and apartments on the upper floors. Past Use of the Site: The site was used as a gasoline filling station from approximately 1924 until approximately 1947, a pre-owned automobile sales lot from the 1940s until the 1960s and as a motel from the 1950s until 2014. Other portions of the site were used for residential purposes until the 1950s. After the buildings were demolished, the site was used as a parking lot. Site Geology and Hydrogeology: Investigations have identified the site geology below the surface cover as urban fill (brick, ash, concrete, etc.) ranging in thickness from 1.0 to 9.0 feet below ground surface (fbgs), underlain by native soils consisting of silty fine sands and silty clay. Bedrock is estimated to be present at over 50 fbgs. The depth to groundwater ranges between 15.6 and 24.3 fbgs, with flow in a northwesterly direction, towards the Niagara River.	Actions taken at the site have eliminated the potential for exposure to contaminated soil. The area is served by a public water supply that is not affected by site contamination. Volatile organic compounds may move into the soil vapor (air spaces within the soil), which in turn may move into nearby buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Soil vapor intrusion is not a current concern as the site is vacant.	Remediation at the site is complete to remediation, the primary contam of concern were polycyclic aromati hydrocarbons (PAHs), metals and pesticides in soil and chlorinated vc organic compounds and metal in groundwater. Remedial actions hav successfully achieved soil cleanup objectives for unrestricted use. A s vapor assessment was completed building construction and the result assessment indicated that no soil v mitigation is required. The Environr Easement for the site was extinguis 2021 based on the results of the sc assessment.
Former Pilgrim Village Senior Apa	1,100-feet sou	This site is located 1,100-feet southeast of Dodge and Michigan. The 1.86-acre Former Pilgrim Village Senior Apartments	Remediation at the site is complete. Prior to remediation, the primary contaminants of concern were semi-volatile organic compounds (SVOCs), arsenic, barium, copper, lead, mercury, and zinc in soil. Remedial actions have successfully achieved soil cleanup objectives for unrestricted use. This site is not a recognized environmental concern in relation to the project site.	Remedial actions are complete anc remedy addressed all identified site contamination so no exposures are expected.
Pilgrim Village Redevelopment/Ca	1,000-feet sou	This site is located 1,000-feet south of Dodge and Michigan. The Pilgrim Village Redevelopment/Campus Square site is a	During the Remedial Investigation (RI), soil and groundwater sam	Site is undergoing active investigat remediation
Site Name: Michigan-Best Development Site Code: C915375 Program: Brownfield Cleanup Program	1,100-feet sou	The Michigan-Best Development site is a 0.736-acre area in Buffalo, NY, bordered by Michigan Avenue, Best Street, Edna Place, and residential/vacant properties. It has been redeveloped with apartments, townhouses, and parking, zoned N-2R for residential use. Historically, the site included residential and commercial buildings, with automotive repair and other commercial operations present from at least 1919 through the 1930s. Soil investigations revealed fill material contaminated with SVOCs and metals exceeding regulatory standards. The site's subsurface conditions include varying fill materials over native sandy clay, with regional groundwater flowing northwest.	Remediation at the site is complete. Prior to remediation, the prin	Remedial actions are complete anc remedy addressed all identified site contamination so no exposures are expected.
Site Name: 1542 Main Street Site Code: 915278 Program: State Superfund Program	1200-feet nor	The 1542 Main Street site is a 0.27-acre urban area at Main and West Ferry Streets in Buffalo, NY. It features two connected buildings used for office space, with a smaller building demolished in 2012 and replaced. Historically, the site housed a dry-cleaning business, which is presumed to have caused contamination. The geology consists of fill materials over sandy clay and silt, with groundwater flowing northeast. From 2007 to 2012, a series of Environmental Assessments were conducted on the 1542 Main Street property. Chlorinated Volatile Organic Compounds (cVOCs), including perchloroethylene (PCE) from past dry-cleaning activities, were found in soil and groundwater, though soil concentrations were mostly below detection limits and unrestricted use standards. The highest groundwater contamination was detected in monitoring wells west of the buildings, with up to 8,480 ug/L total cVOCs. Remedial actions in 2012 included in-situ bioremediation, a soil/fill management plan, and an active sub-slab depressurization system to mitigate vapor intrusion, but the potential for off-site migration of cVOCs has not been evaluated.	As information for this site becomes available, it will be reviewed by the NYSDOH to determine if site contamination presents public health exposure concerns.	Investigation and remediation is on

APPENDIX A

BUFFALO SEWER AUTHORITY

CSO053_14 SPP175 MODIFICATION

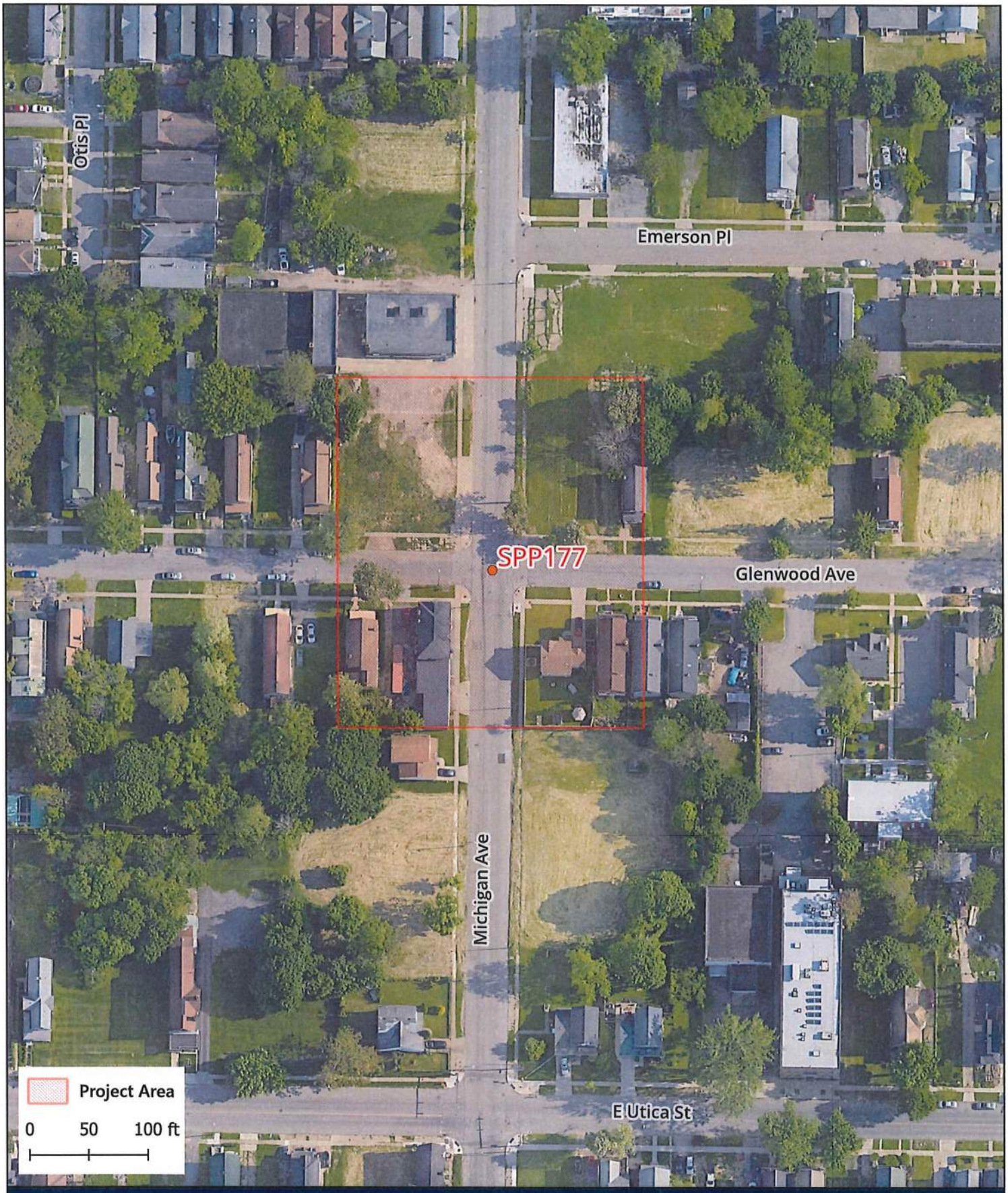
JMDavidson Engineering, D.P.C.

BUFFALO SEWER AUTHORITY

CSO053_14 SPP176 MODIFICATION

APPENDIX A

JMDavidson Engineering, D.P.C.



BUFFALO SEWER AUTHORITY

CSO053_14 SPP177 MODIFICATION

APPENDIX A

JMDavidson Engineering, D.P.C.

MINUTES OF THE REGULAR MEETING

OF THE

BUFFALO SEWER AUTHORITY

July 31, 2024

59009 **59053**

BUFFALO SEWER AUTHORITY

REGULAR MEETING
July 31, 2024
9:00 A.M.

Bird Island Treatment Facility, 90 West Ferry St.
Teleconference +1 917- 933-2166, ID #318 784 050#

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	Roll Call	
1	Motion to Adopt the Minutes of July 1, 2024	59009
2	Approval Of Consent Agenda	59010-25
	A. Informative: Temporary Investments	
	B. Informative: Reallocation of Funds	
	C. Payment From Judgment and Claims	
	D. Revision To Buffalo Sewer Authority Policies and Guidelines	
	E. Travel Authorization - Aspen, CO	
	F. Travel Authorization - Atlanta, GA	
	G. Travel Authorization - Greenville, SC	
	H. Travel Authorization – Cleveland, OH	
	I. Travel Authorization - Greenville, SC	
	J. Tuition Reimbursement	
	K. Tuition Assistance	
	L. Confirmation Of Appointments	
3	Authorization To Create a Not-For-Profit Corporation for The Charitable Purpose of Aiding Persons Living in Buffalo, New York Who Are in Need of Assistance with Water and Sewer Needs	59026-27
4	Extension Of Contract for Energy Consulting Services	59028-29

5	Extension Of the Contract for In -Plant High Pressure Steam System Maintenance Services	59030
6	Change Order No. 1 – Contract No 82000058	59031-32
7	Certificate Of Acceptance and Occupancy Contract 82000058	59033
8	Change Order No. 1 – Contract No 82000030	59034-35
9	Rescind Item No. 6 Of the Buffalo Sewer Authority Board Meeting of June 26, 2024	59036
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11	Extension Of the Contract for Professional Services for Continuation of Water Equity Ambassador Stewardship Service Program	59039
12	Authorization To Purchase Four 2025 Cushman Hauler 800X- Elite Golf Carts Under Omnia Contract	59040
13	Amend Board Resolution No. 31 From June 26, 2024 Board Meeting – Authorization To Enter Into An Agreement With Wendel Companies, Inc., For Professional Engineering Services	59041
14	Amend Board Resolution No. 7 From May 1, 2024 Board Meeting – Change Order No. 3– Additional Construction Observation Services Contract No. 81900016 Broadway At Oak Real Time Control Structure Engineering Services	59042
15	Extension Of the Contract for Private Property Green Infrastructure Grant Program Administration	59043
16	Change Order No. 1 – Contract No. 82000014 GIS Environment Implementation and GIS & GPS Services	59044-45
17	Utility Work Agreement (Hc-140) - New York State Department of Transportation - PIN 5512.57	59046-47
18	Declaration Of Lead Agency for State Environmental Quality Review for Breckenridge CSO Control Project	59048
19	Declaration Of Lead Agency for State Environmental Quality Review For CSO-053 Sewer Patrol Point (SPP) Modification at Colorado Avenue at Scajaquada Street (CSO053_2.5 SPP 337 Modification) Project	59049
20	Declaration Of Lead Agency for State Environmental Quality Review For CSO-053 Sewer Patrol Point (SPP) Modification at GENESEE Street (CSO053_8 SPP 341A Modification) Project	59050

21	Declaration Of Lead Agency for State Environmental Quality Review For CSO-053 Sewer Patrol Point (SPP) Modification at Sidney Street and Lark Street (CSO053_1.5 SPP 336B Modification) Project	59051
22	Declaration Of Lead Agency for State Environmental Quality Review For CSO-053 Sewer Patrol Point (SPP) Modifications at East Delavan Avenue (CSO053_13 SPP 165B Modification), Bailey Avenue (CSO053_3.1 SPP 338 Modification), And Michigan Avenue (CSO053_14 SPP 175 Modification) Project	59052
23	Adjournment Of Meeting	59053

ATTACHMENTS

A: Capital Asset Guide
B: Purchasing Guidelines
C: Fund Balance Policy
D: Investment Guidelines
E: Credit Card Policy
F: Report On Bids Received – Formal Bid Opening for Security Guard Services

CALL OF THE ROLL

Present:	Herbert Bellamy, Jr.	Chairman of Board
	Christopher Roosevelt	Vice Chairman of the Board
	Eleanor Petrucci	Secretary of the Board
	Oluwole McFoy, P.E.	General Manager
	Gelea Y. James	Director of Employee Relations
	LaToya Cunningham	Special Assistant
	Charles Riley	Executive Secretary
	Adam Sassone	Secretary to General Manager
	Cheryl Colston	General Counsel
	Alexander Emmerson	Treatment Plant Superintendent
	Paul Harris	Superintendent of Mechanical Maintenance
	Rosaleen Nogle, P.E.	Principal Sanitary Engineer
	Desiree Briggs	Account Clerk Typist

The meeting was called to order at 9:19 A.M. A quorum was present.

ITEM NO. 1

Motion to Adopt the Minutes of the Meeting of July 1, 2024

MOTION TO ADOPT

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

ITEM NO. 2

APPROVAL OF CONSENT AGENDA

CONTENTS

A. Informative: Temporary Investments

B. Informative: Reallocation of Funds

C. Payment From Judgment and Claims

D. Revision To Buffalo Sewer Authority Policies and Guidelines

E. Travel Authorization - Aspen, CO

F. Travel Authorization - Atlanta, GA

G. Travel Authorization - Greenville, SC

H. Travel Authorization – Cleveland, OH

I. Travel Authorization - Greenville, SC

J. Tuition Reimbursement

K. Tuition Assistance

L. Confirmation Of Appointments

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

2-A

INFORMATIVE: TEMPORARY INVESTMENTS (CERTIFICATES OF DEPOSIT AND TREASURY BILLS)

As of June 30th, 2024

ISSUE DATE	MATURITY DATE	TOTAL DAYS	AMOUNT	BANK	RATE	INTEREST AMOUNT
			CONSTRUCTION/CAPITAL IMPROVEMENT FUND			
31-Jul-12	**MONEY MARKET**		$2,165,296.21	Key	0.01%	Public NOW
30-Apr-24	2-Jul-24	63	$3,999,980.71	Key Banc Capital	5.24%	$37,019.29
9-May-24	18-Jul-24	70	$3,251,650.86	Key Banc Capital	5.22%	$33,349.14
23-May-24	1-Aug-24	70	$3,334,804.65	Key Banc Capital	5.22%	$34,195.35
7-Jun-24	15-Aug-24	69	$4,999,377.96	Key Banc Capital	5.23%	$50,622.04
			$17,751,110.39			
			LIABILITY AND CASUALTY RESERVE FUND			
31-Jul-12	**MONEY MARKET**		$104,096.65	Key	0.01%	Public NOW
18-Apr-24	18-Jul-24	91	$751,964.67	Key Banc Capital	5.21%	$10,035.33
			$856,061.32			
			OPERATING FUND			
31-Jul-12	Super NOW		**$3,706,083.02**	Key	0.01%	Public NOW
			TRUST & AGENCY FUND			
31-Jul-12	Super NOW		**$19,460.48**	Key	0.01%	Public NOW
			SURPLUS FUND			
			$750.02	Wilmington U.S. Treasury	4.79%	
30-May-24	21-Nov-24	175	$10,004,118.72	Key Banc Capital	5.15%	$256,881.28
			$10,004,868.74			
			NET REVENUE FUND			
			$222,047.46	Wilmington U.S. Treasury		
28-May-24	30-Jul-24	63	$8,998,861.10	M&T Securities	5.23%	$83,138.90
27-Jun-24	29-Aug-24	63	$7,500,002.04	M&T Securities	5.21%	$68,997.96
			$16,720,910.60			

BSA 2021 EIB FUND

			$320,864.87	Cash	0.00%	
31-Jan-24	5-Jul-24	156	$10,102,633.92	M&T Securities	4.97%	$222,366.08
23-May-24	14-Nov-24	175	$32,616,488.40	Key Banc Capital	5.15%	$837,511.60
20-Jun-24	12-Dec-24	175	$9,984,839.11	Key Banc Capital	5.13%	$255,160.89
			$53,024,826.30			

DEBT RESERVE FUND

				Series J		
02-Jul-14	13-Nov-33	7076	**$515,879.00**	UST State/Local Govt	2.70%	
				Series K		
02-Jul-14	15-Feb-33	6803	**$361,415.00**	UST State/Local Govt	2.70%	
				Series L		
12-Nov-15	1-Oct-35	7263	**$689,547.00**	UST State/Local Govt	2.44%	
				Series M		
27-Jun-14	1-May-44	10901	**$595,613.00**	UST State/Local Govt	2.70%	
				Series N		
15-Nov-12	15-Apr-32	7091	**$2,167,157.00**	UST State/Local Govt	2.42%	
			EFC 2021			
			$9,275.82	Wilmington U.S. Treasury	4.79%	
29-Feb-24	22-Aug-24	175	$332,562.62	Key Banc Capital	5.09%	$8,437.38
			$341,838.44			

DSF PRIN &INT

			$0.01	Wilmington Fund		

DSF 2021 EIB

			$74,789.93	Wilmington Fund	4.79%	

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Board Meeting of July 31st, 2024

2-B

INFORMATIVE: REALLOCATION OF FUNDS

The following budgetary transfers have been made to cover unforeseen shortages. These transfers do not change the total amount of the Buffalo Sewer Authority's operating budget.

Wastewater Treatment Plant

06/12/2024	00200106 EDU, Licenses &Train	-$150.00	00200105 PLAN Office Supplies	$150.00
06/18/2024	00230105 GRIT Equipment Maint.	-$239.68	00680105 EQUIP Maint & Repair	$239.68
06/20/2024	00520106 MAIN Building Repairs	-$65,000.00	00200105 PLAN Clothing Safety	$65,000.00
06/20/2024	00360105 DEWA Equipment Maint	-$30,000.00	00550106 IWS Eng, & Tech	$30,000.00
06/30/2024	00200105 PLAN Clothing Safety	-$595.48	00200106 PLAN Equipment Maintenance	$595.48
06/30/2024	00220105 SCRE Equipment Maint	-$31,196.18	00520106 Main Maint. Contract	$31,196.18
06/30/2024	00520106 EDU, Licenses &Train	-$29,536.35	00200106 PLAN Non-Professional	$29,536.35
06/30/2024	00360103 DEWA Water	-$75,241.74	00300103 BLOW Electric Light & Power	$75,241.74
06/30/2024	00440103 KELS Electric Light & Power	-$68.11	00470103 WATE Electric Light & Power	$68.11
06/30/2024	00380103 INCIN Gas	-$60,000.00	00550106 IWS Eng and Tech	$60,000.00
06/30/2024	00360103 DEWA Water	-$25,000.00	00550106 IWS Eng and Tech	$25,000.00
06/30/2024	00380105 INCIN Chemicals & Gas	-$4,992.25	00550106 IWS Eng and Tech	$4,992.25
06/30/2024	00380106 INCIN Refuse Disposal	-$7,000.00	00550106 IWS Eng and Tech	$7,000.00
07/05/2024	00330105 FINA Chemical & Gases	-$380,000.00	00340105 THIC Chemical & Gases	$380,000.00
07/05/2024	00330105 FINA Chemical & Gases	-$70,000.00	00290106 AERATION Refuse & Disp.	$70,000.00
07/15/2024	00520106 MAIN Maint. Contract	-$14,000.00	00230106 REFUSE Disposal Services	$14,000.00
07/15/2024	00400103 SOUT Electric Light & Power	-$3,075.00	00380106 INCIN Refuse Disposal Serv	$3,075.00
07/15/2024	00680103 ELECTRICITY	-$10,900.00	00380106 INCIN Refuse Disposal Serv	$10,900.00
07/15/2024	00300103 BLOW Electric Light & Power	-$90,000.00	00230106 REFUSE Disposal Services	$90,000.00
07/15/2024	00300103 BLOW Electric Light & Power	-$161,250.00	00380106 INCIN Refuse Disposal Serv	$161,250.00

07/15/2024	00300103 BLOW Electric Light & Power	-$79,775.00	00380106 INCIN Refuse Disposal Serv	$79,775.00
07/15/2024	00300103 BLOW Electric Light & Power	-$200,000.00	00360105 DEWA Chemicals & Gases	$200,000.00

Sewer Maintenance

06/26/2024	00700105 Building Materials	-$2,101.00	00700107 EQUIPMENT	$2,101.00

Financial Contingency

06/27/2024	00800183 Financial Contingency	-$10,00.00	00820102 FR Health & Welfare Plan	$10,000.00

RECEIVE & FILE
Board Meeting of July 31, 2024

2-C

PAYMENT FROM JUDGMENT AND CLAIMS

WHEREAS: Board approval is required for charges made against the Buffalo Sewer Authority's current budget for services and/or materials received during a prior fiscal year; and

WHEREAS: The following services were received during a prior fiscal year charge to the 2023-2024 budget account no. 00330105-467044:

VENDOR	INVOICE	AMOUNT
Jones Chemicals Inc.	944029	$9,246.54
Jones Chemicals Inc.	942912	$10,844.79
Basil Ford	777960	$2,716.54
Basil Ford	778332	$1,982.98
Barclay Damon	5288724	$5,890.00

; and

WHEREAS: The Executive Secretary and staff recommend the above payment from the Judgment and Claims account.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves the above payments from the Judgment and Claims account.

2-D

REVISION TO BUFFALO SEWER AUTHORITY POLICIES AND GUIDELINES

WHEREAS: The Buffalo Sewer Authority has a developed the following policies and guidelines:
Capital Asset Guide (Attachment A)
Purchasing Guidelines (Attachment B)
Fund Balance Policy (Attachment C)
Investment Guidelines (Attachment D)
Credit Card Policy (Attachment E); and

WHEREAS: These policies and guidelines shall be annually reviewed and approved by the Board.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby adopts the policies and guidelines listed above.

2-E

TRAVEL AUTHORIZATION - ASPEN, CO

WHEREAS: The Aspen-Nicholas Water Forum is a partnership with The Aspen Institute Energy and Environment Program, and Nicholas Institute at Duke University; and

WHEREAS: The 2024 Aspen-Nicholas Water Forum, will be held September 8 – September 11, 2024 in Aspen, Colorado; and

WHEREAS: The Aspen-Nicholas Water Forum serves as a platform for identifying domestic water challenges in the 21st century through collaborative convening to develop forward-thinking pathways to address the state of the US water system; and

WHEREAS: The General Manager has been invited to participate and bring expertise in the areas of building resilient water systems, from green infrastructure to alternative financing, and enabling trust in communities; and

WHEREAS: The Chairman of the board recommends the General Manager's attendance to the Aspen-Nicholas Water Forum.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to travel to Aspen, Colorado from September 7 – September 12, 2024, to attend the Aspen-Nicholas Water Forum Meeting at a total cost not to exceed $3000.00. Account nos. 00110104-458010 and 00110104-458012 will be utilized for this travel.

2-F

TRAVEL AUTHORIZATION - ATLANTA, GA

WHEREAS: The APWA; American Public Works Association is offering a National Equipment Rodeo in Atlanta, GA from September 7, 2024 through September 11, 2024; and

WHEREAS: The APWA New York State Chapter has selected Patrick O'Connor, a Sewer Maintenance Supervisor to compete in the National Equipment Rodeo. The APWA has guaranteed to reimburse the Buffalo Sewer Authority for the cost to attend and participate in the Competition; and

WHEREAS: The Director of Sewer Maintenance and staff recommend sending Patrick O'Connor to represent the Buffalo Sewer Authority and the American Public Works Association New York State Chapter and participate in the National Equipment Rodeo; and

WHEREAS: The Buffalo Sewer Authority will pay for the cost of the registration and travel expenses; which will be reimbursed by the APWA New York Chapter; and

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the Patrick O'Connor, Sewer Maintenance Supervisor to travel to Atlanta, GA from September 7, 2024 through September 11, 2024, to participate in the National Equipment Rodeo, at a total cost not to exceed $2,500.00; and will be charged to account nos. 00650106-421026 and 00650104-458010, which will be reimbursed to the Buffalo Sewer Authority by the APWA New York State Chapter.

2-G

TRAVEL AUTHORIZATION - GREENVILLE, SC

WHEREAS: The Buffalo Sewer Authority has several professional engineering titles that have gone unfilled for years due to the lack of qualified candidates; and

WHEREAS: The National Council of Examiners for Engineering and Surveying (NCEES) develops and administers the professional engineering licensure and pre-licensing exams throughout the United States and Internationally; and

WHEREAS: The Principal Sanitary Engineer has been selected by NCEES to serve on the Professional Engineering Environmental Exam (PE Environmental) Committee; and

WHEREAS: The PE Environmental Committee will hold an in-person meeting to discuss the future format and content of these exams and college educational programs on September 20-21, 2024, and April 25-26, 2025, in Greenville, SC; and

WHEREAS: The Principal Sanitary Engineer's participation in this process will ensure that the experience and knowledge that Buffalo Sewer Authority provides and requires of professional engineers are reflected in the licensing exam; and

WHEREAS: NCEES will provide air travel, lodging, board, and $370.00 stipends to cover incidentals and ground transport for all participants for each meeting; and

WHEREAS: The General Manager recommends that the Principal Sanitary Engineer attend the Committee on Examinations for Professional Engineers Meeting.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the Principal Sanitary Engineer to travel to Greenville, SC on September 19-22, 2024, and April 24-27, 2025, to participate in the Committee on Examinations for Professional Engineers meeting and to accept the stipends from NCEES for incidentals and ground transportation costs. No expenses will be charged to the Buffalo Sewer Authority for this travel.

2-H

TRAVEL AUTHORIZATION - CLEVELAND, OH

WHEREAS: The Buffalo Sewer Authority has recently constituted a Community Outreach and Engagement Team to better inform and educate our constituents regarding our vital water treatment and management efforts; and

WHEREAS: In order to effectively engage in outreach and public education, it is important for our staff to understand and witness the best practices of our peers in water treatment; and

WHEREAS: The Northeast Ohio Regional Sewer District (NEORSD) is widely viewed as a leader in public engagement amongst all utilities having won the prestigious North American Clean Water Agencies (NACWA) award for Public Service 3 times; and

WHEREAS: NEORSD has also received the NACWA award for Public Information and Education 8 times, among many other accolades; and

WHEREAS: NEORSD is hosting its signature public outreach event: Clean Water Fest on Saturday September 21st, and

WHEREAS: There will be opportunities for the BSA Community Outreach Team to learn from and engage with our peers at this marquee event, so the we can improve and expand our public outreach efforts; and

WHEREAS: The General Manager recommends that the Treatment Plant Superintendent and the Community Outreach Team attend Clean Water Fest 2024.

BE IT RESOLVED
NOW THEREFORE: That the Board of the Buffalo Sewer Authority hereby authorizes the Treatment Plant Superintendent, Intergovernmental Coordinator, Press Information Officer and (2) Preventative Maintenance Coordinator, to travel to Cleveland, Ohio on September 20-22, 2024, to participate in Clean Water Fest at a cost not to exceed $4,500.00. Funds are available in account nos. 00110104-458010, 00200104-458010, 00650104-458010, and 00700104-458010.

2-I

TRAVEL AUTHORIZATION - GREENVILLE, SC

WHEREAS: The Buffalo Sewer Authority has several professional engineering titles that have gone unfilled for years due to the lack of qualified candidates; and

WHEREAS: The National Council of Examiners for Engineering and Surveying (NCEES) develops and administers the professional engineering licensure and pre-licensing exams throughout the United States and Internationally; and

WHEREAS: The Principal Sanitary Engineer has been selected by NCEES to serve as New York State's representative to and chairperson on the Committee on Examinations for Professional Engineers; and

WHEREAS: The Committee on Examinations for Professional Engineers will hold an in-person meeting to discuss the future format and content of these exams on February 7-8, 2025, in Greenville, SC; and

WHEREAS: The Principal Sanitary Engineer's participation in this process will ensure that the experience and knowledge that Buffalo Sewer Authority provides and requires of professional engineers are reflected in the licensing exam; and

WHEREAS: NCEES will provide air travel, lodging, board, and a $370.00 stipend to cover incidentals and ground transport for all participants; and

WHEREAS: The General Manager recommends that the Principal Sanitary Engineer attend the Committee on Examinations for Professional Engineers Meeting.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the Principal Sanitary Engineer to travel to Greenville, SC on February 6, 2025-February 9, 2025, to participate in the Committee on Examinations for Professional Engineers meeting and to accept the $370.00 stipend from NCEES for incidentals and ground transportation costs. No expenses will be charged to the Buffalo Sewer Authority for this travel.

2-J

TUITION REIMBURSEMENT

WHEREAS: In accordance with the Agreements between the Buffalo Sewer Authority and CSEA Local 815 and the Communications Workers of America, the following Buffalo Sewer Authority employees have applied for Tuition Reimbursement:

EMPLOYEE	SCHOOL	COURSE	TUITION%	REIMBURSEMENT TOTAL
Daniel O'Sullivan	University at Buffalo	Communication in Organization	75%	$706.75
Daniel O'Sullivan	University at Buffalo	Statics	75%	$712.70

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves the above applications for Tuition Reimbursement totaling $1,419.45. These Reimbursements will be charged to account no. 00200106-421026.

2-K

TUITION ASSISTANCE

WHEREAS: In accordance with the Agreements between the Buffalo Sewer Authority and CSEA Local 815 and the Communications Workers of America, the following Buffalo Sewer Authority employees have applied for Tuition Assistance:

EMPLOYEE	SCHOOL	COURSE	TUITION
Crystalee Lozada	Suny Empire State University	Business Management & Economics Associates	$2,360.00

WHEREAS: No Funds will be expended at this time.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves the above applications for Tuition Assistance.

CONFIRMATION OF APPOINTMENTS

WASTEWATER OPERATOR II (PROVISIONAL)
SEWAGE TREATMENT PLANT
$28.84 PER HOUR
EFFECTIVE: JULY 22, 2024

ZACHARY ISCH
317 WOODSIDE AVE
BUFFALO, NY

WASTEWATER OPERATOR II (PROVISIONAL)
SEWAGE TREATMENT PLANT
$29.13 PER HOUR
EFFECTIVE: JULY 22, 2024

CRAIG SKINNER
50 SUSAN LANE
BUFFALO, NY

SENIOR FIRST CLASS STATIONARY ENGINEER (PROVISIONAL)
SEWAGE TREATMENT PLANT
$31.04 PER HOUR
EFFECTIVE: JULY 22, 2024

JASON KUSMIERSKI
797 AMHERST ST.
BUFFALO, NY

SENIOR FIRST CLASS STATIONARY ENGINEER (PROVISIONAL)
SEWAGE TREATMENT PLANT
$27.70 PER HOUR
EFFECTIVE: JULY 29, 2024

CHRISTOPHER ANTONELLI
103 GREENWOOD PLACE
BUFFALO, NY

LABORER I (SEASONAL)
SEWER MAINTENANCE DIVISION
$140 PER DAY
EFFECTIVE: JULY 29, 2024

JAURNEY BOYLAND
45 HARVARD PLACE
BUFFALO, NY

WASTEWATER OPERATOR II (PROVISIONAL)
SEWAGE TREATMENT PLANT
$29.13 PER HOUR
EFFECTIVE: JULY 22, 2024

ROBERT HART
112 WHITFIELD AVE.
BUFFALO, NY

WHEREAS: The preceding appointments were made by the General Manger since the last Board Meeting; and

WHEREAS: The General Manager requests confirmation of each appointment.

NOW THEREFORE
BE IT RESOLVED: That the preceding appointments are hereby confirmed by the Board of the Buffalo Sewer Authority

ITEM NO. 3

AUTHORIZATION TO CREATE A NOT-FOR-PROFIT CORPORATION FOR THE CHARITABLE PURPOSE OF AIDING PERSONS LIVING IN BUFFALO, NEW YORK WHO ARE IN NEED OF ASSISTANCE WITH WATER AND SEWER NEEDS

WHEREAS: The Buffalo Sewer Authority is a public benefit corporation created pursuant to the laws of New York. The State has delegated to the Buffalo Sewer Authority the responsibility, among other tasks, for providing an effective means of relieving the Niagara River and other tributary streams from pollution by sewage and waste. The Buffalo Sewer Authority has accepted its responsibility and continues to fulfill that responsibility in numerous ways to the benefit and betterment of the residents it serves.

WHEREAS: The Buffalo Sewer Authority has jurisdiction, control, possession and supervision of the existing sewer system to exercise all the rights and privileges necessary for carrying such power into execution. Further, the State has determined that no enumeration of powers, whether general, special or local, shall operate to restrict the Buffalo Sewer Authority's grant of power or to exclude any other powers contemplated within the general grant of power.

WHEREAS: The Buffalo Sewer Authority shall do all things necessary or convenient to carry out the powers granted from the State. In doing so, the State has declared that the Buffalo Sewer Authority, in carrying out its powers, purposes and duties, are in all respects for the benefit of the people served by the facilities for the improvement of their health, welfare and prosperity. Said purposes are public purposes because the Buffalo Sewer Authority performs an essential governmental function.

WHEREAS: As it evolves, the Buffalo Sewer Authority constantly seeks and engages in projects and initiatives that improve the water quality of the residents it serves. Toward that end, the Buffalo Sewer Authority, working in tandem with Buffalo Water, requests authorization to create a not-for-profit corporation for the charitable purpose of aiding persons living in Buffalo, New York area who are in need of assistance with water and sewer needs. Such charitable purposes also include outreach opportunities to educate and support residents in ways that enhance the public benefit that the Buffalo Sewer Authority is charged with providing. No funding is required from the Buffalo Sewer Authority.

WHEREAS: No part of the net earnings of the corporation shall inure to the benefit of, or be distributable to its members, trustees, officers, directors or other private persons, except that the corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes set forth in the Certificate of Incorporation.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager and staff to proceed with the process to create a not-for-profit corporation organized exclusively for charitable purposes.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 4

EXTENSION OF CONTRACT FOR ENERGY CONSULTING SERVICES

WHEREAS: United Energy is a professional consulting organization specializing in energy commodities procurement geared to minimize financial risk and maximize savings; and

WHEREAS: On July 31, 2019, the Board of the Buffalo Sewer Authority authorized the General Manager to enter into and execute an agreement with United Energy for energy consulting services for the period July 1, 2019 through June 30, 2020, with an option to renew for four (4) one-year periods through June 30, 2024; and

WHEREAS: On June 24, 2020, the Board of the Buffalo Sewer Authority authorized an extension of six (6) months under the current terms, conditions, and pricing indicated in the contract document for the period July 1, 2020 through December 31, 2020; and

WHEREAS: On October 28, 2020, the Board of the Buffalo Sewer Authority authorized an extension of six (6) months under the current terms, conditions, and pricing indicated in the contract document for the period January 1, 2021 through June 30, 2021 followed by a not to exceed one (1) year under the current terms, conditions, and pricing indicated in the contract document for the period July 1, 2021 through June 30, 2022; and

WHEREAS: The proposal submitted for Professional Services of Energy Procurement is for $30,000.00 annually, plus a cost of 15% of savings realized (for a cumulative total equal to or less than $150,000.00) and a cost of 22% of savings realized (for a cumulative total greater than $150,000.00); and

WHEREAS: On September 28, 2023, the Board of the Buffalo Sewer Authority authorized the General Manager to extend the contract with United Energy Management for Energy Consulting Services for its fourth one (1) year renewal through June 30, 2024 under the terms, conditions, and pricing indicated in the contract document.

WHEREAS: The Treatment Plant Superintendent recommends the extension of the current contract for one (1) additional year with United Energy for the period of July 1, 2024 through June 30, 2025, at an annual base fee of $30,000.00, plus the percentage indicated for cumulative savings realized.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to extend the contract with United Energy Management for Energy Consulting Services for the period of July 1, 2024 to June 30, 2025, under the current terms, conditions, and pricing indicated in the contract document until the new award for these services is prepared. Expenses for this extension will be charged to account nos. 00380106-432004 and 00380103-441001.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 5

EXTENSION OF THE CONTRACT FOR IN -PLANT HIGH PRESSURE STEAM SYSTEM MAINTENANCE SERVICES

WHEREAS: On May 25, 2022, the Board of the Buffalo Sewer Authority awarded a contract to Quackenbush Company Inc., for In-Plant High Pressure Steam System Maintenance Services for the period July 1, 2022 to June 30, 2023, with an option to renew for four (4) one-year periods, at an annual cost not to exceed $576,700.00; and

WHEREAS: On July 26, 2023, the Board of the Buffalo Sewer Authority authorized the General Manager to renew the contract with Quackenbush Company Inc., for In-Plant High Pressure Steam System Maintenance Services for the period July 1, 2023 to June 30, 2024, at a total cost not to exceed $576,700.00; and

WHEREAS: On April 3, 2024, the Board of the Buffalo Sewer Authority approved Change Order No. 2 to Contract No. 82000045 increasing the contract cost in the amount of $80,000.00 for additional work making the adjusted contract cost $1,233,400.00; and

WHEREAS: Quackenbush Company Inc., has agreed to extend this contract for one (1) additional year under the same terms and conditions for fiscal year 2024-2025; and

WHEREAS: The Treatment Plant Superintendent and staff recommend this extension at a total cost not to exceed $576,700.00.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to renew the contract with Quackenbush Company Inc, for In-Plant High Pressure Steam System Maintenance Services for the period July 1, 2024 to June 30, 2025, at a total cost not to exceed $576,700.00. Expenses for this contract will be charged to account no. 00380106-443421.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 6

CHANGE ORDER NO. 1 – CONTRACT NO 82000058

CONTRACTOR:	ORIGINAL CONTRACT COST	$625,584.50
A1 Land-Care, Inc	PREVIOUS CHANGE ORDER	$0.00
1527 Ridge Road	THIS CHANGE ORDER NO. 1	($57,169.47)
Lewiston, New York 14092	ADJUSTED CONTRACT COST	$568,415.03

WORK: Bird Island Campus Landscape and Site Improvements Project

---

DESCRIPTION OF CHANGE OR EXTRA WORK:

Item #1 ($57,169.49) Decrease in construction costs during construction.

REASON FOR CHANGE OR EXTRA WORK:

Item#1 Field changes and unused allowance during construction resulted in a cost decrease in construction costs in the amount of ($57,169.47).

COST OF CHANGE OR EXTRA WORK:

Item #1 ($57,169.47)

THE TOTAL COST OF THE CHANGE OR EXTRA WORK	($57,169.47)
The total DECREASE to the contract as a result of this Change Order is	($57,169.47)

CHANGE ORDERS

WHEREAS: On February 15, 2022, the Board of the Buffalo Sewer Authority hereby approved the General Manager to enter into and execute a contract with A1 Land-Care, Inc. for the Bird Island Campus Landscape and Site Improvements Project t at a cost not to exceed $625,584.50; and

WHEREAS: The consulting engineer, CHA, has reviewed the proposal for Change Order #1 from A1 Land-Care, Inc. in the amount of ($57,169.47) and recommend approval. BSA Capital Improvements personnel have reviewed the proposal and concur with CHA.

CONTRACT SUPPLEMENT CONDITIONS:

1. The contract completion date established in the original contract or as modified by previous contract remains unchanged.

2. Any additional work to be performed under this contract supplement shall be carried out in compliance with the specifications included in the preceding description of changes involved with the supplemental contract drawings designated none and under the provisions of the original contract, including compliance with applicable equipment specifications, general specifications, and project specifications for the same type of work.

3. This contract supplement unless otherwise provided herein does not relieve the Contractor from strict compliance with the guarantee provisions of the original contract, particularly those pertaining to performance and operation of equipment.

4. The Contractor expressly agrees that he will place under coverage of his performance and payment bonds and Contractor's Insurance all work covered by this contract supplement. The Contractor will furnish to the Owner evidence of increased coverage of his performance and payment bonds for the accrued value of all contract supplements that exceeds the original contract price by twenty percent (20%).

5. The costs established under this contract supplement are acknowledged as including any and all costs associated with the work described herein and including any and all costs associated with any and all work performed or to be performed by the Contractor that may be affected in any manner by the work described herein.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves Change Order No. 1 to Contract No. 82000058 as written in the above Agenda Item, decreasing the contract cost in the amount of $57,169.47 making the adjusted contract cost $568,415.03.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 7

CERTIFICATE OF ACCEPTANCE AND OCCUPANCY CONTRACT 82000058

PROJECT: Bird Island Campus Landscape and Site Improvements Project

BID: $625,584.50

CONTRACTOR: A1 Land-care, Inc.
1527 Ridge Road
Lewiston, New York 14092

WHEREAS: In the February 15, 2022 Board meeting, the Board of the Buffalo Sewer Authority authorized The General Manager to execute a contract with A1 Land-care, Inc. for the Bird Island Campus Landscape and Site Improvements Project at a cost not to exceed $625,584.50; and

WHEREAS: The Treatment Plant Administrator and staff have certified that the Contractor completed the work in accordance with the plans and specifications on July 31, 2024; and

WHEREAS: In the July 31st , 2024, Board Meeting the Board of the Buffalo Sewer Authority approved a deduct change order for field changes and unused contingency allowance in the amount of $57,169.47. Therefore, the adjusted contract cost was $568,415.03; and

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby finds and determines that:

a. The work to be performed under the terms of the Contract has been complete and is accepted.

b. The date of entrance and occupancy be fixed as of July 31, 2024.

c. The maintenance period commences on July 31, 2024.

d. The final cost of the Contract is$568,415.03.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 8

CHANGE ORDER NO. 3 – CONTRACT NO 82000030

CONTRACTOR:	ORIGINAL CONTRACT COST	$1,700,000.00
Greeley and Hansen LLC	PREVIOUS CHANGE ORDER	$1,035,500.00
100 South Wacker Dr.	THIS CHANGE ORDER	$386,875.00
Chicago, IL 60606-4004	ADJUSTED CONTRACT COST	$3,122,375.00

VENDOR NO. 16154 ACCOUNT NO. 02000433-432004

WORK: Primary Treatment Rehabilitation

DESCRIPTION OF CHANGE OR EXTRA WORK:

Item #1 Rebidding and design services for Primary Treatment Renovation Project.

REASON FOR CHANGE OR EXTRA WORK:

Item #1 Additional engineering services are necessary to accommodate additional needs for the Primary Treatment System Upgrades Project. Engineering design services including developing updated contract packages for the Gate WW-17 replacement and high-rate disinfection chlorine contact station, to evaluate how to reallocate work to maximize competitiveness, and provide subsequent bid phase services.

COST OF CHANGE ORDER NO. 3:

Item #1	$386,875.00
THE TOTAL COST OF CHANGE ORDER NO 3:	$386,875.00

WHEREAS: In Item No. 10, on October 20, 2021, the Board approved Change Order No. 1 in the amount of $698,600.00 for additional design work needed for the Primary Treatment Rehabilitation Project; and

WHEREAS: In Item No. 20, on June 22, 2022, the Board approved Change Order No. 2 in the amount of $336,900.00 for additional design and bidding work needed for the Primary Treatment Rehabilitation Project; and

WHEREAS: As part of their proposal for Change Order No. 3 Greely and Hansen LLC have requested the release of retention and elimination of retention from this contract as it is not standard practice for the Buffalo Sewer Authority to hold retention on a professional services contract; and

WHEREAS: The Acting Treatment Plant Administrator, Principal Sanitary Engineer, and staff have reviewed a request for Change Order No. 3 to Contract No. 82000030 in the amount of $386,875.00 as detailed above and recommend its approval.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves Change Order No. 3 to Contract No. 82000030 as written in the above Agenda Item, increasing the contract cost in the amount of $386,875.00, making the adjusted contract cost $3,122,375.00 and releasing all retention. Expenses from this contract will be funded from Account No. 02000433-432004.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 9

RESCIND ITEM NO. 6 OF THE BUFFALO SEWER AUTHORITY BOARD MEETING OF JUNE 26, 2024

WHEREAS: The Board of the Buffalo Sewer Authority approved Item No. 6 (Attachment F) at the Board Meeting of June 26, 2024; and

WHEREAS: The action taken under this item authorized the General Manager to enter into a contract with Shield Protective Group Inc., for Security Guard Services for the period July 1, 2024 through June 30, 2025; and

WHEREAS: Shield Protective Group Inc. was unable to meet contract requirements, and subsequently withdrew their bid.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby rescinds the action taken under Item No. 6 at the Board Meeting of June 26, 2024.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 10

REPORT ON BIDS RECEIVED – FORMAL BID OPENING FOR SECURITY GUARD SERVICES

WHEREAS: Formal bids were advertised and solicited for Security Guard Services for a one-year period, July 1, 2024 through June 30, 2025, with an option to renew for four (4) one-year periods; and

WHEREAS: The following bids were received and opened by the Purchasing Department on May 28, 2024:

VENDOR	COST PER HOUR	NUMBER OF GUARDS	TOTAL ANNUAL COST BASED ON 8,760 HOURS PER GUARD
Shield Protective Group Inc.	$35.00	3	$919,800.00
Don's Security Services Inc.	$40.25	3	$1,057,770.00
Allied Security Services LLC	$42.82	3	$1,125,309.60

; and

WHEREAS: Shield Protective Group Inc. was unable to meet contract requirements, and subsequently withdrew their bid; and

WHEREAS: It has been determined that Don's Security Services Inc. is a non-responsible bidder due to its failure to provide services when requested pursuant to a unilateral short-term extension and prior to award of a replacement contract; and

WHEREAS: The Superintendent of Mechanical Maintenance, Treatment Plant Superintendent, Safety Officer and staff reviewed the bids received and recommend this service be awarded to Allied Security Services LLC, at a total cost of $42.82 per hour for a total amount not to exceed $1,125,309.60, for the period July 1, 2024 through June 30, 2025; and

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to enter into and execute a contract with Allied Security Services LLC, for Security Guard Services at a total cost not to exceed $1,125,309.60 for the period July 1, 2024 through June 30, 2025, with four (4) one-year renewal option periods without seeking further authorization from the board to exercise said options. Expenses for this contract will be charged to account no. 00200106-434000.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 11

EXTENSION OF THE CONTRACT FOR PROFESSIONAL SERVICES FOR CONTINUATION OF WATER EQUITY AMBASSADOR STEWARDSHIP SERVICE PROGRAM

WHEREAS: On April 5, 2023, the Board of the Buffalo Sewer Authority awarded a contract to Buffalo Center for Health Equity for development of the Water Equity Ambassador Stewardship Service Program as defined in the proposal dated March 22, 2023, for a one-year period, with an option to renew four (4) one-year periods, at an annual cost not to exceed $579,289.00; and

WHEREAS: Buffalo Center for Health Equity has agreed to extend this contract for one (1) additional year under the same terms and conditions for fiscal year 2024-2025; and

WHEREAS: The Superintendent of Mechanical Maintenance and staff recommend this extension at a total cost not to exceed $579,289.00.

WHEREAS: Board approval is required for services over $35,000.00.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to renew the contract with Buffalo Center for Health Equity for development of the Water Equity Ambassador Stewardship Service Program for the period July 1, 2024 to June 30, 2025, at a total cost not to exceed $579,289.00. Expenses for this contract will be charged to account no. 00700106-432004.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 12

AUTHORIZATION TO PURCHASE FOUR 2025 CUSHMAN HAULER 800X - ELITE GOLF CARTS UNDER OMNIA CONTRACT

WHEREAS: The Superintendent of Mechanical Maintenance and staff request approval to purchase four (4) new and unused 2025 Cushman Hauler 800X – Elite Golf Carts with additional options listed below, available under Omnia Contract #87705

Contract	Vendor	Equipment	Cost
Omnia #87705 Quote 11992	Golf Car City LLC	Four (4) 2025 Cushman Hauler 800X – Elite Golf Carts as per quote 11992 dated 7/8/24	$13,173.50 X 4 = $52,694.00

; and

WHEREAS: The Superintendent of Mechanical Maintenance, Supervisor of Yards and Grounds, and staff recommend the purchase of the above 2025 Cushman Hauler 800X-Elite Golf carts at a total cost of $52,694.00.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority authorizes the General Manager to purchase the above four 2025 Cushman Hauler 800X Elite Golf Carts with additional options indicated from Golf Car City LLC at a total cost of $52,694.00. This purchase will be charged to account no.00520107-474300.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 13

AMEND BOARD RESOLUTION NO. 31 FROM JUNE 26, 2024 BOARD MEETING – AUTHORIZATION TO ENTER INTO AN AGREEMENT WITH WENDEL COMPANIES, Inc., FOR PROFESSIONAL ENGINEERING SERVICES

WHEREAS: At the June 26, 2024, Board Meeting, the Board of the Buffalo Sewer Authority under Item No. 31 authorized a contract in the amount of $289,000.00 for professional engineering services; and

WHEREAS: In the resolution, Stantec Consulting Services, Inc. was named as the party with which this contract would be entered into:

"That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to execute an agreement with Stantec Consulting Services, Inc. to provide professional engineering services at a cost not to exceed $289,000.00. The cost of this contract will be funded from account no. 02000587-432004." ; and

WHEREAS: The contract was intended to be with Wendel WD Architecture, Engineering, Surveying & Landscape Architecture P.C.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby amends Board Resolution No. 31 from the June 26, 2024, Board Meeting to read as follows:

"That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to execute an agreement with Wendel WD Architecture, Engineering, Surveying & Landscape Architecture P.C. to provide professional engineering services at a cost not to exceed $289,000.00. The cost of this contract will be funded from account no. 02000587-432004."

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 14

AMEND BOARD RESOLUTION NO. 7 FROM MAY 1, 2024 BOARD MEETING – CHANGE ORDER NO. 3– ADDITIONAL CONSTRUCTION OBSERVATION SERVICES CONTRACT NO. 81900016 BROADWAY AT OAK REAL TIME CONTROL STRUCTURE ENGINEERING SERVICES

WHEREAS: At the November 1, 2023, Board Meeting, the Board of the Buffalo Sewer Authority authorized a change order in to CHA's Broadway at Oak Real Time Control Structure Engineering Services in an amount not to exceed $4,536.00 with a calculated total contract to $493,934.00; and

WHEREAS: At the May 1, 2024, Board Meeting, the Board of the Buffalo Sewer Authority authorized an amendment to this board item to redirect the funds from account 02000509-432004 to 02000490-432004, but an error in the total was not corrected; and

WHEREAS: The Resolution of Item No. 7 of the May 1, 2024 Board Meeting read:

"That the Board of the Buffalo Sewer Authority hereby approves Change Order No. 3 to Contract No. 81900016 as written in the above Agenda Item, increasing the contract cost in the amount of $4,536.00, making the adjusted contract cost $493,934.00. These funds shall be drawn from account no. 02000490-432004."

WHEREAS: The contract total authorized inclusive of Change Order No. 3 is $498, 470.00; and

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby amends Board Resolution No. 18 from the November 1, 2023, and Board Resolution No. 7 of the May 1, 2024, Board Meeting – Change Order No. 3- Additional Construction Observation Services Contract No. 81900016 Broadway at Oak Real Time Control Structure Engineering Services to read as follows:

"That the Board of the Buffalo Sewer Authority hereby approves Change Order No. 3 to Contract No. 81900016 as written in the above Agenda Item, increasing the contract cost in the amount of $4,536.00, making the adjusted contract cost $498,470.00. These funds shall be drawn from account no. 02000490-432004."

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 15

EXTENSION OF THE CONTRACT FOR PRIVATE PROPERTY GREEN INFRASTRUCTURE GRANT PROGRAM ADMINISTRATION

WHEREAS: The Buffalo Sewer Authority issued a request for qualifications (RFQ) for the purposes of prequalifying various firms for delivery of green infrastructure capital improvement projects and approved these entities on September 30, 2020; and

WHEREAS: Greenprint Partners, as a prequalified firm, submitted a proposal for administration of a private property green infrastructure program; and

WHEREAS: Greenprint Partners has experience with Detroit's Green Stormwater Infrastructure Capital Partnership Program and Northeast Ohio Regional Sewer District's Green Infrastructure Grant Program standing up green infrastructure grant programs for private properties; and

WHEREAS: On May 3, 2023, the Board of the Buffalo Sewer Authority approved a contract with Greenprint Partners at a cost of $500,000.00 per year at a goal of an average cost of $250,000.00 per acre 0.9 inches of runoff managed with the intention to extend for at least two additional one-year periods and up to four additional one-year periods with unspent funds rolled over each year; and

WHEREAS: The original one-year contract took effect on August 1, 2023; and.

WHEREAS: The Principal Sanitary Engineer now recommends a one-year extension of this contract with an additional $500,000.00 be provided.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to extend the contract with Greenprint Partners to provide private property green infrastructure grant program administration at a cost not to exceed a total of $1,000,000.00 through August 1, 2025. Account no. 02000547-432004 will be utilized for these services.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 16

CHANGE ORDER NO. 1 – CONTRACT NO. 820000014 GIS ENVIRONMENT IMPLEMENTATION AND GIS & GPS SERVICES

CONSULTANT:	ORIGINAL CONTRACT COST	$317,504.00
Bergmann Associates	PREVIOUS CHANGE ORDERS	$0.00
280 East Broad Street Ste 200	THIS CHANGE ORDER	$30,000.00
Rochester, NY 14604	ADJUSTED CONTRACT COST	$347,504.00

VENDOR NO. 1961 ACCOUNT NO. 02000506-432004

WORK: GIS Environment Implementation and GIS & GPS Services

DESCRIPTION OF CHANGE OR EXTRA WORK:

Item #1 Additional GIS & GPS Professional Services through March 27, 2025

REASON FOR CHANGE OR EXTRA WORK:

Item #1 This contract was intended to last six years as three years under the original $317,504.00 with additional change orders for each additional year, the original allotment has been stretched to over four years, however there is a desire to extend through the end of the fifth year, which this change will allow.

COST OF CHANGE OR EXTRA WORK:

Item #1 $30,000.00

THE TOTAL COST OF THE CHANGE OR EXTRA WORK: $30,000.00

WHEREAS: The Buffalo Sewer Authority (BSA) issued a request for proposals (RFP) for up to a three (3) year term agreement and optional three (3), one (1) year renewals thereafter for Geographic Information System (GIS) environment implementation and maintenance and Global Positioning System (GPS) surveying services on December 16, 2019; and

WHEREAS: In Item No. 26, on March 4, 2020, the Board of the Buffalo Sewer Authority authorized the General Manager to enter into an agreement with Bergmann in the amount of $317,504.00 to perform GIS & GPS professional services with expenses to be charged to Account # 02000506-432004; and

WHEREAS: The Principal Sanitary Engineer and staff have reviewed a request for a Change Order No. 1 to Contract No. 82000014 for $30,000.00 as detailed above and recommend its approval.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves Change Order No. 1 to Contract No. 82000014 as written in the above Agenda Item, increasing the contract cost in the amount of $30,000.00, making the adjusted contract cost $347,504.00 and extending the contract through March 27, 2025. Expenses from this contract will be funded from Account No. 02000506-432004.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 17

UTILITY WORK AGREEMENT (HC-140) - NEW YORK STATE DEPARTMENT OF TRANSPORTATION - PIN 5512.57

WHEREAS: The New York State Department of Transportation (NYSDOT) proposes the capital project of PIN 5512.57: Kensington Expressway, Section 1, C 60-2, Best Street Bridge over NY Route 33 and New Electric Substation, City of Buffalo, Erie County; and

WHEREAS: The NYSDOT will include as part of the above mentioned project the separation of certain storm and sanitary sewers, relocation of existing combined sewers, installation of new drainage structures, and adjustment of existing manholes pursuant to Section 10, Subdivision 24, of the State Highway Law, as shown on contract plans relating to the project and meeting the requirements of the Buffalo Sewer Authority; and

WHEREAS: It is a recommendation of the NYSDOT that a Utility Work Agreement be executed by a duly authorized agent of the affected utility to allow the State of New York to perform said work within the Buffalo Sewer Authority; and

WHEREAS: This work will be done at no cost to the Buffalo Sewer Authority.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to execute, on behalf of the Buffalo Sewer Authority, a Utility Work Agreement granting the State of New York authority to perform the adjustments for the Buffalo Sewer Authority under PIN 5512.57: Kensington Expressway, Section 1, C 60-2, Best Street Bridge over NY Route 33 and New Electric Substation, City of Buffalo, Erie County and agreeing to maintain facilities adjusted via State-let contract as stipulated in the project's maintenance jurisdiction table and related documentation that may become necessary as a result of the project as it relates to the Buffalo Sewer Authority.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

CERTIFICATE

I, Eleanor C. Petrucci, Secretary of the Buffalo Sewer Authority in the County of Eric, State of New York, HEREBY CERTIFY that the foregoing attached extract from the Minutes of a meeting of the Board of Directors of said Authority, duly called and held on July 31, 2024, and at which a quorum was present and acting throughout and the resolution contained therein is a true and complete copy of the resolution thereupon adopted on July 31, 2024, and recorded in the Minutes of said Authority and that the foregoing extract has been compared by me with the original minutes as officially recorded in my office in the Minute Book of said Authority and is a true, complete and correct copy thereof and of the whole of said original minutes so far as the same related to the subject matters referred to in said extract, and that said resolution has not been amended or repealed but is in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said Authority this 31st day of July, 2024.

(SEAL)

_____

Eleanor Petrucci
Secretary, Buffalo Sewer Authority Board

ITEM NO. 18

DECLARATION OF LEAD AGENCY FOR STATE ENVIRONMENTAL QUALITY REVIEW FOR BRECKENRIDGE CSO CONTROL PROJECT

WHEREAS: The Buffalo Sewer Authority ("BSA") proposes to upgrade BSA's sewer collection system along Breckenridge Street and West Avenue to control combined sewer overflow (CSO) discharges to the Scajaquada Creek ("the Project"); and

WHEREAS: The Project area is located in the City of Buffalo's Niagara District; and

WHEREAS: The Project will reduce both the number of CSO activation events and the total combined sewage discharge to the Black Rock Canal; and

WHEREAS: In accordance with Part 617 of the implementing regulations pertaining to Article 9 (State Environmental Quality Review Act – "SEQRA") of the Environmental Conservation Law, the Principal Sanitary Engineer and TY Lin/ Greeley and Hansen, as Consulting Engineer have determined that the above project will be treated as a Type I action; and;

WHEREAS: Part 1 of the SEQRA Long Environmental Assessment Form (EAF) has been completed (See Attachment G); and

WHEREAS: The Buffalo Sewer Authority has identified Involved Agencies for the Project;

NOW THEREFORE
BE IT RESOLVED: The Board of the Buffalo Sewer Authority hereby announces its intent that the BSA will serve as Lead Agency to conduct an environmental review of the Project in accordance with SEQR and will notify the Involved Agencies of BSA's intention to act as Lead Agency.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 19

DECLARATION OF LEAD AGENCY FOR STATE ENVIRONMENTAL QUALITY REVIEW FOR CSO-053 SEWER PATROL POINT (SPP) MODIFICATION AT COLORADO AVENUE AT SCAJAQUADA STREET (CSO053_2.5 SPP 337 MODIFICATION) PROJECT

WHEREAS: The Buffalo Sewer Authority ("BSA") proposes to modify BSA's sewer collection system's Sewer Patrol Point (CSO053_2.5 SPP337) at Colorado Avenue at Scajaquada Street to control combined sewer overflow (CSO) discharges to the Scajaquada Creek ("the Project"); and

WHEREAS: The Project area is located in the City of Buffalo's Masten District; and

WHEREAS: The Project will reduce both the number of CSO activation events to Scajaquada Creek and the total combined sewage discharge to Scajaquada Creek, the Black Rock Canal and Niagara River; and

WHEREAS: In accordance with Part 617 of the implementing regulations pertaining to Article 9 (State Environmental Quality Review Act – "SEQRA") of the Environmental Conservation Law, the Principal Sanitary Engineer and TY Lin/ Greeley and Hansen, as Consulting Engineer have determined that the above project is classified as an Unlisted Action; and

WHEREAS: Part 1 of the SEQRA Long Environmental Assessment Form (EAF) has been completed (See Attachment H); and

WHEREAS: The Buffalo Sewer Authority has identified Involved Agencies for the Project;

NOW THEREFORE
BE IT RESOLVED: The Board of the Buffalo Sewer Authority hereby announces its intent that the BSA will serve as Lead Agency to conduct an environmental review of the Project in accordance with SEQRA and will notify the Involved Agencies of BSA's intention to act as Lead Agency.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 20

DECLARATION OF LEAD AGENCY FOR STATE ENVIRONMENTAL QUALITY REVIEW FOR CSO-053 SEWER PATROL POINT (SPP) MODIFICATION AT GENESEE STREET (CSO053_8 SPP 341A MODIFICATION) PROJECT

WHEREAS: The Buffalo Sewer Authority ("BSA") proposes to modify BSA's sewer collection system's Sewer Patrol Point 341A (CSO053_8 SPP341A) at Genesee Street and Kems Avenue to control combined sewer overflow (CSO) discharges to the Scajaquada Creek ("the Project"); and

WHEREAS: The Project area is located in the City of Buffalo's Lovejoy District; and

WHEREAS: The Project will reduce both the number of CSO activation events to Scajaquada Creek and the total combined sewage discharge to Scajaquada Creek, the Black Rock Canal and Niagara River; and

WHEREAS: In accordance with Part 617 of the implementing regulations pertaining to Article 9 (State Environmental Quality Review Act – "SEQRA") of the Environmental Conservation Law, the Principal Sanitary Engineer and TY Lin/ Greeley and Hansen, as Consulting Engineer have determined that the above project is classified as an Unlisted Action; and

WHEREAS: Part 1 of the SEQRA Long Environmental Assessment Form (EAF) has been completed (See Attachment I); and

WHEREAS: The Buffalo Sewer Authority has identified Involved Agencies for the Project;

NOW THEREFORE
BE IT RESOLVED: The Board of the Buffalo Sewer Authority hereby announces its intent that the BSA will serve as Lead Agency to conduct an environmental review of the Project in accordance with SEQRA and will notify the Involved Agencies of BSA's intention to act as Lead Agency.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 21

DECLARATION OF LEAD AGENCY FOR STATE ENVIRONMENTAL QUALITY REVIEW FOR CSO-053 SEWER PATROL POINT (SPP) MODIFICATION AT SIDNEY STREET AND LARK STREET (CSO053_1.5 SPP 336B MODIFICATION) PROJECT

WHEREAS: The Buffalo Sewer Authority ("BSA") proposes to modify BSA's sewer collection system's Sewer Patrol Point 336B (CSO053_1.5 SPP336B) at Humboldt Parkway and north of Sidney Street, to control combined sewer overflow (CSO) discharges to the Scajaquada Creek ("the Project"); and

WHEREAS: The Project area is located in the City of Buffalo's Masten District; and

WHEREAS: The Project will reduce both the number of CSO activation events to Scajaquada Creek and the total combined sewage discharge to Scajaquada Creek, the Black Rock Canal and Niagara River; and

WHEREAS: In accordance with Part 617 of the implementing regulations pertaining to Article 9 (State Environmental Quality Review Act – "SEQRA") of the Environmental Conservation Law, the Principal Sanitary Engineer and TY Lin/ Greeley and Hansen, as Consulting Engineer have determined that the above project is classified as an Unlisted Action; and

WHEREAS: Part 1 of the SEQRA Long Environmental Assessment Form (EAF) has been completed (See Attachment J); and

WHEREAS: The Buffalo Sewer Authority has identified Involved Agencies for the Project.

NOW THEREFORE
BE IT RESOLVED: The Board of the Buffalo Sewer Authority hereby announces its intent that the BSA will serve as Lead Agency to conduct an environmental review of the Project in accordance with SEQRA and will notify the Involved Agencies of BSA's intention to act as Lead Agency.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 22

DECLARATION OF LEAD AGENCY FOR STATE ENVIRONMENTAL QUALITY REVIEW FOR CSO-053 SEWER PATROL POINT (SPP) MODIFICATIONS AT EAST DELAVAN AVENUE (CSO053_13 SPP 165B MODIFICATION), BAILEY AVENUE (CSO053_3.1 SPP 338 MODIFICATION), AND MICHIGAN AVENUE (CSO053_14 SPP 175 MODIFICATION) PROJECT

WHEREAS: The Buffalo Sewer Authority ("BSA") proposes to modify BSA's sewer collection system's Sewer Patrol Point 165B (CSO053_13 SPP165B) at East Delavan and Humboldt, Sewer Patrol Point 338 (CSO053_3.1 SPP 338) at Kerns and Bailey, and Sewer Patrol Points 175, 176 and 177 (CSO053_14 SPP 175) at various points along Michigan Avenue to control combined sewer overflow (CSO) discharges to the Scajaquada Creek ("the Project"); and

WHEREAS: The Project area is located in the City of Buffalo's Ellicott, Masten, Lovejoy Districts; and

WHEREAS: The Project will reduce both the number of CSO activation events to Scajaquada Creek and the total combined sewage discharge to Scajaquada Creek, the Black Rock Canal and Niagara River; and

WHEREAS: In accordance with Part 617 of the implementing regulations pertaining to Article 9 (State Environmental Quality Review Act – "SEQRA") of the Environmental Conservation Law, the Principal Sanitary Engineer and TY Lin/ Greeley and Hansen, as Consulting Engineer have determined that the above project is classified as an Unlisted Action; and

WHEREAS: Part 1 of the SEQRA Long Environmental Assessment Form (EAF) has been completed (See Attachments K, L, and M); and

WHEREAS: The Buffalo Sewer Authority has identified Involved Agencies for the project

NOW THEREFORE
BE IT RESOLVED: The Board of the Buffalo Sewer Authority hereby announces its intent that the BSA will serve as Lead Agency to conduct an environmental review of the Project in accordance with SEQRA and will notify the Involved Agencies of BSA's intention to act as Lead Agency.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

ITEM NO. 23

ADJOURNMENT OF MEETING

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of July 31, 2024

MINUTES OF THE REGULAR MEETING

OF THE

BUFFALO SEWER AUTHORITY

September 25, 2024

BUFFALO SEWER AUTHORITY

REGULAR MEETING
September 25, 2024
9:00 A.M.

Bird Island Treatment Facility, 90 West Ferry St.
Teleconference +1 917- 933-2166, ID #334 244 17#

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	B. Informative: Reallocation of Funds	
	C. Informative: Report On the Condition of The Liability and Casualty Reserve Fund	
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	E. Travel Authorization - Philadelphia, PA	
	F. Travel Authorization - Albany, NY	
	G. Travel Authorization – Greenville, SC	
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3	Claim Against Liability and Casualty Reserve Fund	59073
4	Authorization For Purchase of New Access Control Software, Doors and Equipment Under New York Contract	59074
5	Extension Of Contract for Uniforms, Coveralls, And Lab coats	59075
6	Authorization To Purchase a Demonstrator Model Camel Max 1200 Ejector/12yd Combination Sewer Cleaner with A 2024 Freightliner 1082D Chassis Under the Sourcewell Contract	58076
7	Authorization To Purchase a Vehicle Under the Onondaga Bid 106-19 2024	59077
8	Blanket Order Approval -For Field Engineering Services to Support the Emerson Ovation Distributed Control System	58078
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13	Adjournment Of Meeting	59085

CALL OF THE ROLL

Present:	Herbert Bellamy, Jr.	Chairman of Board
	Christopher Roosevelt	Vice Chairman of the Board
	Eleanor Petrucci	Secretary of the Board
	Oluwole McFoy, P.E.	General Manager
	Gelea Y. James	Director of Employee Relations
	LaToya Cunningham	Special Assistant
	Charles Riley	Executive Secretary
	Adam Sassone	Secretary to General Manager
	Alexander Emmerson	Treatment Plant Superintendent
	Paul Harris	Superintendent of Mechanical Maintenance
	Rosaleen Nogle, P.E.	Principal Sanitary Engineer
	Joel Renzoni	Director of Sewer Maintenance
	Desiree Briggs	Account Clerk Typist
	Scott Steinwald	Intergovernmental Coordinator
	Edmund Aplerh-Doku, P.E.	TY-Lin
	Nadia Mugisha, P.E.	Arcadis
	Jaime Davidson, P.E.	JM Davidson
	Walter Walker	TY-Lin
	Delano Dowell	City of Buffalo Deputy Comptroller
	Laura Surdej	Erie County Department of Sewerage
	Charlie Specht	WGRZ-TV
	Charles Moore	WGRZ-TV

The meeting was called to order at 9:08AM. A quorum was present.

ITEM NO. 1

Motion to Adopt the Minutes of the Meeting of July 31, 2024

MOTION TO ADOPT

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25, 2024

ITEM NO. 2

APPROVAL OF CONSENT AGENDA

CONTENTS

A. Informative: Temporary Investments

B. Informative: Reallocation of Funds

C. Informative: Report On the Condition of The Liability and Casualty Reserve Fund

D. Payment From Judgment and Claims

E. Travel Authorization - Philadelphia, PA

F. Travel Authorization - Albany, NY

G. Travel Authorization – Greenville, SC

H. Travel Authorization – Aurora, CO

I. Travel Authorization – Chattanooga, TN

J. Travel Authorization - Tucson, AZ

K. Travel Authorization – Dallas, TX

L. Tuition Reimbursement

M. Request For Leave of Absence

N. Confirmation Of Appointments

O. Amendment To Schedule of Job Classification Plan

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25, 2024

2-A

INFORMATIVE: TEMPORARY INVESTMENTS (CERTIFICATES OF DEPOSIT AND TREASURY BILLS)

As of July 31st, 2024

ISSUE DATE	MATURITY DATE	TOTAL DAYS	AMOUNT	BANK	RATE	INTEREST AMOUNT
CONSTRUCTION/CAPITAL IMPROVEMENT FUND						
31-Jul-12	**MONEY MARKET**		$2,524,432.60	Key	0.01%	Public NOW
23-May-24	1-Aug-24	70	$3,334,804.65	Key Banc Capital	5.22%	$34,195.35
7-Jun-24	15-Aug-24	69	$4,999,377.96	Key Banc Capital	5.23%	$50,622.04
2-Jul-24	27-Aug-24	56	$2,999,351.04	Key Banc Capital	5.24%	$24,648.96
15-Jul-24	12-Sep-24	59	$11,500,131.73	M&T Securities	5.20%	$98,868.27
18-Jul-24	26-Sep-24	70	$999,846.69	Key Banc Capital	5.17%	$10,153.31
			$26,357,944.67			
LIABILITY AND CASUALTY RESERVE FUND						
31-Jul-12	**MONEY MARKET**		$104,280.34	Key	0.01%	Public NOW
18-Jul-24	17-Oct-24	91	$761,891.52	Key Banc Capital	5.18%	$10,108.48
			$866,171.86			
OPERATING FUND						
31-Jul-12	Super NOW		**$4,528,248.40**	Key	0.01%	Public NOW
TRUST & AGENCY FUND						
31-Jul-12	Super NOW		**$20,190.06**	Key	0.01%	Public NOW
SURPLUS FUND						
			$753.02	Wilmington U.S. Treasury	4.79%	
30-May-24	21-Nov-24	175	$10,004,118.72	Key Banc Capital	5.15%	$256,881.28
			$10,004,871.74			
NET REVENUE FUND						
			$222,918.14	Wilmington U.S. Treasury		
27-Jun-24	29-Aug-24	63	$7,500,002.04	M&T Securities	5.21%	$68,997.96
30-Jul-24	26-Sep-24	58	$12,998,162.97	Key Banc Capital	5.20%	$109,837.03
			$20,721,083.15			

BSA 2021 EIB FUND

			$321,787.97	Cash	0.00%	
23-May-24	14-Nov-24	175	$32,616,488.40	Key Banc Capital	5.15%	$837,511.60
20-Jun-24	12-Dec-24	175	$9,984,839.11	Key Banc Capital	5.13%	$255,160.89
5-Jul-24	19-Dec-24	167	$10,101,710.82	Key Banc Capital	5.09%	$244,289.18
			$53,024,826.30			

DEBT RESERVE FUND

				Series J		
02-Jul-14	13-Nov-33	7076	**$515,879.00**	UST State/Local Govt	2.70%	
				Series K		
02-Jul-14	15-Feb-33	6803	**$361,415.00**	UST State/Local Govt	2.70%	
				Series L		
12-Nov-15	1-Oct-35	7263	**$689,547.00**	UST State/Local Govt	2.44%	
				Series M		
27-Jun-14	1-May-44	10901	**$595,613.00**	UST State/Local Govt	2.70%	
				Series N		
15-Nov-12	15-Apr-32	7091	**$2,167,157.00**	UST State/Local Govt	2.42%	
			EFC 2021			
			$9,312.20	Wilmington U.S. Treasury	4.79%	
29-Feb-24	22-Aug-24	175	$332,562.62	Key Banc Capital	5.09%	$8,437.38
			$341,874.82			

DSF PRIN &INT

			$0.01	Wilmington Fund		

DSF 2021 EIB

			$301,419.05	Wilmington Fund	4.79%	

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Board Meeting of September 25, 2024

2-B

INFORMATIVE: REALLOCATION OF FUNDS

The following budgetary transfers have been made to cover unforeseen shortages. These transfers do not change the total amount of the Buffalo Sewer Authority's operating budget.

Wastewater Treatment Plant

06/30/2024	0200106 EDU, LIC & Training	-$2,280.00	00380106 INCIN Eng & TECH	$2,280.00
07/25/2024	00520106 INCIN Maintenance Contract	-$6,000.00	00380106 PLAN Eng & TECH	$6,000.00
08/05/2024	00510105 LAB Laboratory Supplies	-$2,300.00	00510106 LAB Maintenance Contract	$2,300.00
08/05/2024	00510105 LAB Equipment Maintenance	-$2,750.00	00510106 LAB Maintenance Contract	$2,750.00
08/05/2024	00330105 PLAN Maintenance Contract	-$4,250.00	00510106 LAB Maintenance Contract	$4,250.00
08/05/2024	00300103 SOUTH Electric Light	-$350.00	00450103 KELF Electric Light	$350.00
08/15/2024	00200105 PLAN Clothing and Safety	-$130.10	00550105 IWS Spill Hazard	$130.10

Financial Contingency

08/09/2024	00800183 Financial Contingency	-$3,683.32	00820102 ADMIN Miscellaneous	$3,683.32

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Board Meeting of September 25, 2024

2-C

INFORMATIVE: REPORT ON THE CONDITION OF THE LIABILITY AND CASUALTY RESERVE FUND

The Resolution that created the Liability and Casualty Reserve Fund provides that:

"The General Manager shall regularly and not less than semi-annually render to the Board a detailed report of the operation and condition of the Liability and Casualty Reserve Fund."

Fund Balance as of June 30, 2023	$1,008,974.92
Interest Earnings	$50,312.82
Claims Paid	$200,845.78
Transfer from Operating Fund	$150,000.00
Fund Balance as of June 30, 2024	$1,008,441.96

The Resolution that created the Liability and Casualty Reserve Fund provides that:

"When the amount of the Liability and Casualty Reserve Fund reaches the sum of $1,000,000.00, no further additions shall be made thereto until the Fund has been reduced below $1,000,000.00".

During the period of July 1, 2023 – June 30, 2024 the Authority settled six claims, resulting in cash payments from the Buffalo Sewer Authority in the amount of $200,845.78. No claims were denied in this time period.

Total Active Claims Pending as of June 30th, 2024

Bodily Injury	9
Property Damage	4
Motor Vehicle	0
Auto B.I. & P.D	7
Other Liability	2
Total	22

RECEIVE & FILE

Board Meeting of September 25, 2024

2-D

PAYMENT FROM JUDGMENT AND CLAIMS

WHEREAS: Board approval is required for charges made against the Buffalo Sewer Authority's current budget for services and/or materials received during a prior fiscal year; and

WHEREAS: The following services were received during a prior fiscal year charge to the 2023-2024 budget account no. 00800108-480214:

VENDOR	INVOICE	AMOUNT
Polydyne, Inc.	1842222	$62,390.00
Modern Disposal	11176092	$601.66
Modern Disposal	11242016	$1,239.43
Modern Disposal	11402760	$929.83
Modern Disposal	11176090	$11,508.33
Modern Disposal	11402758	$16,492.59
New Wave Energy	2093	$626.77
Mollenberg-Betz Inc.	70057	$5,270.36
Krackeler Scientific, Inc.	3438550	$787.70

; and

WHEREAS: The Executive Secretary and staff recommend the above payment from the Judgment and Claims account.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves the above payments from the Judgment and Claims account no. 00800108-480214.

2-E

TRAVEL AUTHORIZATION - PHILADELPHIA, PA

WHEREAS: The Buffalo Sewer Authority is actively working with PowerCorpsPHL and Buffalo Center for Health Equity to expand its integrated Water Equity Stewardship Program to foster workforce development and meet the growing needs of Buffalo Sewer; and

WHEREAS: As part of workforce development, Buffalo Sewer seeks to address environmental and equity needs as key requirements within the structure of the Water Equity Stewardship Program to develop local talent from low-income and undeserved communities by providing training and complete wrap around services to successfully meet the Buffalo Sewer's maintenance management; and

WHEREAS: Philadelphia Water department has agreed to host the Buffalo team October 16 – 17, 2024 to facilitate building the solid peer-to-peer relationships with Buffalo Sewer for connecting on water sector best practices and to strengthen overall maintenance and operations department optimization and effectiveness, the General Manager has identified the need for the Superintendent of Mechanical Maintenance, Director of Employee Relations, Treatment Plant Superintendent, Director of Sewer Maintenance, Forester (BSA), and Human Resources Clerk, to participate in a series of coordinating meetings, including a tours with PowerCorpsPHL and Philadelphia Water Department to be held in Philadelphia, PA, October 16 – October 17, 2024.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the Superintendent of Mechanical Maintenance, Director of Employee Relations, Treatment Plant Superintendent, Director of Sewer Maintenance, Forester (BSA), and Human Resources Clerk, to travel to Philadelphia, PA from October 15- 17, 2024, to attend the PowerCorpsPHL coordination meetings and tours, at a total cost not to exceed $12,600.00 and will be charged to account no. 00200104-458010.

2-F

TRAVEL AUTHORIZATION - ALBANY, NY

WHEREAS: The New York Water Environment Association (NYWEA) is hosting a Women of Water Leadership Exchange in Albany, NY on October 24, 2024; and

WHEREAS: The Women of Water Leadership Exchange will offer sessions on overcoming imposter syndrome, mastering difficult conversations, engaging in meaningful mentorship, and other topics related to strengthening leadership skills; and

WHEREAS: The Industrial Waste Administrator, Legal Investigator, Senior Engineer, GIS Specialist II, and GIS Specialist I are subject matter experts and leaders within Buffalo Sewer in roles and capacities in which women have been traditionally underrepresented; and

WHEREAS: The General Manager recommends that the Industrial Waste Administrator, Legal Investigator, Senior Engineer, GIS Specialist II, and GIS Specialist I attend the Women of Water Leadership Exchange.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the Industrial Waste Administrator, Legal Investigator, Senior Engineer, GIS Specialist II and GIS Specialist I to travel to Albany, NY from October 23- 24, 2024, to attend the NYWEA Women of Water Leadership Exchange at a total cost not to exceed $3,500.00. Account nos. 00200104-458010, 00200104-458012, 00600104-458010, and 00600104-458012 will be utilized for this travel.

2-G

TRAVEL AUTHORIZATION - GREENVILLE. SC

WHEREAS: The Buffalo Sewer Authority has several professional engineering titles that have gone unfilled for years due to the lack of qualified candidates; and

WHEREAS: The National Council of Examiners for Engineering and Surveying (NCEES) develops and administers the professional engineering licensure and pre-licensing exams throughout the United States and Internationally; and

WHEREAS: The Principal Sanitary Engineer has been selected by NCEES to serve as New York State's representative to and chairperson on the Committee on Examinations for Professional Engineers and represent the Committee on the Exam Audit (Audit) Committee; and

WHEREAS: The Audit Committees will hold an in-person meeting on October 25-26, 2024, in Greenville, SC; and

WHEREAS: The Principal Sanitary Engineer's participation in this process will ensure that the experience and knowledge that Buffalo Sewer Authority provides and requires of professional engineers are reflected in the licensing exam; and

WHEREAS: NCEES will provide air travel, lodging, board, and a $370.00 stipend to cover incidentals and ground transport for all participants for this meeting; and

WHEREAS: The General Manager recommends that the Principal Sanitary Engineer attend the Audit Committee Meeting.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the Principal Sanitary Engineer to travel to Greenville, SC on October 24-26, 2024, to participate in the Audit Committee Meeting and to accept the $370.00 stipend from NCEES for incidentals and ground transportation costs. No expenses will be charged to the Buffalo Sewer Authority for this travel.

2-H

TRAVEL AUTHORIZATION – AURORA, CO

WHEREAS: The Society of Human Resources Management (SHRM) Annual Inclusion 2024 Conference and SHRM-CP and SHRM-SCP Certification Preparation course will be held November 2, 2024-November 7, 2024, in Aurora, CO

WHEREAS: The Director of Employee Relations will participate in this event to help prepare to earn the SHRM-CP or SHRM-SCP certification. To gain knowledge on how to develop a robust inclusion, equity and diversity program. Enhance skills regarding best practices, actionable tools, and implement breakthrough strategies that will propel our workplace culture to one that puts inclusion first.

WHEREAS: The General Manager recommends attendance to The Society of Human Resources Management (SHRM) Annual Inclusion 2024 Conference and SHRM-CP and SHRM-SCP Certification Preparation course for the Director of Employee Relations

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorized travel from November 1 - 7, 2024, for the Director of Employee Relations to travel to Aurora, CO to attend the SHRM Annual Inclusion 2024 Conference and SHRM-CP and SHRM-SCP Certification Preparation course at the total cost not to exceed $5,8000. Funds are available in account nos. 00120104-458010 and 00120104-458012

TRAVEL AUTHORIZATION – CHATTANOOGA, TN

WHEREAS: The Vibration Institute is offering a CAT III Machinery Vibration Analysis Training and Exam to include Principles of Vibration, Data Acquisition Procedures, Signal Processing; Time Waveform Analysis, Frequency and Phase Analysis, Orbit Analysis and Shaft Centerline Position, Machine Testing, Balancing of Rotating Machinery, Condition Monitoring & Evaluation of Machine Components, and Potential Fault Frequencies in Chattanooga, TN from November 3, - 9, 2024; and

WHEREAS: The Superintendent of Mechanical Maintenance and staff have determined a need for a Senior Instrument Technician, to attend the training and exam; and

WHEREAS: The Machinery Vibration Analysis Training (MVA) prepares attendees to perform vibration analysis on industrial machinery using multi-channel measurements, according to established and recognized procedures; and

WHEREAS: The training will further support and strengthen the Authority's comprehensive Predictive Maintenance program which enables the ability to monitor, record and analyze vibration characteristics of rotating equipment throughout the Treatment Plant and Outlying Stations. The Predictive Maintenance program significantly enhances troubleshooting capabilities and allows Authority personnel to predict machinery component failure before it occurs, which translates to significant cost savings by directly increasing machinery life and avoiding unnecessary emergency shutdowns. Thereby, increasing overall reliably and availability of equipment; and

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes travel from November 2 - 10, 2024, for Senior Instrument Technician, to attend The Vibration Institute's CAT III – Machinery Vibration Analysis Training Course and Exam in Chattanooga, TN at the total cost not to exceed $3,200.00 and will be charged to account no. 00200104-458010.

2-J

TRAVEL AUTHORIZATION - TUCSON, AZ

WHEREAS: The Buffalo Sewer Authority serves as a member agency for the National Association of Clean Water Agencies (NACWA), an organization dedicated to engagement and advocacy in the water sector on behalf of municipal organizations; and

WHEREAS: The NACWA Fall Strategic Leadership, Board of Directors Meeting, and National Clean Water Law & Enforcement Seminar will be held in Tucson. from November 11 – 14, 2024, covering major national concerns relating to the water sector practices and issues; and

WHEREAS: The General Manager serves on the Board of Directors and as Past President; and

WHEREAS: The Chairman of the Board recommends attendance for the Board Chairman, General Manager and General Counsel to attend the NACWA Fall Strategic Leadership, Board of Directors Meeting, and National Clean Water Law & Enforcement Seminar.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the Board Chairman, General Manager and General Counsel to travel to Tucson, Arizona from November 10 –15, 2024, to attend the NACWA Fall Strategic Leadership and Board of Directors Meeting and, National Clean Water Law & Enforcement Seminar at a total cost not to exceed $8,500.00. Account nos. 00100104-458010, 00100104-458012, 00110104-458010 and 00110104-458012 will be utilized for this travel.

2-K

TRAVEL AUTHORIZATION - DALLAS, TX

WHEREAS: The Buffalo Sewer Authority has several professional engineering titles that have gone unfilled for years due to the lack of qualified candidates; and

WHEREAS: The National Council of Examiners for Engineering and Surveying (NCEES) develops and administers the professional engineering licensure and pre-licensing exams throughout the United States and Internationally; and

WHEREAS: The Principal Sanitary Engineer has been selected by NCEES to serve as New York State's representative to and chairperson on the Committee on Examinations for Professional Engineers and represent the Committee on Examination Policy and Procedures (EPP) Committee; and

WHEREAS: The EPP Committee will hold an in-person meetings on January 17-18, 2025, in Dallas, TX; and

WHEREAS: The Principal Sanitary Engineer's participation in this process will ensure that the experience and knowledge that Buffalo Sewer Authority provides and requires of professional engineers are reflected in the licensing exam; and

WHEREAS: NCEES will provide air travel, lodging, board, and a $410.00 stipend to cover incidentals and ground transport for all participants for this meeting; and

WHEREAS: The General Manager recommends that the Principal Sanitary Engineer attend the EPP Committee Meeting.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the Principal Sanitary Engineer to travel to Dallas, TX on January 16-19, 2025, to participate in the EPP Committee Meeting for Professional Engineers meeting and to accept the $410.00 stipends from NCEES for incidentals and ground transportation costs. No expenses will be charged to the Buffalo Sewer Authority for this travel.

2-L

TUITION REIMBURSEMENT

WHEREAS: In accordance with the Agreements between the Buffalo Sewer Authority and CSEA Local 815 and the Communications Workers of America, the following Buffalo Sewer Authority employees have applied for Tuition Reimbursement:

EMPLOYEE	SCHOOL	COURSE	TUITION%	REIMBURSEMENT TOTAL
Daniel O'Sullivan	University At Buffalo	STEM Communications	90%	$796.50

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves the above applications for Tuition Reimbursement totaling $796.50. These Reimbursements will be charged to account no. 00200106-421026.

2-M

REQUEST FOR LEAVE OF ABSENCE

WHEREAS: The Buffalo Sewer Authority has received a request from Scott Steinwald, a permanent Preventative Maintenance Coordinator, for an unpaid leave of absence. Mr. Steinwald has accepted the position of Intergovernmental Coordinator with the Buffalo Sewer Authority beginning August 29, 2024, and has requested an unpaid leave of absence for the duration of his position as Intergovernmental Coordinator; and

WHEREAS: The General Manager has reviewed this request and recommends approval of Mr. Steinwald' s request for an unpaid leave of absence for the duration of his position as Intergovernmental Coordinator with the Buffalo Sewer Authority.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby grants Scott Steinwald, an unpaid leave of absence beginning August 29, 2024, for the duration of his position as Intergovernmental Coordinator with the Buffalo Sewer Authority.

CONFIRMATION OF APPOINTMENTS

CLERK (PROVISIONAL)
TREATMENT PLANT ADMINISTRATION
$45,216 PER ANNUM
EFFECTIVE: AUGUST 26, 2024

CATHERINE AMOIA
49 TREEHAVEN RD.
BUFFALO, NY 14215

SR. FIRST CLASS STATIONARY ENGINEER (PROVISIONAL)
SEWAGE TREATMENT PLANT
$31.04 PER HOUR
EFFECTIVE: AUGUST 7, 2024

KAMERON BROWN
55 SUSSEX ST.
BUFFALO, NY 14215

SR. FIRST CLASS STATIONARY ENGINEER (PROVISIONAL)
SEWAGE TREATMENT PLANT
$27.0 PER HOUR
EFFECTIVE: AUGUST 7, 2024

SEAN GOODSPEED
145 SHENANDOAH RD.
BUFFALO, NY 14220

SR. INSTRUMENT TECHNICIAN (PROVISIONAL)
SEWAGE TREATMENT PLANT
$83, 718 PER ANNUM
EFFECTIVE: AUGUST 7, 2024

ISAIHAIH WHITE
39 PROCTOR UPPER
BUFFALO, NY 14215

SR. INSTRUMENT TECHNICIAN (PROVISIONAL)
SEWAGE TREATMENT PLANT
$83, 718 PER ANNUM
EFFECTIVE: AUGUST 7, 2024

KEVIN COLEMAN
23 ATHOL ST.
BUFFALO, NY 14220

LABORER I (SEASONAL)
SEWAGE TREATMENT PLANT
$140 PER DAY
EFFECTIVE: AUGUST 26, 2024

JOHN CARDINALE
76 TENNYSON AVE.
BUFFALO, NY 14216

INTERGOVERMENTAL COORDINATOR (EXEMPT)
CITY HALL ADMINISTRATION
$84, 539 ANNUM
EFFECTIVE: AUGUST 29, 2024

SCOTT STEINWALD
15 WELLINGTON RD.
BUFFALO, NY 14216

WHEREAS: The preceding appointments were made by the General Manger since the last Board Meeting; and

WHEREAS: The General Manager requests confirmation of each appointment.

NOW THEREFORE
BE IT RESOLVED: That the preceding appointments are hereby confirmed by the Board of the Buffalo Sewer Authority

AMENDMENT TO SCHEDULE OF JOB CLASSIFICATION PLAN

WHEREAS: There is a need to modify the Job Classification Plan.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority approves the addition of the following positions to the Job Classification Plan:

One (1) Laborer Supervisor	00700131 411001
One (1) Equipment Operator	00700161 411001
One (1) Clerk	00650121 411001
Four (4) Sewer Construction Worker	00660171 411001

ITEM NO. 3

CLAIM AGAINST LIABILITY AND CASUALTY RESERVE FUND

WHEREAS: Shateer Douglas sued Buffalo Sewer Authority, City of Buffalo and a Buffalo Sewer Authority employee, who was operating a Super Produce Camel Vactor, for property damage and personal injury arising out of an alleged motor vehicle accident occurring on or about October 7, 2022 on Elmwood Avenue.

WHEREAS: The City of Buffalo Corporation Counsel's Office handled the litigation, negotiated the settlement and has reviewed this matter with the General Counsel and agrees that the final settlement amount of $10,000.00 is in the best interest of the parties.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to make payment plaintiff Shateer Douglas and his attorney, Craig Small, in the final settlement amount of $10,000.00 for full and complete settlement of this matter. This claim will be paid out of the Liability and Casualty Reserve Fund.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25,2024

ITEM NO. 4

AUTHORIZATION FOR PURCHASE OF NEW ACCESS CONTROL SOFTWARE, DOORS AND EQUIPMENT UNDER NEW YORK CONTRACT

WHEREAS: After a statewide competitive bid, Minuteman Security was awarded a New York State contract for Intelligent Facility & Security Systems and Solutions; and

WHEREAS: The Buffalo Sewer Authority currently uses Minuteman Security for the installation and service of access control software, doors, and equipment under this contract; and

WHEREAS: Minuteman Security submitted a quote in the amount of $53,009.56 for the purchase and installation of new access control software, and seven (7) access control doors located at the Megastructure, Maintenance Building, Sewer Maintenance Building and City Hall Offices; and

WHEREAS: Board approval is required for services over $35,000.00.

WHEREAS: Due to time constraints, members of the Board were individually polled on August 16, 2024, and authorized acceptance of this proposal; and

WHEREAS: It is now necessary to formally ratify that authorization.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to purchase new access control software, and access control doors and equipment for the Megastructure, Maintenance Building, Sewer Maintenance and City Hall Offices at a cost not to exceed $53,009.56 from Minuteman Security. Account no. 00200106-443421 will be charged for this purchase.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25, 2024

ITEM NO. 5

EXTENSION OF CONTRACT FOR UNIFORMS, COVERALLS, AND LABCOATS

WHEREAS: On May 3, 2023, the Board of the Buffalo Sewer Authority awarded a contract to UniFirst Corporation for uniforms and/or uniform services at the Bird Island Treatment Facility for the period July 1, 2023 to June 30, 2024 with an option to renew four (4) one-year periods, at an annual cost not to exceed $70,888.48; and

WHEREAS: UniFirst Corporation has agreed to extend this contract for one (1) year under the same terms and conditions for fiscal year 2024-2025; and

WHEREAS: The Treatment Plant Superintendent and staff recommend this extension at a total cost not to exceed $70,888.48.

WHEREAS: Board approval is required for services over $35,000.00.

WHEREAS: Due to time constraints, members of the Board were individually polled on August 16, 2024, and authorized acceptance of this proposal; and

WHEREAS: It is now necessary to formally ratify that authorization.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to renew the contract with UniFirst Corporation for uniforms and/or uniform services for the period July 1, 2024 to June 30, 2025, at a total cost not to exceed $70,888.48. Expenses for this contract will be charged to account nos. 00200106-442330, 00520106-442330 and 00650106-442330

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25, 2024

ITEM NO. 6

AUTHORIZATION TO PURCHASE A DEMONSTRATOR MODEL CAMEL MAX 1200 EJECTOR/12YD COMBINATION SEWER CLEANER WITH A 2024 FREIGHTLINER 1082D CHASSIS UNDER THE SOURCEWELL CONTRACT

WHEREAS: The Director of Sewer Maintenance, Assistant Superintendent and Staff request approval to purchase the following Camel Max 1200 Ejector/12yd Combination Sewer Cleaner mounted on a 2024 Freightliner 108SD Chassis under the Sourcewell Contract:

Awarded Contract	Vendor	Equipment	Cost
101221-SPL	Cyncon Equipment	2024 Freightliner 108SD Chassis and Demonstrator Model Camel Max 1200 Ejector/12YD Combination Sewer Cleaner	Contract Price: $524,601.00 Demo Discount: ($25,000.00) Total Cost: $499,601.00

; and

WHEREAS: Purchases over $20,000.00 require Board Approval; and

WHEREAS: A Letter of Intent was issued by the General Manager to enter into a purchase agreement with Cyncon Equipment, Inc. contingent upon the Buffalo Sewer Authority's Board Approval; and

WHEREAS: Due to time constraints, members of the Board were individually polled on August 16, 2024, and authorized acceptance of this proposal; and

WHEREAS: It is now necessary to formally ratify that authorization.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority authorizes the General Manager to purchase the above 2024 Freightliner 108SD Chassis and Demonstrator Model Camel Max 1200 Ejector/12YD Combination Sewer Cleaner from Cyncon Equipment, Inc. at a total estimated cost of $499,601.00. This purchase will be charged to account no. 00690107-474200.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25, 2024

ITEM NO. 7

AUTHORIZATION TO PURCHASE A VEHICLE UNDER THE ONONDAGA BID 106-19 2024

WHEREAS: The Director of Sewer Maintenance and Head Motor Equipment Mechanic, request approval to purchase the following vehicle, with additional options, available under Onondaga County Contract to add to the existing fleet for Sewer Maintenance:

County Contract	Vendor	Vehicle	Cost
Bid No. 2024 Award No. 7974	Van Bortel Ford	One (1) 2024 Ford F-550 XL Super Cab 4x4 203 WB 84 CA With various options as listed on quote#35950: 11-Ft Reading Service Body w/Enclosed 72" sides Model # CLASSIC 11. Steel A60 Galvanneal steel construction. Roll up rear door (1) Full length shelf on each side centered above compartment top. (2) LED dome lights installed on the roof of the cargo areas and wire to a switch Master locking system. 2-1/2" receiver trailer hitch, safety D-rings and trailer plug (4) LED amber flashers at rear of body in compartments (two on each side) (2) LED amber flashers in front of service body facing forward (2) LED Amber Beacon lights one mounted on front of body and the other in rear of body. Delivery Charge: Total Vehicle Cost:	$58,257.90 $36,627.50 $ 110.00 $94,995.40

WHEREAS: The Director of Sewer Maintenance and Head Motor Equipment Mechanic recommend the purchase of the above vehicle at the total cost of $94,995.40

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority authorizes the General Manager to purchase the above vehicle and additional options indicated from Van Bortel Ford, at a total cost of $94,995.40. This purchase will be charged to account no. 00690107-474200.

MOTION TO APPROVE

MADE BY MR. ROOSEVELT

2ND BY MRS. PETRUCCI

AYES 3 NOES 0

Board Meeting of September 25, 2024

ITEM NO. 8

BLANKET ORDER APPROVAL FOR FIELD ENGINEERING SERVICES TO SUPPORT THE EMERSON OVATION DISTRUBUTED CONTROL SYSTEM

WHEREAS: The Buffalo Sewer Authority's Distributed Control System, (DCS) is an Ovation System provided by Emerson Process Control; and

WHEREAS: Emerson Process Control is on the Sole Source list for Ovation field service as well as ovation parts and components; and

WHEREAS: It is necessary to have Emerson Process Control perform field engineering services in place to assist in system troubleshooting, cybersecurity and general system maintenance. In addition, the blanket order will encompass emergency onsite services as well as call-in assistance with Ovation issues; and

WHEREAS: The Buffalo Sewer Authority initiated a blanket order with Emerson in the amount not to exceed $35,000.00 on July 9, 2024. It is necessary to increase this amount by $150,000.00 for continued support of the Ovation Distribution Control System; and

WHEREAS: The Acting Treatment Plant Administrator, Treatment Plant Superintendent and staff recommend approval to retain Emerson Blanket Order, for field engineering services on an as-needed basis for the 2024-2025 fiscal year.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to retain Emerson Process Control, for field engineering services on an as-needed basis in an amount not to exceed $185,000.00 for the period October 1, 2024 through June 30, 2025. Expenses for these services will be charged to account no. 00200106-432004.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25, 2024

ITEM NO. 9

REPORT ON BIDS RECEIVED – DOOR INSPECTION AND PREVENTATIVE MAINTENANCE REPAIR SERVICES FOR EXTERIOR AND INTERIOR DOORS

WHEREAS: Formal bids were advertised and solicited for Door Inspection and Preventative Maintenance Repair Services for approximately 560 exterior and interior doors located at the Bird Island Treatment Facility and Outlying Stations; and

WHEREAS: The following bids were received and opened by the Buffalo Sewer Authority Purchase Department on June 17, 2024:

Vendor:	**Total Cost:**
A 24 Hour Door National Inc.	$113,500.00
Sicoli Construction	$119,750.00

; and

WHEREAS: The Superintendent of Mechanical Maintenance and staff reviewed the quotes received and recommend this service be awarded to the lowest bidder; A 24 Hour Door National Inc., at a total cost not to exceed $113,500.00; and

WHEREAS: Board Approval is required on services over $35,000.00.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to enter into and execute a contract with A 24 Hour Door National Inc., to provide the Inspection and Preventative Maintenance and Repair Services to the approximately 560 passageway doors at the Bird Island Treatment Facility and Outlying Stations for the period beginning July 1, 2024 to June 30, 2025 at an annual cost not to exceed $113,500.00. Expenses for this contract will be charged to account nos. 00520106-443421 and 00520105-466107.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25, 2024

ITEM NO. 10

AUTHORIZATION TO ENTER INTO AN AGREEMENT FOR PROFESSIONAL SERVICES WITH ERIE COMMUNITY COLLEGE TO PROVIDE MILLWRIGHT TRAINING

WHEREAS: The Superintendent of Mechanical Maintenance, the General Manager and staff have identified the need to develop a comprehensive skill enhancement training program for our Millwrights to enhance the Buffalo Sewer Authority's ability to adequately and cost effectively maintain assets; and

WHEREAS: Erie Community College has proposed a customized welding training program for the Buffalo Sewer Authority Millwrights that would provide advanced knowledge to perform corrective and preventative maintenance to the equipment at the facility with a higher level of general millwright skills, an in-depth knowledge of industry best practices, and a greater sense of quality and innovation; and

WHEREAS: Based upon proposal review, the Superintendent of Mechanical Maintenance and staff recommend retaining Erie Community College to perform the training for the Buffalo Sewer Authority Millwrights for the fiscal year of 2024-2025.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to enter into an agreement for professional services with Erie Community College to provide training for the Buffalo Sewer Authority Millwrights at a total cost not to exceed $91,000.00. These services will be charged to account no. 00520106-421026.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25, 2024

ITEM NO. 11

AUTHORIZATION TO ENTER INTO AN AGREEMENT FOR PROFESSIONAL SERVICES WITH ERIE COMMUNITY COLLEGE TO PROVIDE INSTRUMENT TECHNICIAN TRAINING

WHEREAS: The Superintendent of Mechanical Maintenance, the General Manager and staff have identified the need to develop a comprehensive skill enhancement training program for our Instrument Technicians to enhance the Buffalo Sewer Authorities ability to adequately and cost effectively maintain the assets; and

WHEREAS: Erie Community College has proposed customized training programs for the Buffalo Sewer Authority Instrument Technicians that would provide advanced knowledge to perform corrective and preventative maintenance to the equipment at the facility with a higher level of general instrument tech skills, an in-depth knowledge of industry best practices, and a greater sense of quality and innovation; and

WHEREAS: Based upon proposal review, the Superintendent of Mechanical Maintenance and staff recommend retaining Erie Community College to perform the training for the Buffalo Sewer Authority Instrument Technicians for the 2024-2025 fiscal year.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to enter into an agreement for professional services with Erie Community College to provide training for the Buffalo Sewer Authority Instrument Technicians at a total cost not to exceed $75,000.00. These services will be charged to account no. 00520106-421026.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25, 2024.

ITEM NO. 12

CHANGE ORDER NO. 2 – CONTRACT NO. 82000021 ERDMAN ANTHONY TERM AGREEMENT

CONSULTANT:	ORIGINAL CONTRACT COST	$250,000.00
Erdman Anthony and Associates, Inc.	PREVIOUS CHANGE ORDERS	$235,000.00
145 Culver Road, Suite 200	THIS CHANGE ORDER	$26,000.00
Rochester, NY 14620	ADJUSTED CONTRACT COST	$511,000.00

VENDOR NO. 10444 ACCOUNT NO. 02000510-432004

WORK: Three (3) Year Professional Engineering Services Term Agreement

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DESCRIPTION OF CHANGE OR EXTRA WORK:

Item #1 Additional design and coordination services for the Fruit Belt sewer project

REASON FOR CHANGE OR EXTRA WORK:

Item #1 Erdman Anthony is providing design services for sewer lining and repair work in the Fruit Belt neighborhood, due to unforeseen coordination issues this design has taken more effort than originally anticipated.

COST OF CHANGE OR EXTRA WORK:

Item #1 $26,000.00

THE TOTAL COST OF THE CHANGE OR EXTRA WORK: $26,000.00

WHEREAS: In Item No. 10, on April 1, 2020, the Board of the Buffalo Sewer Authority awarded six (6) term engineering contracts for work on an as needed and as directed basis for capital improvement projects for up to three (3) years for $250,000.00 each; and

WHEREAS: On August 4, 2020, Erdman Anthony and Associates, Inc. entered into a contract with the Buffalo Sewer Authority in accordance with the previously stated conditions; and

WHEREAS: On March 1, 2023, the Board of the Buffalo Sewer Authority approved Change Order No. 1 to this contract to provide design, outreach, and bidding services for the Fruit Belt sewer rehabilitation project; and

WHEREAS: The Principal Sanitary Engineer has reviewed the proposed "Buffalo Sewer Authority Term Agreement Contract No. 82000021 Fruit Belt Sewers- Request for extra work- Revision 1" and the Change Order No. 2 and recommend their approval.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves Change Order No. 2 to Contract No. 82000021 as written in the above Agenda Item, increasing the contract cost in the amount of $26,000.00, making the adjusted contract cost $511,000.00. Expenses from this contract will be funded from Account No. 02000510-432004.

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25, 2024

SUPPLEMENTAL ITEM: 12-1

FUND BALANCE DESIGNATION

WHEREAS: The Buffalo Sewer Authority has adopted a Fund Balance Policy in an effort to ensure financial security through the maintenance of a healthy reserve fund.

WHEREAS: In accordance with this policy, each year the Buffalo Sewer Authority must designate the purpose of fund balance.

WHEREAS: The General Manager recommends the following designation of fund balance for the fiscal year ending June 30, 2024

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves the following designation of fund balance for the fiscal year ending June 30, 2024.

Fund Balances:	
Non-Spendable	$242,607
Committed:	
Encumbrances	6,500,676
Loss Contingencies	4,000,000
Capital Projects	20,507,711
Unassigned	10,000,000
Total Fund Balances	$41,250,994

MOTION TO APPROVE

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of September 25, 2024

ITEM NO. 13

ADJOURNMENT OF MEETING

MOTION TO ADJOURN

MADE BY MR. ROOSEVELT

2ND BY MRS. PETRUCCI

AYES 3 NOES 0

Board Meeting of September 25, 2024

FUND BALANCE DESIGNATION

WHEREAS: The Buffalo Sewer Authority has adopted a Fund Balance Policy in an effort to ensure financial security through the maintenance of a healthy reserve fund.

WHEREAS: In accordance with this policy, each year the Buffalo Sewer Authority must designate the purpose of fund balance.

WHEREAS: The General Manager recommends the following designation of fund balance for the fiscal year ending June 30, 2024

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves the following designation of fund balance for the fiscal year ending June 30, 2024.

Fund Balances:	
Non-Spendable	$242,607
Committed:	
Encumbrances	6,500,676
Loss Contingencies	4,000,000
Capital Projects	20,507,711
Unassigned	10,000,000
Total Fund Balances	$41,250,994

MOTION TO _____

MADE BY _____

2ND BY _____

AYES _____ NOES _____

Board Meeting of September 25, 2024

BUFFALO
SEWER AUTHORITY

ATTACHMENT A-1

Full Environmental Assessment Form (FEAF)
Part 3 - Determination of Significance

Lead Agency: Buffalo Sewer Authority

Project: Breckenridge Street CSO Control Project

Proposed Activity:

This gravity sewer project will include rebuilding the existing brick sewer on Breckenridge Street, installing a new sewer on West Avenue and a new drop-pipe manhole at the intersection of West Avenue and Lafayette Avenue. The project site encompasses Breckenridge Street from West Avenue to Herkimer Street, and West Avenue from Breckenridge Street to Lafayette Avenue. The existing Breckenridge Street sewer between West Avenue and Herkimer Street will be rebuilt to convey flow west to West Avenue and to separate flow from the existing brick sewer west of the diversion point. The new West Avenue sewer will receive flow from the rebuilt Breckenridge Street sewer. Existing collection sewers along West Avenue will be abandoned and house connections along West Avenue and Breckenridge Street will be reconnected to the new sewer. A new drop-pipe manhole will be constructed at the intersection of West Avenue and Lafayette Avenue to convey the West Avenue flow to the Scajaquada Tunnel.

Background:

The BSA entered into an Administrative Order (AO) with New York State Department of Environmental Conservation (DEC) and the United States Environmental Protection Agency (EPA) as part of their approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) that was approved on March 18, 2014. The purpose of the LTCP is to reduce CSO activations within the existing collection system and to alleviate flow spikes for influent flow to the wastewater treatment facility.

Compliance with the LTCP is defined by the number of activations allowed in the typical precipitation year for the Sewer Patrol Point's (SPP's) receiving waterbody as determined by BSA's collection system hydraulic model. Following the approval of the LTCP in 2014 by the regulatory agencies, the collection system hydraulic model used in the LTCP was updated and recalibrated to reflect current system conditions. The updated and re-calibrated LTCP (now re-named the Queen City Clean Waters Program) model suggested that some projects originally envisioned in the 2014 LTCP are no longer feasible and that other planned projects can be further optimized to meet targets. The BSA undertook an optimization process that defined many projects within a Selected Alternative. Pursuant to the State Environmental Quality Review Act ("SEQRA") and 6 NYCRR 617.6(b)(3)(i), BSA has prepared this Significance Statement for the Breckenridge Street CSO Control Project

Agency Coordination:

Ten potentially involved agencies were identified. SEQR project materials were prepared and sent: City of Buffalo Common Council (Masten District), City of Buffalo Department of Public Works (Parks & Streets – Parks, Parks & Streets - City Engineer), New York State Department of State - Coastal Management Program, New York State Department of Transportation – Region 5, New York State Department of Environmental Conservation - Region 9, City of

Buffalo Office of Strategic Planning, City of Buffalo Water Authority, Erie County Department of Health, Buffalo Environmental Management Commission, U.S. Fish and Wildlife Service. No agencies objected to the BSA serving as Lead Agency or expressed concern with the project.

Agency Coordination:

Additionally, project information was submitted for review to New York State Parks, Recreation and Historic Preservation – Office of Parks, Recreation and Historic Preservation (OPRHP). OPRHP issued an Effect Finding of No Impact Letter. Based upon the review, no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

A consultation was also made with the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) system. The project site is located within the vicinity of four (4) listed endangered/proposed endangered species: the Northern Long Eared Bat, the Tricolored Bat, the Salamander Mussel, and the Monarch Butterfly. The site is also located within the vicinity of two (2) protected eagle species and twnty-three (23) bird species that are listed on the US Fish and Wildlife Service (USFWS) Birds of Conservation Concern list. There are no critical habitats in the vicinity or the project site. USFW issued a letter stating the project is not reasonably certain to cause incidental take of any endangered species.

A consultation was made with the NY State Natural Heritage Program (NHP). The project area is located within the buffer area of the Lake Sturgeon protection area, which is listed as threatened through the NYSDEC. NYNHP issued a letter stating the project is not reasonably certain to cause incidental take of the Lake Sturgeon.

The SEQR project materials and correspondence from responding agencies is included as an attachment to this document.

Analysis of Impacts:

Using the information provided in the FEAF Part 1, project impacts were evaluated for each of the 18-areas identified in the FEAF Part 2. Impacts were evaluated based on magnitude, duration, and likelihood of occurring. Potential impacts were identified in two areas: Impacts to Land and Open Space. The magnitude of the impacts is discussed below:

Impact on Land

The proposed action involves the construction of the land surface on the proposed site. The total land area to be disturbed is approximately 1.6 acres over six to seven months. It will also involve an excavation to approximately 60-feet below grade. Given the relatively small area of disturbance and the targeted nature of the excavation, the impact on existing land use is expected to be minor. Temporary disruption may occur during construction, but the long-term land use will be consistent with the project's goals of improving sewer capacity and reducing overflows.

The excavation process will expose soil to the elements, increasing the potential for erosion and sediment runoff. Mitigation measures, such as erosion control practices and proper site management, will be essential to minimize these impacts. Implementing effective control measures will be crucial to prevent adverse effects on surrounding areas.

During construction, the primary impacts will be related to noise, dust, and temporary disruption of local traffic. These impacts are anticipated to be localized and temporary. Once construction is complete, the land will be restored and maintained in accordance with project plans, with minimal long-term land use changes anticipated.

Overall, while the project involves a moderate excavation and land disturbance, the impacts on land are expected to be minor in magnitude and a short-term impact. The benefits of improving sewer capacity and reducing overflows outweigh the temporary construction impacts. Proper management and mitigation strategies will ensure that the land impacts are minimized and that the project contributes positively to the overall infrastructure improvements.

Determination of Significance

In determining the significance of this project, it is important to emphasize the long-term benefits it will have on the overall public health of Buffalo and its citizens. By reducing Combined Sewer Overflow (CSO) activations as part of the BSA's compliance with the LTCP, the project directly contributes to improved water quality in Buffalo's receiving waterbodies, reducing pollutants and contaminants entering the local waterways. The decrease in overflow events also alleviates the stress on the wastewater treatment facility, ensuring more reliable and effective wastewater management for the community.

While short-term impacts from land disturbance and excavation during construction are anticipated, these are temporary and manageable with proper mitigation measures. The long-term benefits, including enhanced environmental quality, safer water bodies, and compliance with state and federal environmental mandates, far outweigh these temporary inconveniences. Ultimately, the project promotes a healthier and more sustainable urban environment for the residents of Buffalo, contributing to cleaner water resources, improved infrastructure, and the overall resilience of the city's wastewater management system. These public health and environmental improvements underscore the importance of advancing the project despite any short-term impacts.

With consideration of the aforementioned environmental factors, along with findings from Part 1 and Part 2 of the Full Environmental Assessment Form, the magnitude, importance, duration, and scale of adverse environmental impacts related to this project are very low.

Therefore, the lead agency checks "A" on the last page of the Full Environmental Assessment Form, issuing a negative declaration (Neg. Dec) for the action.

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☐ NO ☑ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☑	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☑	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☑
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☑
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☑	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: _____ _____		☑	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	□	□
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	□	□
c. Other impacts: _____ _____		□	□

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑ NO ☐ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	□	□
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	□	□
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	□	□
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	□	□
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	□	□
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	□	□
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	□	□
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	□	□
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	□	□
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	□	□
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	□	□

l. Other impacts: _____ _____		□	□

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t)

☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	□	□
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	□	□
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	□	□
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	□	□
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	□	□
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	□	□
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	□	□
h. Other impacts: _____ _____		□	□

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	□	□
b. The proposed action may result in development within a 100 year floodplain.	E2j	□	□
c. The proposed action may result in development within a 500 year floodplain.	E2k	□	□
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	□	□
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	□	□
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	□	□

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. ☑ NO ☐ YES
(See Part 1. D.2.f., D.2.h, D.2.g)
If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑ NO ☐ YES
If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	□	□
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	□	□
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	□	□
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	□	□
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	□	□
j. Other impacts: _____ _____		□	□

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	**No, or small impact may occur**	**Moderate to large impact may occur**
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	□	□
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	□	□
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	□	□
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	□	□
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	□	□
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	□	□
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	□	□
h. Other impacts: _____		□	□

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☑ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		□	□
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	□	□
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	□	□
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	□	□

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	□	□
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	□	□
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	□	□
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	□	□
e. Other impacts: _____ _____		□	□

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
c. Other impacts: _____ _____		□	□

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____			

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES

(See Part 1. C.1, C.2. and C.3.)

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES

(See Part 1. C.2, C.3, D.2, E.3)

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

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ATTACHMENT A-3

Agency Use Only [IfApplicable]

Project : Breckenridge Street

Date : 9/6/2024

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See attached significance statement.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the Buffalo Sewer Authority as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Breckenridge Combined Sewer Overflow (CSO) Project

Name of Lead Agency: Buffalo Sewer Authority

Name of Responsible Officer in Lead Agency: Oluwole McFoy

Title of Responsible Officer: General Manager

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer) Elizabeth Tramposch Date: 09/06/2024

For Further Information:

Contact Person: Elizabeth Tramposch, PE - CORE Environmental Consultants, Inc.

Address: 2312 Wehrle Drive, Buffalo, NY 14221

Telephone Number: (716) 204-8054

E-mail: emt@coreenv.com

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

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ATTACHMENT B-1

Full Environmental Assessment Form (FEAF)
Part 3 - Determination of Significance

Lead Agency: Buffalo Sewer Authority

Project: Genesee St - CSO053_8 SPP341A Modification

Proposed Activity:

This project is a Sewer Patrol Point (SPP) modification to incorporate an additional 18-inch diameter underflow pipe and raising the overflow weir to 55.60 ft to achieve a new total flow of 26.4 million gallons per day (MGD) reducing overflows at CSO-053. The project area is located on Genessee Street east of Kerns Street. The existing drop shaft connection to the Scajaquada Tunnel Interceptor at SPP 341A was reviewed and determined to be undersized for the proposed flow, with an original design flow of only 4.43 MGD. A vortex style drop structure is proposed to achieve the desired increased capacity. The small footprint of the vortex plunge design combined with its ability to reuse the existing tunnel connection from the existing drop shaft make this style drop shaft the preferred alternative. The drop shaft replacement would be constructed next to the existing drop shaft and completed offline.

Background:

The BSA entered into an Administrative Order (AO) with New York State Department of Environmental Conservation (DEC) and the United States Environmental Protection Agency (EPA) as part of their approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) that was approved on March 18, 2014. The purpose of the LTCP is to reduce CSO activations within the existing collection system and to alleviate flow spikes for influent flow to the wastewater treatment facility.

Compliance with the LTCP is defined by the number of activations allowed in the typical precipitation year for the Sewer Patrol Point's (SPP's) receiving waterbody as determined by BSA's collection system hydraulic model. Following the approval of the LTCP in 2014 by the regulatory agencies, the collection system hydraulic model used in the LTCP was updated and recalibrated to reflect current system conditions. The updated and re-calibrated LTCP (now re-named the Queen City Clean Waters Program) model suggested that some projects originally envisioned in the 2014 LTCP are no longer feasible and that other planned projects can be further optimized to meet targets. The BSA undertook an optimization process that defined many projects within a Selected Alternative. Pursuant to the State Environmental Quality Review Act ("SEQRA") and 6 NYCRR 617.6(b)(3)(i), BSA has prepared this Significance Statement for the Genesee St - CSO053_8 SPP341A Modification

Agency Coordination:

Ten potentially involved agencies were identified. SEQR project materials were prepared and sent: City of Buffalo Common Council (Masten District), City of Buffalo Department of Public Works (Parks & Streets – Parks, Parks & Streets - City Engineer), New York State Department of State - Coastal Management Program, New York State Department of Transportation – Region 5, New York State Department of Environmental Conservation - Region 9, City of Buffalo Office of Strategic Planning, City of Buffalo Water Authority, Erie County Department of

Health, Buffalo Environmental Management Commission, U.S. Fish and Wildlife Service. No agencies objected to the BSA serving as Lead Agency or expressed concern with the project.

Agency Coordination:

Additionally, project information was submitted for review to New York State Parks, Recreation and Historic Preservation – Office of Parks, Recreation and Historic Preservation (OPRHP). OPRHP issued an Effect Finding of No Impact Letter. Based upon the review, no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

A consultation was also made with the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) system. The project site is located within the vicinity of four (4) listed endangered/proposed endangered species: the Northern Long Eared Bat, the Tricolored Bat, the Salamander Mussel, and the Monarch Butterfly. The site is also located within the vicinity of two (2) protected eagle species and twnty-three (23) bird species that are listed on the US Fish and Wildlife Service (USFWS) Birds of Conservation Concern list. There are no critical habitats in the vicinity or the project site. USFW issued a letter stating the project is not reasonably certain to cause incidental take of any endangered species.

The site did not require consultation with the NY State Natural Heritage Program (NHP) as the site does not contain a designated significant natural community or contain any species that NYS lists as species of special concern. The SEQR project materials and correspondence from responding agencies is included as an attachment to this document.

Analysis of Impacts:

Using the information provided in the FEAF Part 1, project impacts were evaluated for each of the 18-areas identified in the FEAF Part 2. Impacts were evaluated based on magnitude, duration, and likelihood of occurring. Potential impacts were identified in two areas: Impacts to Land and Open Space. The magnitude of the impacts is discussed below:

Impact on Land

The proposed action involves the construction of the land surface on the proposed site. The total land area to be disturbed is approximately 2,200 square feet (0.05 acres). It will also involve an excavation to approximately 50-feet below grade, and a total of 1,500 cubic yards of material to be excavated. Given the relatively small area of disturbance and the targeted nature of the excavation, the impact on existing land use is expected to be minor. Temporary disruption may occur during construction, but the long-term land use will be consistent with the project's goals of improving sewer capacity and reducing overflows.

The excavation process will expose soil to the elements, increasing the potential for erosion and sediment runoff. Mitigation measures, such as erosion control practices and proper site management, will be essential to minimize these impacts. Implementing effective control measures will be crucial to prevent adverse effects on surrounding areas.

During construction, the primary impacts will be related to noise, dust, and temporary disruption of local traffic. These impacts are anticipated to be localized and temporary. Once construction is complete, the land will be restored and maintained in accordance with project plans, with minimal long-term land use changes anticipated.

Overall, while the project involves a moderate excavation and land disturbance, the impacts on land are expected to be minor in magnitude and a short-term impact. The benefits of improving sewer capacity and reducing overflows outweigh the temporary construction impacts. Proper management and mitigation strategies will ensure that the land impacts are minimized and that the project contributes positively to the overall infrastructure improvements.

Impacts to Open Space:

The installation of a new vortex-style drop shaft within Schiller Park will have a minimal impact on the open space. The footprint of the proposed drop shaft structure is small, and its location next to the existing drop shaft will limit the extent of disturbance to the surrounding park area. Additionally, only two manholes will be added to facilitate access and maintenance, further reducing the project's spatial impact on the park. The construction will be completed offline, meaning that the existing infrastructure will remain operational during installation, minimizing the need for prolonged work within the open space.

Although the project will introduce some temporary disruptions during construction, such as restricted access and minor vegetation disturbance, these impacts will be short-term and localized. The small scale of the footprint and the reuse of the existing tunnel connection will help preserve the overall character and functionality of the park. Once the modifications are complete, the park area will remain largely unaffected, with minimal visual or physical changes. The project will result in long-term environmental benefits by increasing the sewer system’s capacity, reducing combined sewer overflows (CSO) at CSO-053, and improving water quality in nearby water bodies, which aligns with community goals for enhanced environmental management.

Determination of Significance

In determining the significance of this project, it is important to emphasize the long-term benefits it will have on the overall public health of Buffalo and its citizens. By reducing Combined Sewer Overflow (CSO) activations as part of the BSA's compliance with the LTCP, the project directly contributes to improved water quality in Buffalo’s receiving waterbodies, reducing pollutants and contaminants entering the local waterways. The decrease in overflow events also alleviates the stress on the wastewater treatment facility, ensuring more reliable and effective wastewater management for the community.

While short-term impacts from land disturbance and excavation during construction are anticipated, these are temporary and manageable with proper mitigation measures. The long-term benefits, including enhanced environmental quality, safer water bodies, and compliance with state and federal environmental mandates, far outweigh these temporary inconveniences. Ultimately, the project promotes a healthier and more sustainable urban environment for the residents of Buffalo, contributing to cleaner water resources, improved infrastructure, and the overall resilience of the city’s wastewater management system. These public health and environmental improvements underscore the importance of advancing the project despite any short-term impacts.

With consideration of the aforementioned environmental factors, along with findings from Part 1 and Part 2 of the Full Environmental Assessment Form, the magnitude, importance, duration, and scale of adverse environmental impacts related to this project are very low.

Therefore, the lead agency checks “A” on the last page of the Full Environmental Assessment Form, issuing a negative declaration (Neg. Dec) for the action.

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ATTACHMENT B-2

Agency Use Only [If applicable]

Project: Genesee Street SPP341A

Date: 09/06/24

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer **"Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer **"No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☐ NO ☑ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☑	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☑	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☑
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☑
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☑	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑ NO ☐ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑NO ☐YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑NO ☐YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☑NO ☐YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑NO ☐YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources
The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑NO ☐YES
If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources
The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)
If "Yes", answer questions a - g. If "No", go to Section 10.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	☐ ☐	☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	☐ ☐	☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources
The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)
If "Yes", answer questions a - e. If "No", go to Section 11.

☐ NO ☑ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☑	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☑	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☑	☐

d. Other impacts: _____		☑	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☐ NO ☑ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☑	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☑	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☑	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☑	☐
e. Other impacts: Minor construction in Schiller Park		☐	☑

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____		☐	☐

13. Impact on Transportation
The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____		☐	☐

14. Impact on Energy
The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____			

15. Impact on Noise, Odor, and Light
The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☐ NO ☑ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☑	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☑	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☑
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☑	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☑	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☑	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☑	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☑	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☑	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☑	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☑	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☑	☐
m. Other impacts: _____ _____		☑	☐

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES

(See Part 1. C.1, C.2. and C.3.)

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES

(See Part 1. C.2, C.3, D.2, E.3)

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

BUFFALO
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ATTACHMENT B-3

Agency Use Only [IfApplicable]

Project : Genesee Street

Date : 9/6/2024

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See attached significance statement.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the Buffalo Sewer Authority as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Capital Project Program - Genesee Street CSO053_8 SPP341A Modification

Name of Lead Agency: Buffalo Sewer Authority

Name of Responsible Officer in Lead Agency: Oluwole McFoy

Title of Responsible Officer: General Manager

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer) Elizabeth Tramposch Date: 09/06/2024

For Further Information:

Contact Person: Elizabeth Tramposch, PE CORE Environmental Consultants, Inc.

Address: 2312 Wehrle Drive, Buffalo, NY 14221

Telephone Number: (716) 204-8054

E-mail: emt@coreenv.com

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

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ATTACHMENT C-1

Full Environmental Assessment Form (FEAF)
Part 3 - Determination of Significance

Lead Agency: Buffalo Sewer Authority

Project: CSO-053 Sewer Patrol Point (SPP) Modification at Colorado Avenue at Scajaquada Street (CSO053_2.5 SPP337 Modification)

Proposed Activity:

For this project, SPP337 would be modified by incorporating an additional 30-inch diameter underflow pipe. SPP337 is located near the intersection of Scajaquada Street and Colorado Avenue in the City of Buffalo. This modification would reduce overflows at CSO053 and would benefit from the installation of the Schiller Park Offline Storage (OLS) or the Sidney OLS to free up additional capacity within the Scajaquada Tunnel. To obtain the necessary flow capacity, a new sewer diversion chamber and drop shaft connection to the Scajaquada Tunnel Interceptor will be constructed. The new drop shaft will be connected directly to a new diversion chamber constructed in line with the existing sewer along Colorado Avenue. Flow will enter the diversion chamber and be directed towards the drop shaft as the primary flow path. Any high flow event that exceeds the 48 (million gallons per day) MGD flow for the new drop shaft connection will pass over a weir in the structure and continue down the sewer in Colorado Avenue which outlets to the Scajaquada Drain.

Background:

The BSA entered into an Administrative Order (AO) with New York State Department of Environmental Conservation (DEC) and the United States Environmental Protection Agency (EPA) as part of their approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) that was approved on March 18, 2014. The purpose of the LTCP is to reduce CSO activations within the existing collection system and to alleviate flow spikes for influent flow to the wastewater treatment facility.

Compliance with the LTCP is defined by the number of activations allowed in the typical precipitation year for the Sewer Patrol Point's (SPP's) receiving waterbody as determined by BSA's collection system hydraulic model. Following the approval of the LTCP in 2014 by the regulatory agencies, the collection system hydraulic model used in the LTCP was updated and recalibrated to reflect current system conditions. The updated and re-calibrated LTCP (now re-named the Queen City Clean Waters Initiative) model suggested that some projects originally envisioned in the 2014 LTCP are no longer feasible and that other planned projects can be further optimized to meet targets. The BSA undertook an optimization process that defined many projects within a Selected Alternative. Pursuant to the State Environmental Quality Review Act ("SEQRA") and 6 NYCRR 617.6(b)(3)(i), BSA has prepared this Significance Statement for the Colorado Avenue at Scajaquada Street CSO053_2.5 SPP337 Modification.

Agency Coordination:

Ten potentially involved agencies were identified. SEQR project materials were prepared and sent: City of Buffalo Common Council (Masten District), City of Buffalo Department of Public Works (Parks & Streets – Parks, Parks & Streets - City Engineer), New York State Department of State - Coastal Management Program, New York State Department of Transportation –

Region 5, New York State Department of Environmental Conservation - Region 9, City of Buffalo Office of Strategic Planning, City of Buffalo Water Authority, Erie County Department of Health, Buffalo Environmental Management Commission, U.S. Fish and Wildlife Service. No agencies objected to the BSA serving as Lead Agency or expressed concern with the project.

Agency Consultations:

Additionally, project information was submitted for review to New York State Parks, Recreation and Historic Preservation – Office of Parks, Recreation and Historic Preservation (OPRHP). OPRHP issued an Effect Finding of No Impact Letter. Based upon the review, no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

A consultation was also made with the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) system. The project site is located within the vicinity of four (4) listed endangered/proposed endangered species: the Northern Long Eared Bat, the Tricolored Bat, the Salamander Mussel, and the Monarch Butterfly. The site is also located within the vicinity of two (2) protected eagle species and twnty-three (23) bird species that are listed on the US Fish and Wildlife Service (USFWS) Birds of Conservation Concern list. There are no critical habitats in the vicinity or the project site. USFW issued a letter stating the project is not reasonably certain to cause incidental take of any endangered species.

The site did not require consultation with the NY State Natural Heritage Program (NHP) as the site does not contain a designated significant natural community or contain any species that NYS lists as species of special concern. The SEQR project materials and correspondence from responding agencies is included as an attachment to this document.

Analysis of Impacts:

Using the information provided in the Full Environmental Assessment Form (FEAF) Part 1, project impacts were evaluated for each of the 18-areas identified in the FEAF Part 2. Impacts were evaluated based on magnitude, duration, and likelihood of occurring. Potential impacts were identified in three areas: Land, Impacts on Surface Water, and Impact on Human Health. The magnitude of the impacts is discussed below:

Impact on Land

The proposed action involves the construction of the land surface on the proposed site. The total land area to be disturbed is approximately 6,700 square feet (0.15 acres). It will also involve an excavation to approximately 18-feet below grade, and a total of 1,700 cubic yards of material to be excavated. Given the relatively small area of disturbance and the targeted nature of the excavation, the impact on existing land use is expected to be minor. Temporary disruption may occur during construction, but the long-term land use will be consistent with the project's goals of improving sewer capacity and reducing overflows.

The excavation process will expose soil to the elements, increasing the potential for erosion and sediment runoff. Mitigation measures, such as erosion control practices and proper site management, will be essential to minimize these impacts. Implementing effective control measures will be crucial to prevent adverse effects on surrounding areas.

During construction, the primary impacts will be related to noise, dust, and temporary disruption

of local traffic. These impacts are anticipated to be localized and temporary. Once construction is complete, the land will be restored and maintained in accordance with project plans, with minimal long-term land use changes anticipated.

Overall, while the project involves a moderate excavation and land disturbance, the impacts on land are expected to be minor in magnitude and a short-term impact. The benefits of improving sewer capacity and reducing overflows outweigh the temporary construction impacts. Proper management and mitigation strategies will ensure that the land impacts are minimized and that the project contributes positively to the overall infrastructure improvements.

Impacts on Human Health

The proximity of the project area to the 1001 East Delevan Avenue Brownfield Cleanup Site and the 320 Scajaquada Street State Superfund site raises concerns about potential exposure to contaminants. The 1001 East Delevan Avenue site is known for polychlorinated biphenyl (PCB) contamination and hazardous waste, while the 320 Scajaquada Street site is a State Superfund site with historical contamination issues.

The 1001 East Delavan Avenue site, located directly north of the project area, spans 32.884 acres and includes a 2.54-acre Class 2 New York State Inactive Hazardous Waste Site. Formerly used by GM and American Axle for manufacturing, the site was contaminated with oil and PCBs and is now partially redeveloped by East Delavan Properties. A Brownfield Cleanup Agreement was executed in 2018, with ongoing investigations since 2021. The nearby Saginaw-Buffalo site, 0.1-mile northeast, is a 7.248-acre former industrial site with a history of oil and PCB contamination. The contaminated soils at the Saginaw-Buffalo site are covered by pavement, with deed restrictions limiting the site to industrial use. Remediation has been completed, and residual contamination is managed under a Site Management Plan.

While conducting soil borings at the project site, free product was encountered while core drilling bedrock at approximately 38-feet below grade. A sample of the free product was analyzed for PCBs and petroleum hydrocarbon identification. The sample chromatogram most closely matches hydraulic fluid or motor oil. The sample also contained PCBs (Aroclor-1248) at 4.2 parts per million. Soil samples collected at the soil-groundwater interface did not contain concentrations of contaminants above regulatory levels. The results of the investigation were shared with the New York State Department of Environmental Conservation, and they will be conducting further investigation.

Although soil testing in the area has largely indicated low levels of contamination, the presence of free product contamination in bedrock, coupled with the nearby contaminated sites, presents a higher risk of exposure. Excavation and soil disturbance may mobilize contaminants, leading to possible exposure through dust or direct contact, particularly during construction.

To mitigate health risks, several measures will be implemented:

- Dust and Contaminant Control: Active dust suppression, covering exposed areas, and secure management of excavated materials will prevent the spread of contaminants through air or water.
- Protective Equipment for Workers: Construction workers will use personal protective equipment (PPE) to reduce exposure to any hazardous substances during the excavation process.
- Health and Safety Plans: A detailed Health and Safety Plan (HASP) will be developed,

incorporating procedures for safely managing any contaminated materials encountered.
- Contingency Plan: A contingency plan will be developed for this project to outline steps to be taken if contamination is encountered.

Although the project is in close proximity to known contaminated sites and free product has been discovered, a series of protective measures will be put in place to mitigate human health risks. Through diligent soil testing, dust control, the use of PPE, and continuous monitoring, the project aims to minimize potential exposure to contaminants. With the NYSDEC conducting further investigation, additional safety protocols will be adopted as needed to protect workers and the surrounding community from health impacts. Therefore, the impact to public health will be a moderate magnitude and a short-term impact.

Determination of Significance:

In determining the significance of this project, it is important to emphasize the long-term benefits it will have on the overall public health of Buffalo and its citizens. By reducing Combined Sewer Overflow (CSO) activations as part of the BSA's compliance with the LTCP, the project directly contributes to improved water quality in Buffalo's receiving waterbodies, reducing pollutants and contaminants entering the local waterways. The decrease in overflow events also alleviates the stress on the wastewater treatment facility, ensuring more reliable and effective wastewater management for the community.

While short-term impacts from land disturbance, excavation, and potential exposure to contaminants during construction are anticipated, these are temporary and manageable with proper mitigation measures. The long-term benefits, including enhanced environmental quality, safer water bodies, and compliance with state and federal environmental mandates, far outweigh these temporary inconveniences. Ultimately, the project promotes a healthier and more sustainable urban environment for the residents of Buffalo, contributing to cleaner water resources, improved infrastructure, and the overall resilience of the city's wastewater management system. These public health and environmental improvements underscore the importance of advancing the project despite any short-term impacts.

With consideration of the aforementioned environmental factors, along with findings from Part 1 and Part 2 of the Full Environmental Assessment Form, the magnitude, importance, duration, and scale of adverse environmental impacts related to the installation of the new sewer diversion chamber and drop shaft connection to the Scajaquada Tunnel Interceptor are very low.

Therefore, the lead agency checks "A" on the last page of the Full Environmental Assessment Form, issuing a negative declaration (Neg. Dec) for the action.

BUFFALO
SEWER AUTHORITY

ATTACHMENT C-2

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Agency Use Only [If applicable]

Project :

Date :

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer **"Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer **"No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land

Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)

☐ NO ☑ YES

If "Yes", answer questions a - j. If "No", move on to Section 2.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☑	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☑	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☑
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☑
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☑	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: _____		☑	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑ NO ☐ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☑NO ☐YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑NO ☐YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑NO ☐YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources
The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)
If "Yes", answer questions a - g. If "No", go to Section 10.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	☐ ☐	☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	☐ ☐	☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources
The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)
If "Yes", answer questions a - e. If "No", go to Section 11.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____ _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____ _____		☐	☐

13. Impact on Transportation
The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____		☐	☐

14. Impact on Energy
The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____			

15. Impact on Noise, Odor, and Light
The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☐ NO ☑ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☑	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☑
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☑
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☑	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☑	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☑	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☑	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☑	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☑	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☑	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☑	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☑	☐
m. Other impacts: _____ _____		☑	☐

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES

(See Part 1. C.1, C.2. and C.3.)

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES

(See Part 1. C.2, C.3, D.2, E.3)

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

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ATTACHMENT C-3

Agency Use Only [IfApplicable]

Project : Colorado Avenue

Date : 9/6/2024

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See attached significance statement.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the Buffalo Sewer Authority as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Capital Project Program - Colorado Avenue CSO053_2.5 SPP337 Modification

Name of Lead Agency: Buffalo Sewer Authority

Name of Responsible Officer in Lead Agency: Oluwole McFoy

Title of Responsible Officer: General Manager

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer) Date:

For Further Information:

Contact Person: Elizabeth Tramposch

Address: 2312 Wehrle Drive, Buffalo, NY 14221

Telephone Number: (716) 204-8054

E-mail: emt@coreenv.com

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

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ATTACHMENT D-1

Full Environmental Assessment Form (FEAF)
Part 3 - Determination of Significance

Lead Agency: Buffalo Sewer Authority

Project: South Bailey - CSO053_3.1 SPP338 Modification

Proposed Activity:

The Bailey Avenue near Kerns Avenue and Scajaquada Street SPP Modification involves the installation of a new labyrinth weir to increase weir length from 15 ft to 30-ft and raise the height of the weir by 1.83 ft in the structure that diverts flow to the existing drop shaft connection to the Scajaquada Tunnel Interceptor away from the Scajaquada Drain. For this project, the SPP338 underflow orifice would be enlarged. This project would reduce overflows at CSO-053. The addition of an orifice plate upstream from the SPP will also be required to store flow in the upstream sewers during wet weather.

Background:

The BSA entered into an Administrative Order (AO) with New York State Department of Environmental Conservation (DEC) and the United States Environmental Protection Agency (EPA) as part of their approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) that was approved on March 18, 2014. The purpose of the LTCP is to reduce CSO activations within the existing collection system and to alleviate flow spikes for influent flow to the wastewater treatment facility.

Compliance with the LTCP is defined by the number of activations allowed in the typical precipitation year for the Sewer Patrol Point's (SPP's) receiving waterbody as determined by BSA's collection system hydraulic model. Following the approval of the LTCP in 2014 by the regulatory agencies, the collection system hydraulic model used in the LTCP was updated and recalibrated to reflect current system conditions. The updated and re-calibrated LTCP (now re-named the Queen City Clean Waters Program) model suggested that some projects originally envisioned in the 2014 LTCP are no longer feasible and that other planned projects can be further optimized to meet targets. The BSA undertook an optimization process that defined many projects within a Selected Alternative.

Pursuant to the State Environmental Quality Review Act ("SEQRA") and 6 NYCRR 617.6(b)(3)(i), BSA has prepared this Significance Statement for the South Bailey - CSO053_3.1 SPP338 Modification.

Agency Coordination:

Ten potentially involved agencies were identified. SEQR project materials were prepared and sent: City of Buffalo Common Council (Masten District), City of Buffalo Department of Public Works (Parks & Streets – Parks, Parks & Streets - City Engineer), New York State Department of State - Coastal Management Program, New York State Department of Transportation – Region 5, New York State Department of Environmental Conservation - Region 9, City of Buffalo Office of Strategic Planning, City of Buffalo Water Authority, Erie County Department of Health, Buffalo Environmental Management Commission, U.S. Fish and Wildlife Service. No agencies objected to the BSA serving as Lead Agency or expressed concern with the project.

Agency Consultations:

A consultation was made with the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) system. The South Bailey ILS Site is located within the vicinity of Three (3) listed endangered/proposed endangered species: The Northern Long-eared Bat, the Salamander Mussel, and the Monarch Butterfly. Two (2) eagles and twenty-three (23) migratory birds have been identified in proximity to the site. No wetlands, national wildlife refuges, or fish hatcheries are identified in the vicinity of the project site. There are no critical habitats in the vicinity or the project site. USFW issued a letter stating the project is not reasonably certain to cause incidental take of any endangered species.

A consultation was not required with the New York State Parks, Recreation and Historic Preservation – Office of Parks, Recreation and Historic Preservation (OPRHP) because this project does not involve any land disturbance and is not located within the vicinity of historic building or structures.

The site did not require consultation with the NY State Natural Heritage Program (NHP) as the site does not contain a designated significant natural community or contain any species that NYS lists as species of special concern. The SEQR project materials and correspondence from responding agencies is included as an attachment to this document.

Analysis of Impacts:

Using the information provided in the Full Environmental Assessment Form (FEAF) Part 1, project impacts were evaluated for each of the 18-areas identified in the FEAF Part 2. Impacts were evaluated based on magnitude, duration, and likelihood of occurring. No potential impacts were identified. The impacts of this project are confined to the existing underground infrastructure, with no anticipated disturbance to surface land, groundwater, or local ecosystems. By improving the management of stormwater and wastewater flows, the project will help reduce the frequency and severity of untreated discharges into local waterways, resulting in a positive impact on water quality in the area. Since the work is confined within the sewer system, no significant adverse environmental impacts are expected, and the project aligns with ongoing efforts to upgrade local wastewater infrastructure and reduce CSOs.

Determination of Significance:

In determining the significance of this project, it is important to emphasize the long-term benefits it will have on the overall public health of Buffalo and its citizens. By reducing Combined Sewer Overflow (CSO) activations as part of the BSA's compliance with the LTCP, the project directly contributes to improved water quality in Buffalo’s receiving waterbodies, reducing pollutants and contaminants entering the local waterways. The decrease in overflow events also alleviates the stress on the wastewater treatment facility, ensuring more reliable and effective wastewater management for the community.

The analysis of the project to raise the weirs reveals no significant adverse environmental impacts. The project will improve the management of wastewater and stormwater, resulting in reduced combined sewer overflows and improved water quality. All construction activities will be temporary and confined to existing underground infrastructure, ensuring minimal disruption to the environment and the surrounding community. The project is consistent with community plans and will have a positive impact on human health by reducing water contamination.

With consideration of the aforementioned environmental factors, along with findings from Part 1 and Part 2 of the Full Environmental Assessment Form, the magnitude, importance, duration, and scale of adverse environmental impacts related to the installation of the new labyrinth weir is low.

Therefore, the lead agency checks “A” on the last page of the Full Environmental Assessment Form, issuing a negative declaration (Neg. Dec) for the action.

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ATTACHMENT D-2

Agency Use Only [If applicable]

Project: South Bailey Avenue SPP338

Date: 08/14/2024

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes**" to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No**" to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land

Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)

☑ NO ☐ YES

If "Yes", answer questions a - j. If "No", move on to Section 2.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☐	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☐	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☐	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☐	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☐	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑ NO ☐ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☑NO ☐YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑NO ☐YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑NO ☐YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources
The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)
If "Yes", answer questions a - g. If "No", go to Section 10.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	☐ ☐	☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	☐ ☐	☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____		☐	☐

10. Impact on Historic and Archeological Resources
The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)
If "Yes", answer questions a - e. If "No", go to Section 11.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____		☐	☐

13. Impact on Transportation
The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____		☐	☐

14. Impact on Energy
The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____			

15. Impact on Noise, Odor, and Light
The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES

(See Part 1. C.1, C.2. and C.3.)

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES

(See Part 1. C.2, C.3, D.2, E.3)

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

Agency Use Only [IfApplicable]

Project : South Bailey Avenue

Date : 9/6/2024

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See attached significance statement.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the Buffalo Sewer Authority as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Capital Project Program - South Bailey ILS CSO053_3.1 SPP338 Modification

Name of Lead Agency: Buffalo Sewer Authority

Name of Responsible Officer in Lead Agency: Oluwole McFoy

Title of Responsible Officer: General Manager

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer) Elizabeth Tramposch Date: 09/06/2024

For Further Information:

Contact Person: Elizabeth Tramposch, PE - CORE Environmental Consultants, Inc.

Address: 2312 Wehrle Drive, Buffalo, NY 14221

Telephone Number: (716) 204-8054

E-mail: emt@coreenv.com

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

Full Environmental Assessment Form (FEAF)
Part 3 - Determination of Significance

Lead Agency: Buffalo Sewer Authority

Project: South Bailey - CSO053_3.1 SPP338 Modification

Proposed Activity:

The Bailey Avenue near Kerns Avenue and Scajaquada Street SPP Modification involves the installation of a new labyrinth weir to increase weir length from 15 ft to 30-ft and raise the height of the weir by 1.83 ft in the structure that diverts flow to the existing drop shaft connection to the Scajaquada Tunnel Interceptor away from the Scajaquada Drain. For this project, the SPP338 underflow orifice would be enlarged. This project would reduce overflows at CSO-053. The addition of an orifice plate upstream from the SPP will also be required to store flow in the upstream sewers during wet weather.

Background:

The BSA entered into an Administrative Order (AO) with New York State Department of Environmental Conservation (DEC) and the United States Environmental Protection Agency (EPA) as part of their approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) that was approved on March 18, 2014. The purpose of the LTCP is to reduce CSO activations within the existing collection system and to alleviate flow spikes for influent flow to the wastewater treatment facility.

Compliance with the LTCP is defined by the number of activations allowed in the typical precipitation year for the Sewer Patrol Point's (SPP's) receiving waterbody as determined by BSA's collection system hydraulic model. Following the approval of the LTCP in 2014 by the regulatory agencies, the collection system hydraulic model used in the LTCP was updated and recalibrated to reflect current system conditions. The updated and re-calibrated LTCP (now re-named the Queen City Clean Waters Program) model suggested that some projects originally envisioned in the 2014 LTCP are no longer feasible and that other planned projects can be further optimized to meet targets. The BSA undertook an optimization process that defined many projects within a Selected Alternative.

Pursuant to the State Environmental Quality Review Act ("SEQRA") and 6 NYCRR 617.6(b)(3)(i), BSA has prepared this Significance Statement for the South Bailey - CSO053_3.1 SPP338 Modification.

Agency Coordination:

Ten potentially involved agencies were identified. SEQR project materials were prepared and sent: City of Buffalo Common Council (Masten District), City of Buffalo Department of Public Works (Parks & Streets – Parks, Parks & Streets - City Engineer), New York State Department of State - Coastal Management Program, New York State Department of Transportation – Region 5, New York State Department of Environmental Conservation - Region 9, City of Buffalo Office of Strategic Planning, City of Buffalo Water Authority, Erie County Department of Health, Buffalo Environmental Management Commission, U.S. Fish and Wildlife Service. No agencies objected to the BSA serving as Lead Agency or expressed concern with the project.

Agency Consultations:

A consultation was made with the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) system. The South Bailey ILS Site is located within the vicinity of Three (3) listed endangered/proposed endangered species: The Northern Long-eared Bat, the Salamander Mussel, and the Monarch Butterfly. Two (2) eagles and twenty-three (23) migratory birds have been identified in proximity to the site. No wetlands, national wildlife refuges, or fish hatcheries are identified in the vicinity of the project site. There are no critical habitats in the vicinity or the project site. USFW issued a letter stating the project is not reasonably certain to cause incidental take of any endangered species.

A consultation was not required with the New York State Parks, Recreation and Historic Preservation – Office of Parks, Recreation and Historic Preservation (OPRHP) because this project does not involve any land disturbance and is not located within the vicinity of historic building or structures.

The site did not require consultation with the NY State Natural Heritage Program (NHP) as the site does not contain a designated significant natural community or contain any species that NYS lists as species of special concern. The SEQR project materials and correspondence from responding agencies is included as an attachment to this document.

Analysis of Impacts:

Using the information provided in the Full Environmental Assessment Form (FEAF) Part 1, project impacts were evaluated for each of the 18-areas identified in the FEAF Part 2. Impacts were evaluated based on magnitude, duration, and likelihood of occurring. No potential impacts were identified. The impacts of this project are confined to the existing underground infrastructure, with no anticipated disturbance to surface land, groundwater, or local ecosystems. By improving the management of stormwater and wastewater flows, the project will help reduce the frequency and severity of untreated discharges into local waterways, resulting in a positive impact on water quality in the area. Since the work is confined within the sewer system, no significant adverse environmental impacts are expected, and the project aligns with ongoing efforts to upgrade local wastewater infrastructure and reduce CSOs.

Determination of Significance:

In determining the significance of this project, it is important to emphasize the long-term benefits it will have on the overall public health of Buffalo and its citizens. By reducing Combined Sewer Overflow (CSO) activations as part of the BSA's compliance with the LTCP, the project directly contributes to improved water quality in Buffalo’s receiving waterbodies, reducing pollutants and contaminants entering the local waterways. The decrease in overflow events also alleviates the stress on the wastewater treatment facility, ensuring more reliable and effective wastewater management for the community.

The analysis of the project to raise the weirs reveals no significant adverse environmental impacts. The project will improve the management of wastewater and stormwater, resulting in reduced combined sewer overflows and improved water quality. All construction activities will be temporary and confined to existing underground infrastructure, ensuring minimal disruption to the environment and the surrounding community. The project is consistent with community plans and will have a positive impact on human health by reducing water contamination.

With consideration of the aforementioned environmental factors, along with findings from Part 1 and Part 2 of the Full Environmental Assessment Form, the magnitude, importance, duration, and scale of adverse environmental impacts related to the installation of the new labyrinth weir is low.

Therefore, the lead agency checks “A” on the last page of the Full Environmental Assessment Form, issuing a negative declaration (Neg. Dec) for the action.

BUFFALO
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ATTACHMENT E-1

Full Environmental Assessment Form (FEAF)
Part 3 - Determination of Significance

Lead Agency: Buffalo Sewer Authority

Project: East Delavan at Humboldt Parkway - CSO053_13 SPP165B Modification

Proposed Activity:

This Sewer Patrol Point (SPP) Modification involves the replacement of approximately 1,000 linear feet of 24-inch pipe between East Delavan Avenue and Northland Avenue will be replaced with a 36-inch diameter pipe to accommodate conveyance of the peak flow of 11.3 million gallons per day (MGD) through the underflow sewer. SPP165B is located at the intersection of East Delavan Avenue and Humboldt Parkway. The overflow weir will also be raised to 54.81 (city datum). Due to the small size of the existing junction chamber at East Delavan Avenue, where the 24-inch pipe currently connects to the 46-inch brick sewer under East Delavan Avenue, a new flow channel will be constructed to the pipe, to accommodate a larger orifice plate so that junction chamber will also be replaced and upsized. These modifications would reduce overflows at CSO-053 and would benefit from the installation of the Sidney OLS project to make more capacity available in the Scajaquada Tunnel. These modifications would reduce overflows at CSO-053.

Background:

The BSA entered into an Administrative Order (AO) with New York State Department of Environmental Conservation (DEC) and the United States Environmental Protection Agency (EPA) as part of their approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) that was approved on March 18, 2014. The purpose of the LTCP is to reduce CSO activations within the existing collection system and to alleviate flow spikes for influent flow to the wastewater treatment facility.

Compliance with the LTCP is defined by the number of activations allowed in the typical precipitation year for the Sewer Patrol Point's (SPP's) receiving waterbody as determined by BSA's collection system hydraulic model. Following the approval of the LTCP in 2014 by the regulatory agencies, the collection system hydraulic model used in the LTCP was updated and recalibrated to reflect current system conditions. The updated and re-calibrated LTCP (now re-named the Queen City Clean Waters Program) model suggested that some projects originally envisioned in the 2014 LTCP are no longer feasible and that other planned projects can be further optimized to meet targets. The BSA undertook an optimization process that defined many projects within a Selected Alternative.

Pursuant to the State Environmental Quality Review Act ("SEQRA") and 6 NYCRR 617.6(b)(3)(i), BSA has prepared this Significance Statement for the East Delavan at Humboldt Parkway - CSO053_13 SPP165B Modification

Agency Coordination:

Ten potentially involved agencies were identified. SEQR project materials were prepared and sent: City of Buffalo Common Council (Masten District), City of Buffalo Department of Public

Works (Parks & Streets – Parks, Parks & Streets - City Engineer), New York State Department of State - Coastal Management Program, New York State Department of Transportation – Region 5, New York State Department of Environmental Conservation - Region 9, City of Buffalo Office of Strategic Planning, City of Buffalo Water Authority, Erie County Department of Health, Buffalo Environmental Management Commission, U.S. Fish and Wildlife Service. No agencies objected to the BSA serving as Lead Agency or expressed concern with the project.

Agency Consultations:

Additionally, project information was submitted for review to New York State Parks, Recreation and Historic Preservation – Office of Parks, Recreation and Historic Preservation (OPRHP). OPRHP issued an Effect Finding of No Impact Letter. Based upon the review, no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

A consultation was also made with the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) system. The project site is located within the vicinity of four (4) listed endangered/proposed endangered species: the Northern Long Eared Bat, the Tricolored Bat, the Salamander Mussel, and the Monarch Butterfly. The site is also located within the vicinity of two (2) protected eagle species and twnty-three (23) bird species that are listed on the US Fish and Wildlife Service (USFWS) Birds of Conservation Concern list. There are no critical habitats in the vicinity or the project site. USFW issued a letter stating the project is not reasonably certain to cause incidental take of any endangered species.

The site did not require consultation with the NY State Natural Heritage Program (NHP) as the site does not contain a designated significant natural community or contain any species that NYS lists as species of special concern. The SEQR project materials and correspondence from responding agencies is included as an attachment to this document.

Analysis of Impacts:

Using the information provided in the Full Environmental Assessment Form (FEAF) Part 1, project impacts were evaluated for each of the 18-areas identified in the FEAF Part 2. Impacts were evaluated based on magnitude, duration, and likelihood of occurring. Potential impacts were identified in two areas: Impacts on Land and Impacts to Surface Water. The magnitude of the impact is discussed below:

Impact on Land

The proposed action involves the construction of the land surface on the proposed site. The total project area is 0.9 acres, and the area to be disturbed is approximately 5,230 square feet (0.12 acres). It will also involve an excavation to approximately 18-feet below grade, and a total of 1,200 cubic yards of material to be excavated. Given the relatively small area of disturbance and the targeted nature of the excavation, the impact on existing land use is expected to be minor. Temporary disruption may occur during construction, but the long-term land use will be consistent with the project's goals of improving sewer capacity and reducing overflows.

The excavation process will expose soil to the elements, increasing the potential for erosion and sediment runoff. Mitigation measures, such as erosion control practices and proper site management, will be essential to minimize these impacts. Implementing effective control measures will be crucial to prevent adverse effects on surrounding areas.

During construction, the primary impacts will be related to noise, dust, and temporary disruption of local traffic. These impacts are anticipated to be localized and temporary. Once construction is complete, the land will be restored and maintained in accordance with project plans, with minimal long-term land use changes anticipated.

Overall, while the project involves a moderate excavation and land disturbance, the impacts on land are expected to be minor in magnitude and a short-term impact. The benefits of improving sewer capacity and reducing overflows outweigh the temporary construction impacts. Proper management and mitigation strategies will ensure that the land impacts are minimized and that the project contributes positively to the overall infrastructure improvements.

Impacts to Surface Water

The project is located near the Scajaquada Drain**,** but the drain is above the new sewer alignment. The Scajaquada Drain (a portion of Scajaquada Creek that was covered and is currently directed in an underground pipe) is classified as an R4SBC wetland. No direct impacts to the Scajaquada Drain are expected as the profiles of the drain and sewer do not overlap. The main benefit of this project is the anticipated reduction of CSO discharges into local waterways, including potential overflows into the Scajaquada Creek. By enhancing the capacity of the sewer system, the risk of untreated stormwater and sewage entering surface waters will be minimized.

Although the Scajaquada Drain runs near the project area, the fact that the sewer is located below the drain ensures no direct physical impacts will occur to the drain itself.
Indirectly, by reducing CSOs and improving stormwater management, the project will reduce potential pollution to the Scajaquada Drain, which could otherwise carry pollutants to Scajaquada Creek and other connected water bodies.

Determination of Significance:

In determining the significance of this project, it is important to emphasize the long-term benefits it will have on the overall public health of Buffalo and its citizens. By reducing Combined Sewer Overflow (CSO) activations as part of the BSA's compliance with the LTCP, the project directly contributes to improved water quality in Buffalo’s receiving waterbodies, reducing pollutants and contaminants entering the local waterways. The decrease in overflow events also alleviates the stress on the wastewater treatment facility, ensuring more reliable and effective wastewater management for the community.

While short-term impacts from land disturbance and excavation during construction are anticipated, these are temporary and manageable with proper mitigation measures. The long-term benefits, including enhanced environmental quality, safer water bodies, and compliance with state and federal environmental mandates, far outweigh these temporary inconveniences. Ultimately, the project promotes a healthier and more sustainable urban environment for the residents of Buffalo, contributing to cleaner water resources, improved infrastructure, and the overall resilience of the city’s wastewater management system. These public health and environmental improvements underscore the importance of advancing the project despite any short-term impacts.

With consideration of the aforementioned environmental factors, along with findings from Part 1 and Part 2 of the Full Environmental Assessment Form, the magnitude, importance, duration,

and scale of adverse environmental impacts related to this project are very low.

Therefore, the lead agency checks “A” on the last page of the Full Environmental Assessment Form, issuing a negative declaration (Neg. Dec) for the action.

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ATTACHMENT E-2

Agency Use Only [If applicable]

Project: Humboldt Parkway SPP 165

Date: 09/06/2024

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer **"Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer **"No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☐ NO ☑ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☑	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☑	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☑
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☑
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☑	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☐ NO ☑ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☑	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☑	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☑	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☑	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☑	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☑	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☑	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☑	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☑	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☑	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☑	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater
The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☐NO ☑YES
If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☑	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☑	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☑	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☑	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☑	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☑	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☑	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding
The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑NO ☐YES
If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☑NO ☐YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑NO ☐YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources
The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑NO ☐YES
If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources
The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)
If "Yes", answer questions a - g. If "No", go to Section 10.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources
The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)
If "Yes", answer questions a - e. If "No", go to Section 11.

☐ NO ☑ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☐	☑
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☑
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☑	☐

d. Other impacts: _____ _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☑	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☑	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☑	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____ _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____ _____		☐	☐

13. Impact on Transportation
The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____		☐	☐

14. Impact on Energy
The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____			

15. Impact on Noise, Odor, and Light
The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. (See Part 1. C.1, C.2. and C.3.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. (See Part 1. C.2, C.3, D.2, E.3) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

BUFFALO
SEWER AUTHORITY

ATTACHMENT E-3

Agency Use Only [IfApplicable]

Project : Humboldt Parkway

Date : 9/6/2024

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See attached significance statement.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the Buffalo Sewer Authority as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Capital Project Program - Humboldt Parkway CSO_13 SPP 165

Name of Lead Agency: Buffalo Sewer Authority

Name of Responsible Officer in Lead Agency: Oluwole McFoy

Title of Responsible Officer: General Manager

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer) Elizabeth Tramposch Date: 09/06/2024

For Further Information:

Contact Person: Elizabeth Tramposch - CORE Environmental Consultants, Inc.

Address: 2312 Wehrle Drive, Buffalo, NY 14221

Telephone Number: (716) 204-8054

E-mail: emt@coreenv.com

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

Full Environmental Assessment Form (FEAF)
Part 3 - Determination of Significance

Lead Agency: Buffalo Sewer Authority

Project: East Delavan at Humboldt Parkway - CSO053_13 SPP165B Modification

Proposed Activity:

This Sewer Patrol Point (SPP) Modification involves the replacement of approximately 1,000 linear feet of 24-inch pipe between East Delavan Avenue and Northland Avenue will be replaced with a 36-inch diameter pipe to accommodate conveyance of the peak flow of 11.3 million gallons per day (MGD) through the underflow sewer. SPP165B is located at the intersection of East Delavan Avenue and Humboldt Parkway. The overflow weir will also be raised to 54.81 (city datum). Due to the small size of the existing junction chamber at East Delavan Avenue, where the 24-inch pipe currently connects to the 46-inch brick sewer under East Delavan Avenue, a new flow channel will be constructed to the pipe, to accommodate a larger orifice plate so that junction chamber will also be replaced and upsized. These modifications would reduce overflows at CSO-053 and would benefit from the installation of the Sidney OLS project to make more capacity available in the Scajaquada Tunnel. These modifications would reduce overflows at CSO-053.

Background:

The BSA entered into an Administrative Order (AO) with New York State Department of Environmental Conservation (DEC) and the United States Environmental Protection Agency (EPA) as part of their approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) that was approved on March 18, 2014. The purpose of the LTCP is to reduce CSO activations within the existing collection system and to alleviate flow spikes for influent flow to the wastewater treatment facility.

Compliance with the LTCP is defined by the number of activations allowed in the typical precipitation year for the Sewer Patrol Point's (SPP's) receiving waterbody as determined by BSA's collection system hydraulic model. Following the approval of the LTCP in 2014 by the regulatory agencies, the collection system hydraulic model used in the LTCP was updated and recalibrated to reflect current system conditions. The updated and re-calibrated LTCP (now re-named the Queen City Clean Waters Program) model suggested that some projects originally envisioned in the 2014 LTCP are no longer feasible and that other planned projects can be further optimized to meet targets. The BSA undertook an optimization process that defined many projects within a Selected Alternative.

Pursuant to the State Environmental Quality Review Act ("SEQRA") and 6 NYCRR 617.6(b)(3)(i), BSA has prepared this Significance Statement for the East Delavan at Humboldt Parkway - CSO053_13 SPP165B Modification

Agency Coordination:

Ten potentially involved agencies were identified. SEQR project materials were prepared and sent: City of Buffalo Common Council (Masten District), City of Buffalo Department of Public

Works (Parks & Streets – Parks, Parks & Streets - City Engineer), New York State Department of State - Coastal Management Program, New York State Department of Transportation – Region 5, New York State Department of Environmental Conservation - Region 9, City of Buffalo Office of Strategic Planning, City of Buffalo Water Authority, Erie County Department of Health, Buffalo Environmental Management Commission, U.S. Fish and Wildlife Service. No agencies objected to the BSA serving as Lead Agency or expressed concern with the project.

Agency Consultations:

Additionally, project information was submitted for review to New York State Parks, Recreation and Historic Preservation – Office of Parks, Recreation and Historic Preservation (OPRHP). OPRHP issued an Effect Finding of No Impact Letter. Based upon the review, no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

A consultation was also made with the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) system. The project site is located within the vicinity of four (4) listed endangered/proposed endangered species: the Northern Long Eared Bat, the Tricolored Bat, the Salamander Mussel, and the Monarch Butterfly. The site is also located within the vicinity of two (2) protected eagle species and twnty-three (23) bird species that are listed on the US Fish and Wildlife Service (USFWS) Birds of Conservation Concern list. There are no critical habitats in the vicinity or the project site. USFW issued a letter stating the project is not reasonably certain to cause incidental take of any endangered species.

The site did not require consultation with the NY State Natural Heritage Program (NHP) as the site does not contain a designated significant natural community or contain any species that NYS lists as species of special concern. The SEQR project materials and correspondence from responding agencies is included as an attachment to this document.

Analysis of Impacts:

Using the information provided in the Full Environmental Assessment Form (FEAF) Part 1, project impacts were evaluated for each of the 18-areas identified in the FEAF Part 2. Impacts were evaluated based on magnitude, duration, and likelihood of occurring. Potential impacts were identified in two areas: Impacts on Land and Impacts to Surface Water. The magnitude of the impact is discussed below:

Impact on Land

The proposed action involves the construction of the land surface on the proposed site. The total project area is 0.9 acres, and the area to be disturbed is approximately 5,230 square feet (0.12 acres). It will also involve an excavation to approximately 18-feet below grade, and a total of 1,200 cubic yards of material to be excavated. Given the relatively small area of disturbance and the targeted nature of the excavation, the impact on existing land use is expected to be minor. Temporary disruption may occur during construction, but the long-term land use will be consistent with the project's goals of improving sewer capacity and reducing overflows.

The excavation process will expose soil to the elements, increasing the potential for erosion and sediment runoff. Mitigation measures, such as erosion control practices and proper site management, will be essential to minimize these impacts. Implementing effective control measures will be crucial to prevent adverse effects on surrounding areas.

During construction, the primary impacts will be related to noise, dust, and temporary disruption of local traffic. These impacts are anticipated to be localized and temporary. Once construction is complete, the land will be restored and maintained in accordance with project plans, with minimal long-term land use changes anticipated.

Overall, while the project involves a moderate excavation and land disturbance, the impacts on land are expected to be minor in magnitude and a short-term impact. The benefits of improving sewer capacity and reducing overflows outweigh the temporary construction impacts. Proper management and mitigation strategies will ensure that the land impacts are minimized and that the project contributes positively to the overall infrastructure improvements.

Impacts to Surface Water

The project is located near the Scajaquada Drain, but the drain is above the new sewer alignment. The Scajaquada Drain (a portion of Scajaquada Creek that was covered and is currently directed in an underground pipe) is classified as an R4SBC wetland. No direct impacts to the Scajaquada Drain are expected as the profiles of the drain and sewer do not overlap. The main benefit of this project is the anticipated reduction of CSO discharges into local waterways, including potential overflows into the Scajaquada Creek. By enhancing the capacity of the sewer system, the risk of untreated stormwater and sewage entering surface waters will be minimized.

Although the Scajaquada Drain runs near the project area, the fact that the sewer is located below the drain ensures no direct physical impacts will occur to the drain itself.
Indirectly, by reducing CSOs and improving stormwater management, the project will reduce potential pollution to the Scajaquada Drain, which could otherwise carry pollutants to Scajaquada Creek and other connected water bodies.

Determination of Significance:

In determining the significance of this project, it is important to emphasize the long-term benefits it will have on the overall public health of Buffalo and its citizens. By reducing Combined Sewer Overflow (CSO) activations as part of the BSA's compliance with the LTCP, the project directly contributes to improved water quality in Buffalo's receiving waterbodies, reducing pollutants and contaminants entering the local waterways. The decrease in overflow events also alleviates the stress on the wastewater treatment facility, ensuring more reliable and effective wastewater management for the community.

While short-term impacts from land disturbance and excavation during construction are anticipated, these are temporary and manageable with proper mitigation measures. The long-term benefits, including enhanced environmental quality, safer water bodies, and compliance with state and federal environmental mandates, far outweigh these temporary inconveniences. Ultimately, the project promotes a healthier and more sustainable urban environment for the residents of Buffalo, contributing to cleaner water resources, improved infrastructure, and the overall resilience of the city's wastewater management system. These public health and environmental improvements underscore the importance of advancing the project despite any short-term impacts.

With consideration of the aforementioned environmental factors, along with findings from Part 1 and Part 2 of the Full Environmental Assessment Form, the magnitude, importance, duration,

and scale of adverse environmental impacts related to this project are very low.

Therefore, the lead agency checks "A" on the last page of the Full Environmental Assessment Form, issuing a negative declaration (Neg. Dec) for the action.

BUFFALO
SEWER AUTHORITY

ATTACHMENT F-1

Full Environmental Assessment Form (FEAF)
Part 3 - Determination of Significance

Lead Agency: Buffalo Sewer Authority

Project: SPP336B Modification (CSO053_1.5)

Proposed Activity:

SPP336B is located in the Kensington Expressway, north of Hamlin Road. For this project, SPP336B would be modified by removing the underflow orifice plate, reducing overflows at CSO-053.

Background:

The BSA entered into an Administrative Order (AO) with New York State Department of Environmental Conservation (DEC) and the United States Environmental Protection Agency (EPA) as part of their approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) that was approved on March 18, 2014. The purpose of the LTCP is to reduce CSO activations within the existing collection system and to alleviate flow spikes for influent flow to the wastewater treatment facility.

Compliance with the LTCP is defined by the number of activations allowed in the typical precipitation year for the Sewer Patrol Point's (SPP's) receiving waterbody as determined by BSA's collection system hydraulic model. Following the approval of the LTCP in 2014 by the regulatory agencies, the collection system hydraulic model used in the LTCP was updated and recalibrated to reflect current system conditions. The updated and re-calibrated LTCP (now re-named the Queen City Clean Waters Program) model suggested that some projects originally envisioned in the 2014 LTCP are no longer feasible and that other planned projects can be further optimized to meet targets. The BSA undertook an optimization process that defined many projects within a Selected Alternative.

Pursuant to the State Environmental Quality Review Act ("SEQRA") and 6 NYCRR 617.6(b)(3)(i), BSA has prepared this Significance Statement for the SPP336B Modification (CSO053_1.5).

Agency Coordination:

Ten potentially involved agencies were identified. SEQR project materials were prepared and sent: City of Buffalo Common Council (Masten District), City of Buffalo Department of Public Works (Parks & Streets – Parks, Parks & Streets - City Engineer), New York State Department of State - Coastal Management Program, New York State Department of Transportation – Region 5, New York State Department of Environmental Conservation - Region 9, City of Buffalo Office of Strategic Planning, City of Buffalo Water Authority, Erie County Department of Health, Buffalo Environmental Management Commission, U.S. Fish and Wildlife Service. No agencies objected to the BSA serving as Lead Agency or expressed concern with the project.

Agency Consultations:

A consultation was made with the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) system. The South Bailey ILS Site is located within the vicinity of Three (3)

listed endangered/proposed endangered species: The Northern Long-eared Bat, the Salamander Mussel, and the Monarch Butterfly. Two (2) eagles and twenty-three (23) migratory birds have been identified in proximity to the site. No wetlands, national wildlife refuges, or fish hatcheries are identified in the vicinity of the project site. There are no critical habitats in the vicinity or the project site. USFW issued a letter stating the project is not reasonably certain to cause incidental take of any endangered species.

A consultation was not required with the New York State Parks, Recreation and Historic Preservation – Office of Parks, Recreation and Historic Preservation (OPRHP) because this project does not involve any land disturbance and is not located within the vicinity of historic building or structures.

The site did not require consultation with the NY State Natural Heritage Program (NHP) as the site does not contain a designated significant natural community or contain any species that NYS lists as species of special concern. The SEQR project materials and correspondence from responding agencies is included as an attachment to this document.

Analysis of Impacts:

Using the information provided in the Full Environmental Assessment Form (FEAF) Part 1, project impacts were evaluated for each of the 18-areas identified in the FEAF Part 2. Impacts were evaluated based on magnitude, duration, and likelihood of occurring. No potential impacts were identified. The impacts of this project are confined to the existing underground infrastructure, with no anticipated disturbance to surface land, groundwater, or local ecosystems. By improving the management of stormwater and wastewater flows, the project will help reduce the frequency and severity of untreated discharges into local waterways, resulting in a positive impact on water quality in the area. Since the work is confined within the sewer system, no significant adverse environmental impacts are expected, and the project aligns with ongoing efforts to upgrade local wastewater infrastructure and reduce CSOs.

Determination of Significance:

In determining the significance of this project, it is important to emphasize the long-term benefits it will have on the overall public health of Buffalo and its citizens. By reducing Combined Sewer Overflow (CSO) activations as part of the BSA's compliance with the LTCP, the project directly contributes to improved water quality in Buffalo’s receiving waterbodies, reducing pollutants and contaminants entering the local waterways. The decrease in overflow events also alleviates the stress on the wastewater treatment facility, ensuring more reliable and effective wastewater management for the community.

The analysis of the project to raise the weirs reveals no significant adverse environmental impacts. The project will improve the management of wastewater and stormwater, resulting in reduced combined sewer overflows and improved water quality. All construction activities will be temporary and confined to existing underground infrastructure, ensuring minimal disruption to the environment and the surrounding community. The project is consistent with community plans and will have a positive impact on human health by reducing water contamination.
With consideration of the aforementioned environmental factors, along with findings from Part 1 and Part 2 of the Full Environmental Assessment Form, the magnitude, importance, duration, and scale of adverse environmental impacts related to the installation of the orifice plate is low.

Therefore, the lead agency checks “A” on the last page of the Full Environmental Assessment

Form, issuing a negative declaration (Neg. Dec) for the action.

BUFFALO
SEWER AUTHORITY

ATTACHMENT F-2

Agency Use Only [If applicable]

Project :

Date :

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer **"Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer **"No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☐	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☐	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☐	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☐	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☐	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑ NO ☐ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☑NO ☐YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑NO ☐YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources
The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑NO ☐YES
If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, E1b	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	E1 a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	☐ ☐	☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	☐ ☐	☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☑ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____ _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____ _____		☐	☐

13. Impact on Transportation
The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy
The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____			

15. Impact on Noise, Odor, and Light
The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health
The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☐ NO ☑ YES
If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☑	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☑	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☑	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☑	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☑	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☑	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☑	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☑	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☑	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☑	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☑	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☑	☐
m. Other impacts: _____ _____		☑	☐

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. (See Part 1. C.1, C.2. and C.3.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. (See Part 1. C.2, C.3, D.2, E.3) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

BUFFALO
SEWER AUTHORITY

ATTACHMENT F-3

Agency Use Only [IfApplicable]

Project : SPP336B

Date : 9/6/2024

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See attached significance statement.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the Buffalo Sewer Authority as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Capital Project Program - CSO053_1.5 SPP336B Modification

Name of Lead Agency: Buffalo Sewer Authority

Name of Responsible Officer in Lead Agency: Oluwole McFoy

Title of Responsible Officer: General Manager

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer) Elizabeth Tramposch Date: 09/06/2024

For Further Information:

Contact Person: Elizabeth Tramposch, PE - CORE Environmental Consultants, Inc.

Address: 2312 Wehrle Drive, Buffalo, NY 14221

Telephone Number: (716) 204-8054

E-mail: emt@coreenv.com

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

Full Environmental Assessment Form (FEAF)
Part 3 - Determination of Significance

Lead Agency: Buffalo Sewer Authority

Project: SPP336B Modification (CSO053_1.5)

Proposed Activity:

SPP336B is located in the Kensington Expressway, north of Hamlin Road. For this project, SPP336B would be modified by removing the underflow orifice plate, reducing overflows at CSO-053.

Background:

The BSA entered into an Administrative Order (AO) with New York State Department of Environmental Conservation (DEC) and the United States Environmental Protection Agency (EPA) as part of their approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) that was approved on March 18, 2014. The purpose of the LTCP is to reduce CSO activations within the existing collection system and to alleviate flow spikes for influent flow to the wastewater treatment facility.

Compliance with the LTCP is defined by the number of activations allowed in the typical precipitation year for the Sewer Patrol Point's (SPP's) receiving waterbody as determined by BSA's collection system hydraulic model. Following the approval of the LTCP in 2014 by the regulatory agencies, the collection system hydraulic model used in the LTCP was updated and recalibrated to reflect current system conditions. The updated and re-calibrated LTCP (now re-named the Queen City Clean Waters Program) model suggested that some projects originally envisioned in the 2014 LTCP are no longer feasible and that other planned projects can be further optimized to meet targets. The BSA undertook an optimization process that defined many projects within a Selected Alternative.

Pursuant to the State Environmental Quality Review Act ("SEQRA") and 6 NYCRR 617.6(b)(3)(i), BSA has prepared this Significance Statement for the SPP336B Modification (CSO053_1.5).

Agency Coordination:

Ten potentially involved agencies were identified. SEQR project materials were prepared and sent: City of Buffalo Common Council (Masten District), City of Buffalo Department of Public Works (Parks & Streets – Parks, Parks & Streets - City Engineer), New York State Department of State - Coastal Management Program, New York State Department of Transportation – Region 5, New York State Department of Environmental Conservation - Region 9, City of Buffalo Office of Strategic Planning, City of Buffalo Water Authority, Erie County Department of Health, Buffalo Environmental Management Commission, U.S. Fish and Wildlife Service. No agencies objected to the BSA serving as Lead Agency or expressed concern with the project.

Agency Consultations:

A consultation was made with the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) system. The South Bailey ILS Site is located within the vicinity of Three (3)

listed endangered/proposed endangered species: The Northern Long-eared Bat, the Salamander Mussel, and the Monarch Butterfly. Two (2) eagles and twenty-three (23) migratory birds have been identified in proximity to the site. No wetlands, national wildlife refuges, or fish hatcheries are identified in the vicinity of the project site. There are no critical habitats in the vicinity or the project site. USFW issued a letter stating the project is not reasonably certain to cause incidental take of any endangered species.

A consultation was not required with the New York State Parks, Recreation and Historic Preservation – Office of Parks, Recreation and Historic Preservation (OPRHP) because this project does not involve any land disturbance and is not located within the vicinity of historic building or structures.

The site did not require consultation with the NY State Natural Heritage Program (NHP) as the site does not contain a designated significant natural community or contain any species that NYS lists as species of special concern. The SEQR project materials and correspondence from responding agencies is included as an attachment to this document.

Analysis of Impacts:

Using the information provided in the Full Environmental Assessment Form (FEAF) Part 1, project impacts were evaluated for each of the 18-areas identified in the FEAF Part 2. Impacts were evaluated based on magnitude, duration, and likelihood of occurring. No potential impacts were identified. The impacts of this project are confined to the existing underground infrastructure, with no anticipated disturbance to surface land, groundwater, or local ecosystems. By improving the management of stormwater and wastewater flows, the project will help reduce the frequency and severity of untreated discharges into local waterways, resulting in a positive impact on water quality in the area. Since the work is confined within the sewer system, no significant adverse environmental impacts are expected, and the project aligns with ongoing efforts to upgrade local wastewater infrastructure and reduce CSOs.

Determination of Significance:

In determining the significance of this project, it is important to emphasize the long-term benefits it will have on the overall public health of Buffalo and its citizens. By reducing Combined Sewer Overflow (CSO) activations as part of the BSA's compliance with the LTCP, the project directly contributes to improved water quality in Buffalo's receiving waterbodies, reducing pollutants and contaminants entering the local waterways. The decrease in overflow events also alleviates the stress on the wastewater treatment facility, ensuring more reliable and effective wastewater management for the community.

The analysis of the project to raise the weirs reveals no significant adverse environmental impacts. The project will improve the management of wastewater and stormwater, resulting in reduced combined sewer overflows and improved water quality. All construction activities will be temporary and confined to existing underground infrastructure, ensuring minimal disruption to the environment and the surrounding community. The project is consistent with community plans and will have a positive impact on human health by reducing water contamination. With consideration of the aforementioned environmental factors, along with findings from Part 1 and Part 2 of the Full Environmental Assessment Form, the magnitude, importance, duration, and scale of adverse environmental impacts related to the installation of the orifice plate is low.

Therefore, the lead agency checks "A" on the last page of the Full Environmental Assessment

Form, issuing a negative declaration (Neg. Dec) for the action.

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ATTACHMENT G-1

Full Environmental Assessment Form (FEAF)
Part 3 - Determination of Significance

Lead Agency: Buffalo Sewer Authority

Project: Michigan Ave - CSO053_14 SPP175, 176, 177 Modification

Proposed Activity:

This project is a Sewer Patrol Point (SPP) modification to raise the weir points at the intersection of Michigan Avenue and Dodge Street, Michigan Avenue and Riley Street, and at the intersection of Michigan Avenue and Glenwood Avenue. The three SPPs are similar in configuration with dry weather flow conveyed north straight through the chamber, while higher flows overtop a weir and are conveyed east in conduits along the respective cross streets.

Background:

The BSA entered into an Administrative Order (AO) with New York State Department of Environmental Conservation (DEC) and the United States Environmental Protection Agency (EPA) as part of their approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) that was approved on March 18, 2014. The purpose of the LTCP is to reduce CSO activations within the existing collection system and to alleviate flow spikes for influent flow to the wastewater treatment facility.

Compliance with the LTCP is defined by the number of activations allowed in the typical precipitation year for the Sewer Patrol Point's (SPP's) receiving waterbody as determined by BSA's collection system hydraulic model. Following the approval of the LTCP in 2014 by the regulatory agencies, the collection system hydraulic model used in the LTCP was updated and recalibrated to reflect current system conditions. The updated and re-calibrated LTCP (now re-named the Queen City Clean Waters Program) model suggested that some projects originally envisioned in the 2014 LTCP are no longer feasible and that other planned projects can be further optimized to meet targets. The BSA undertook an optimization process that defined many projects within a Selected Alternative.

Pursuant to the State Environmental Quality Review Act ("SEQRA") and 6 NYCRR 617.6(b)(3)(i), BSA has prepared this Significance Statement for the Michigan Ave - CSO053_14 SPP175, 176, 177 Modification

Agency Coordination:

Ten potentially involved agencies were identified. SEQR project materials were prepared and sent: City of Buffalo Common Council (Masten District), City of Buffalo Department of Public Works (Parks & Streets – Parks, Parks & Streets - City Engineer), New York State Department of State - Coastal Management Program, New York State Department of Transportation – Region 5, New York State Department of Environmental Conservation - Region 9, City of Buffalo Office of Strategic Planning, City of Buffalo Water Authority, Erie County Department of Health, Buffalo Environmental Management Commission, U.S. Fish and Wildlife Service. No agencies objected to the BSA serving as Lead Agency or expressed concern with the project.

Agency Consultations:

A consultation was made with the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) system. The project site is located within the vicinity of four (4) listed endangered/proposed endangered species: the Northern Long Eared Bat, the Tricolored Bat, the Salamander Mussel, and the Monarch Butterfly. The site is also located within the vicinity of two (2) protected eagle species and twnty-three (23) bird species that are listed on the US Fish and Wildlife Service (USFWS) Birds of Conservation Concern list. There are no critical habitats in the vicinity or the project site. USFW issued a letter stating the project is not reasonably certain to cause incidental take of any endangered species.

A consultation was not required with the New York State Parks, Recreation and Historic Preservation – Office of Parks, Recreation and Historic Preservation (OPRHP) because this project does not involve any land disturbance and is not located within the vicinity of historic building or structures.

The site did not require consultation with the NY State Natural Heritage Program (NHP) as the site does not contain a designated significant natural community or contain any species that NYS lists as species of special concern. The SEQR project materials and correspondence from responding agencies is included as an attachment to this document.

Analysis of Impacts:

Using the information provided in the Full Environmental Assessment Form (FEAF) Part 1, project impacts were evaluated for each of the 18-areas identified in the FEAF Part 2. Impacts were evaluated based on magnitude, duration, and likelihood of occurring. No potential impacts were identified. This is due to the nature of the sewer project, which is occurring entirely within the sewer structure and does not involve land disturbance.

Determination of Significance:

In determining the significance of this project, it is important to emphasize the long-term benefits it will have on the overall public health of Buffalo and its citizens. By reducing Combined Sewer Overflow (CSO) activations as part of the BSA's compliance with the LTCP, the project directly contributes to improved water quality in Buffalo’s receiving waterbodies, reducing pollutants and contaminants entering the local waterways. The decrease in overflow events also alleviates the stress on the wastewater treatment facility, ensuring more reliable and effective wastewater management for the community.

The analysis of the project to raise the weirs reveals no significant adverse environmental impacts. The project will improve the management of wastewater and stormwater, resulting in reduced combined sewer overflows and improved water quality. All construction activities will be temporary and confined to existing underground infrastructure, ensuring minimal disruption to the environment and the surrounding community. The project is consistent with community plans and will have a positive impact on human health by reducing water contamination.

With consideration of the aforementioned environmental factors, along with findings from Part 1 and Part 2 of the Full Environmental Assessment Form, the magnitude, importance, duration, and scale of adverse environmental impacts related this project are very low.

Therefore, the lead agency checks “A” on the last page of the Full Environmental Assessment Form, issuing a negative declaration (Neg. Dec) for the action.

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ATTACHMENT G-2

Agency Use Only [If applicable]

Project: Michigan Avenue SPP145-177

Date: 08/14/2024

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer **"Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer **"No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☐	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☐	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☐	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☐	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☐	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑ NO ☐ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☑NO ☐YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑NO ☐YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑NO ☐YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources
The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)
If "Yes", answer questions a - g. If "No", go to Section 10.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	☐ ☐	☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	☐ ☐	☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources
The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)
If "Yes", answer questions a - e. If "No", go to Section 11.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____ _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____ _____		☐	☐

13. Impact on Transportation
The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____		☐	☐

14. Impact on Energy
The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____			

15. Impact on Noise, Odor, and Light
The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health
The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES
If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. (See Part 1. C.1, C.2. and C.3.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. (See Part 1. C.2, C.3, D.2, E.3) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

BUFFALO
SEWER AUTHORITY

ATTACHMENT G-3

Agency Use Only [IfApplicable]

Project: Michigan Avenue

Date: 9/6/2024

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts and Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See attached significance statement.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the Buffalo Sewer Authority as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Capital Project Program - Michigan Avenue CSO053_14 SPP 175 Modification

Name of Lead Agency: Buffalo Sewer Authority

Name of Responsible Officer in Lead Agency: Oluwole McFoy

Title of Responsible Officer: General Manager

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer) Elizabeth Tramposch Date: 09/06/2024

For Further Information:

Contact Person: Elizabeth Tramposch, PE - CORE Environmental Consultants, Inc.

Address: 2312 Wehrle Drive, Buffalo, NY 14221

Telephone Number: (716) 204-8054

E-mail: emt@coreenv.com

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

Full Environmental Assessment Form (FEAF)
Part 3 - Determination of Significance

Lead Agency: Buffalo Sewer Authority

Project: Michigan Ave - CSO053_14 SPP175, 176, 177 Modification

Proposed Activity:

This project is a Sewer Patrol Point (SPP) modification to raise the weir points at the intersection of Michigan Avenue and Dodge Street, Michigan Avenue and Riley Street, and at the intersection of Michigan Avenue and Glenwood Avenue. The three SPPs are similar in configuration with dry weather flow conveyed north straight through the chamber, while higher flows overtop a weir and are conveyed east in conduits along the respective cross streets.

Background:

The BSA entered into an Administrative Order (AO) with New York State Department of Environmental Conservation (DEC) and the United States Environmental Protection Agency (EPA) as part of their approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) that was approved on March 18, 2014. The purpose of the LTCP is to reduce CSO activations within the existing collection system and to alleviate flow spikes for influent flow to the wastewater treatment facility.

Compliance with the LTCP is defined by the number of activations allowed in the typical precipitation year for the Sewer Patrol Point's (SPP's) receiving waterbody as determined by BSA's collection system hydraulic model. Following the approval of the LTCP in 2014 by the regulatory agencies, the collection system hydraulic model used in the LTCP was updated and recalibrated to reflect current system conditions. The updated and re-calibrated LTCP (now re-named the Queen City Clean Waters Program) model suggested that some projects originally envisioned in the 2014 LTCP are no longer feasible and that other planned projects can be further optimized to meet targets. The BSA undertook an optimization process that defined many projects within a Selected Alternative.

Pursuant to the State Environmental Quality Review Act ("SEQRA") and 6 NYCRR 617.6(b)(3)(i), BSA has prepared this Significance Statement for the Michigan Ave - CSO053_14 SPP175, 176, 177 Modification

Agency Coordination:

Ten potentially involved agencies were identified. SEQR project materials were prepared and sent: City of Buffalo Common Council (Masten District), City of Buffalo Department of Public Works (Parks & Streets – Parks, Parks & Streets - City Engineer), New York State Department of State - Coastal Management Program, New York State Department of Transportation – Region 5, New York State Department of Environmental Conservation - Region 9, City of Buffalo Office of Strategic Planning, City of Buffalo Water Authority, Erie County Department of Health, Buffalo Environmental Management Commission, U.S. Fish and Wildlife Service. No agencies objected to the BSA serving as Lead Agency or expressed concern with the project.

Agency Consultations:

A consultation was made with the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) system. The project site is located within the vicinity of four (4) listed endangered/proposed endangered species: the Northern Long Eared Bat, the Tricolored Bat, the Salamander Mussel, and the Monarch Butterfly. The site is also located within the vicinity of two (2) protected eagle species and twnty-three (23) bird species that are listed on the US Fish and Wildlife Service (USFWS) Birds of Conservation Concern list. There are no critical habitats in the vicinity or the project site. USFW issued a letter stating the project is not reasonably certain to cause incidental take of any endangered species.

A consultation was not required with the New York State Parks, Recreation and Historic Preservation – Office of Parks, Recreation and Historic Preservation (OPRHP) because this project does not involve any land disturbance and is not located within the vicinity of historic building or structures.

The site did not require consultation with the NY State Natural Heritage Program (NHP) as the site does not contain a designated significant natural community or contain any species that NYS lists as species of special concern. The SEQR project materials and correspondence from responding agencies is included as an attachment to this document.

Analysis of Impacts:

Using the information provided in the Full Environmental Assessment Form (FEAF) Part 1, project impacts were evaluated for each of the 18-areas identified in the FEAF Part 2. Impacts were evaluated based on magnitude, duration, and likelihood of occurring. No potential impacts were identified. This is due to the nature of the sewer project, which is occurring entirely within the sewer structure and does not involve land disturbance.

Determination of Significance:

In determining the significance of this project, it is important to emphasize the long-term benefits it will have on the overall public health of Buffalo and its citizens. By reducing Combined Sewer Overflow (CSO) activations as part of the BSA's compliance with the LTCP, the project directly contributes to improved water quality in Buffalo's receiving waterbodies, reducing pollutants and contaminants entering the local waterways. The decrease in overflow events also alleviates the stress on the wastewater treatment facility, ensuring more reliable and effective wastewater management for the community.

The analysis of the project to raise the weirs reveals no significant adverse environmental impacts. The project will improve the management of wastewater and stormwater, resulting in reduced combined sewer overflows and improved water quality. All construction activities will be temporary and confined to existing underground infrastructure, ensuring minimal disruption to the environment and the surrounding community. The project is consistent with community plans and will have a positive impact on human health by reducing water contamination.

With consideration of the aforementioned environmental factors, along with findings from Part 1 and Part 2 of the Full Environmental Assessment Form, the magnitude, importance, duration, and scale of adverse environmental impacts related this project are very low.

Therefore, the lead agency checks "A" on the last page of the Full Environmental Assessment Form, issuing a negative declaration (Neg. Dec) for the action.

MINUTES OF THE REGULAR MEETING

OF THE

BUFFALO SEWER AUTHORITY

December 4, 2024

BUFFALO SEWER AUTHORITY

REGULAR MEETING
December 4, 2024
9:00 A.M.

Bird Island Treatment Facility, 90 West Ferry St.
Teleconference +1 917- 933-2166, ID #382 944 649#

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	D. Confirmation Of Appointments	
	E. Amendment To Schedule of Job Classification Plan	
	F. Amendment To Schedule of Job Classification Plan	
	G. Request for Leave of Absence	
	H. Travel Authorization - New York, NY	
	I. Schedule Of Board Meetings for Calendar Year 2025	
	J. Informative: Buffalo Municipal Housing Authority Memorandum of Understanding Negotiations	
	K. Informative: Buffalo Public Schools Memorandum of Understanding Negotiations	

3	Travel Authorization - Nashua, NH	59101
4	Authorization For Renewal Purchase of Microsoft Office 365	59102
5	Authorization To Purchase a Vehicle Under the Onondaga Bid 106-19 2025	59103
6	Report On Bids Received - Purchase of Various New & Unused Steel Products	59104
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8	Reports On Bids Received - Purchase of Five (5) New and Unused 2025 Ford Maverick XL AWD	59106
9	Change Order No. 2– Contract No. 82000042	59107-08
10	Certificate Of Acceptance and Occupancy	59109
11	Change Order No. 2 Contract Renewal and Modifications Contract No. 82000026 Wet Weather Operational Optimization and Real Time Control Coordination System Implementation	59110-11
12	Extension Of the Contract for Agreement with Greeley and Hansen, A Tylin Company for Capital Projects Program Management Services	59112-13
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14	Adoption Of Negative Declaration of State Environmental Quality Review For CSO-053 Sewer Patrol Point (SPP) Modification at Genesee Street (CSO053_8 SPP 341A Modification) Project	59116-17
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16	Adoption Of Negative Declaration of State Environmental Quality Review for Cso-053 Sewer Patrol Point (SPP) Modifications at East Delevan Avenue (CSO053_13 SPP 165B Modification), Bailey Avenue (CSO-053_3.1 SPP 338 Modification), And Michigan Avenue (Cso-053_14 SPP 175 Modification) Project	59120-21

16-1	Series 2024 Bond Anticipation Note Resolution	59122-50
17	Adjournment Of Meeting	59151

ATTACHMENTS

A1-A3 SEQR Attachments
Project: Breckenridge Street CSO Control Project

B1-B3 SEQR Attachments
Project: Genesee St - CSO053_8 SPP341A Modification

C1-C3 SEQR Attachments
Project: CSO-053 Sewer Patrol Point (SPP) Modification at Colorado Avenue at Scajaquada Street (CSO053_2.5 SPP337 Modification)

D1-D3 SEQR Attachments
Project: South Bailey - CSO053_3.1 SPP338 Modification

E1-E3 SEQR Attachments
Project: East Delavan at Humboldt Parkway - CSO053_13 SPP165B Modification

F1-F3 SEQR Attachments
Project: SPP336B Modification (CSO053_1.5)

G1-G3 SEQR Attachments
Project: Michigan Ave - CSO053_14 SPP175, 176, 177 Modification

CALL OF THE ROLL

Present:	Herbert Bellamy, Jr.	Chairman of Board
	Christopher Roosevelt	Vice Chairman of the Board
	Eleanor Petrucci	Secretary of the Board
	Oluwole McFoy, P.E.	General Manager
	Gelea Y. James	Director of Employee Relations
	LaToya Cunningham	Special Assistant
	Charles Riley	Executive Secretary
	Adam Sassone	Secretary to General Manager
	Alexander Emmerson	Treatment Plant Superintendent
	Paul Harris	Superintendent of Mechanical Maintenance
	Rosaleen Nogle, P.E.	Principal Sanitary Engineer
	Joel Renzoni	Director of Sewer Maintenance
	Desiree Briggs	Account Clerk Typist
	Regina Harris	Senior Engineer
	Salvatore Falzone	CWA Union President
	Bob Armacost	Xylem
	Williams Ferguson	City of Buffalo Accountant
	Laura Surdej	Erie County Department of Sewerage
	Damone Smith	City of Buffalo Special Assistant to Comptroller
	Barabara Miller-Williams	City of Buffalo Comptroller
	Charlie Specht	WGRZ-TV
	Charles Moore	WGRZ-TV

The meeting was called to order at 9:48 AM.. A quorum was present.

ITEM NO. 1

Motion to Adopt the Minutes of the Meeting of September 25, 2024

MOTION TO ADOPT

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 2

APPROVAL OF CONSENT AGENDA

CONTENTS

A. Informative: Temporary Investments

B. Informative: Reallocation of Funds

C. Payment From Judgment and Claims

D. Confirmation Of Appointments

E. Amendment To Schedule of Job Classification Plan

F. Amendment To Schedule of Job Classification Plan

G. Request for Leave of Absence

H. Travel Authorization - New York, NY

I. Schedule Of Board Meetings for Calendar Year 2025

J. Informative: Buffalo Municipal Housing Authority Memorandum of Understanding Negotiations

K. Informative: Buffalo Public Schools Memorandum of Understanding Negotiations

MOTION TO APPROVE CONSENT AGENDA EXCLUDING ITEM 2-H

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

2-A

INFORMATIVE: TEMPORARY INVESTMENTS (CERTIFICATES OF DEPOSIT AND TREASURY BILLS)

As of October 31st, 2024

ISSUE DATE	MATURITY DATE	TOTAL DAYS	AMOUNT	BANK	RATE	INTEREST AMOUNT
CONSTRUCTION/CAPITAL IMPROVEMENT FUND						
31-Jul-12	**MONEY MARKET**		$3,841,393.43	Key	0.01%	Public NOW
8-Oct-24	7-Nov-24	30	$2,999,282.19	Key Banc Capital	4.67%	$11,717.81
10-Oct-24	21-Nov-24	42	$1,833,953.27	M&T Securities	4.67%	$10,046.73
24-Oct-24	5-Dec-24	42	$5,499,192.24	Key Banc Capital	4.62%	$29,807.76
			$14,173,821.13			
LIABILITY AND CASUALTY RESERVE FUND						
31-Jul-12	**MONEY MARKET**		$242,814.24	Key	0.01%	Public NOW
17-Oct-24	16-Jan-25	91	$771,166.93	Key Banc Capital	4.48%	$8,833.07
			$1,013,981.17			
OPERATING FUND						
31-Jul-12	**SUPER NOW**		**$4,763,755.64**	Key	0.01%	Public NOW
TRUST & AGENCY FUND						
31-Jul-12	**SUPER NOW**		**$23,739.23**	Key	0.01%	Public NOW
SURPLUS FUND						
			$762.10	Wilmington U.S. Treasury	4.79%	
30-May-24	21-Nov-24	175	$10,004,118.72	Key Banc Capital	5.15%	$256,881.28
			$10,004,880.82			
NET REVENUE FUND						
			$226,970.99	Wilmington U.S. Treasury		
29-Aug-24	26-Nov-24	89	$7,499,280.59	Key Banc Capital	4.94%	$92,719.41
26-Sep-24	26-Dec-24	91	$15,549,099.23	Key Banc Capital	4.48%	$177,900.77
4-Oct-25	28-Jan-25	116	$7,499,639.87	Key Banc Capital	4.38%	$107,360.13
31-Oct-24	25-Feb-25	117	$7,998,401.65	M&T Securities	4.42%	$116,598.35
			$38,773,392.33			

BSA 2021 EIB FUND

			$321,787.97	Cash	0.00%	
23-May-24	14-Nov-24	175	$32,616,488.40	Key Banc Capital	5.15%	$837,511.60
20-Jun-24	12-Dec-24	175	$9,984,839.11	Key Banc Capital	5.13%	$255,160.89
5-Jul-24	19-Dec-24	167	$10,101,710.82	Key Banc Capital	5.09%	$244,289.18
			$53,024,826.30			

DEBT RESERVE FUND

				Series J		
02-Jul-14	13-Nov-33	7076	**$278,395.02**	UST State/Local Govt	2.70%	
				Series K		
02-Jul-14	15-Feb-33	6803	**$194,245.26**	UST State/Local Govt	2.70%	
				Series L		
12-Nov-15	1-Oct-35	7263	**$689,547.00**	UST State/Local Govt	2.44%	
				Series M		
27-Jun-14	1-May-44	10901	**$585,063.94**	UST State/Local Govt	2.70%	
				Series N		
15-Nov-12	15-Apr-32	7091	**$2,167,157.00**	UST State/Local Govt	2.42%	
			EFC 2021			
			$557.73	Wilmington U.S. Treasury	4.79%	
22-Aug-24	13-Feb-25	175	$349,820.69	Key Banc Capital	4.70%	$8,179.31
			$350,378.42			

DSF PRIN &INT

$0.01 Wilmington Fund

DSF 2021 EIB

$974,415.65 Wilmington Fund 4.79%

RECEIVE & FILE

Board Meeting of December 4th, 2024

2-B

INFORMATIVE: REALLOCATION OF FUNDS

The following budgetary transfers have been made to cover unforeseen shortages. These transfers do not change the total amount of the Buffalo Sewer Authority's operating budget.

Wastewater Treatment Plant

10/17/2024	00390103 HAMBURG Drain Float Water	-$800.00	00430103 BAB Electric Light & Power	$800.00
10/17/2024	00230106 PRIM Equipment Maintenance	-$20,000.00	00360103 DEWA Water	$20,000.00
10/17/2024	00200105 PLAN Equipment Maintenance	-$15,000.00	00520106 MAIN Building Repairs	$15,000.00
10/17/2024	00200105 PLAN Clothing & Safety	-$15,000.00	00520106 MAIN Building Repairs	$15,000.00
10/17/2024	00210105 RWWP Equipment Maintenance	-$20,000.00	00520106 MAIN Building Repairs	$20,000.00
10/17/2024	00250105 SECO Equipment Maintenance	-$20,000.00	00520106 MAIN Building Repairs	$20,000.00
10/17/2024	00270105 GAS Equipment Maintenance	-$20,000.00	00520106 MAIN Building Repairs	$20,000.00
10/17/2024	00320105 CHEM Equipment Maintenance	-$15,000.00	00520106 MAIN Building Repairs	$15,000.00
10/17/2024	00350105 FILT Equipment Maintenance	-$20,000.00	00520106 MAIN Building Repairs	$20,000.00
10/17/2024	00390105 HAMB DR FLT Equipment	-$20,000.00	00520106 MAIN Building Repairs	$20,000.00
10/17/2024	00400105 SOUT Equipment Maintenance	-$40,000.00	00520106 MAIN Building Repairs	$40,000.00
10/17/2024	00370105 CENT Equipment Maintenance	-$10,000.00	00520106 MAIN Building Repairs	$10,000.00
10/30/2024	00410105 HAMB Equip. Maintenance	-$780.00	00200106 PLAN Non-Professional	$780.00
10/30/2024	00380106 INCIN Refuse Disposal	-$97,839.65	00360103 DEWA Water	$97,839.65
10/30/2024	00360105 DEWA Chemicals & Gases	-$52,119.00	00360103 DEWA Water	$52,119.00

Sewer Maintenance

10/25/2024	00660105 SWRR Equip Maintenance	-$1,500.00	00650105 SWRM Office Supplies	$1,500.00

Financial Contingency

10/10/2024	00800183 Financial Contingency	-$40,000.00	00800108 FIN Judgements & Claims	$40,000.00

RECEIVE & FILE

Board Meeting of December 4, 2024

2-C

PAYMENT FROM JUDGMENT AND CLAIMS

WHEREAS: Board approval is required for charges made against the Buffalo Sewer Authority's current budget for services and/or materials received during a prior fiscal year; and

WHEREAS: The following services were received during a prior fiscal year charge to the 2023-2024 budget account no. 00800108-480214:

VENDOR	INVOICE	AMOUNT
Biel's Information Tech Systems	5096147-IN	$2,191.00
Comairco Equipment, Inc.	S0062158	$6,404.40
Airgas USA, LLC	9151349342	$1,176.00
Airgas USA, LLC	9151349343	$504.00
Airgas USA, LLC	1604797375	$30.15
Airgas USA, LLC	1604811384	$59.19

; and

WHEREAS: The Executive Secretary and staff recommend the above payment from the Judgment and Claims account.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves the above payments from the Judgment and Claims account no. 00800108-480214.

2-D

CONFIRMATION OF APPOINTMENTS

SEWER CONSTRUCTION INSPECTOR (PROVISIONAL)
SEWAGE TREATMENT PLANT
$74, 793 PER ANNUM
EFFECTIVE: SEPTEMBER 30, 2024

ANDREW STRUG
16 CAMBRIA ST.
BUFFALO, NY

CHIEF SEWER CONSTRUCTION INSPECTOR (PROVISIONAL)
SEWAGE TREATMENT PLANT
$90,071 PER ANNUM
EFFECTIVE: SEPTEMBER 30, 2024

DOUGLAS SMITH
44 FAIRVALE DRIVE
CHEEKTOWAGA, NY

GIS SPECIALIST I (PROVISIONAL)
ENGINEERING
$53,539 PER ANNUM
EFFECTIVE: NOVEMBER 4, 2024

NICHOLAS BRANDJES
759 RICHMOND AVE
BUFFALO, NY

WHEREAS: The preceding appointments were made by the General Manger since the last Board Meeting; and

WHEREAS: The General Manager requests confirmation of each appointment.

NOW THEREFORE
BE IT RESOLVED: That the preceding appointments are hereby confirmed by the Board of the Buffalo Sewer Authority

2-E

AMENDMENT TO SCHEDULE OF JOB CLASSIFICATION PLAN

WHEREAS: There is a need to modify the Job Classification Plan.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority approves the addition of the following positions to the Job Classification Plan:

One (1) Preventive Maintenance Coordinator	00650131	411001
One (1) Senior Resiliency Grants Manager	00600161	411001
One (1) Resiliency Grants Manager	00600161	411001
One (1) Account Clerk Typist	00120121	411001
One (1) Senior Personnel Clerk	00120121	411001
One (1) Clerk	00600121	411001
One (1) Clerk	00200121	411001
Two (2) Laborer I (Seasonal)	00380161	411001

2-F

AMENDMENT TO SCHEDULE OF JOB CLASSIFICATION PLAN

WHEREAS: There is a need to modify the Job Classification Plan.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority approves the deletion of the following position to the Job Classification Plan:

One (1) Administrative Assistant	00650121	411001
One (1) Senior Clerk	00600121	411001

2-G

REQUEST FOR LEAVE OF ABSENCE

WHEREAS: Maha Alabbadi, an Assistant Computer Programmer (provisional), has requested a non-medical leave of absence beginning October 23, 2024, and extending until April 23, 2025.

WHEREAS: The General Manager has reviewed this request and recommends approving this leave of absence request for a period of six (6) months.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby grants Maha Alabbadi a six (6) month unpaid non-medical leave of absence without pay beginning October 23, 2024, and extending until April 23, 2025.

2-H

TRAVEL AUTHORIZATION - NEW YORK, NY

WHEREAS: The Buffalo Sewer Authority must be up-to-date on current environmental regulations in order to maintain compliance; and

WHEREAS: The 97th Annual Meeting of the New York Water Environment Association, Inc., (NYWEA) will be held in New York, N.Y. from February 3 – 5, 2025, covering an overview of environmental requirements and aging infrastructures; and

WHEREAS: The Chairman, Vice-Chairman, Secretary, Principal Sanitary Engineer, Treatment Plant Superintendent, Director of Sewer Maintenance, Industrial Waste Administrator, Senior Engineer, Senior Instrument Technician, two Shift Supervisors, and Forester , find it necessary to attend board and committee meetings to remain current with regulations affecting their respective areas of expertise; and

WHEREAS: The Chairman of the Board recommends attendance at the 97th Annual Meeting of NYWEA.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the Principal Sanitary Engineer, Senior Engineer, Senior Instrument Technician, two Shift Supervisors, Forester, Director of Sewer Maintenance, Industrial Waste Administrator and Treatment Plant Superintendent to travel to New York, N.Y. from February 2 – 6, 2024, to attend the 97th Annual Meeting of the New York Water Environment Association, Inc., at a total cost not to exceed $29,800.00. Account nos. 0010104-458010, 00100104-458012, 00200104-458010, 00200104-458012, 00650104-458010, 00650104-458012, 00600104-458010, and 00600104-458012 will be utilized for this travel.

2-I

SCHEDULE OF BOARD MEETINGS FOR CALENDAR YEAR 2025

WHEREAS: It is proposed that the new Board Meeting schedule for the calendar year 2025 be approved as follows:

January 8, 2025	July 30, 2025
February 19, 2025	September 24, 2025
March 12, 2025	October 15, 2025
April 2, 2025	November 12, 2025
May 7 & 28 2025	December 10, 2025
June 25, 2025 (Annual Meeting)	

All meetings are scheduled for Wednesdays at 9:00 AM. The location of the meetings will be announced.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves the above Schedule of Board Meetings for the calendar year 2025.

2-J

INFORMATIVE: BUFFALO MUNICIPAL HOUSING AUTHORITY MEMORANDUM OF UNDERSTANDING NEGOTIATIONS

On June 3, 2021, the Board of the Buffalo Sewer Authority Approved the Pricing and other Details of the Sewer System Environmental Impact Revenue Bonds, Series 2021 to fund the Raincheck 2.0 Green Infrastructure Program.

As a term of these bonds, green infrastructure constructed through this funding mechanism are required to be on publicly owned lands.

The Kenfield-Langfield and Ferry-Grider properties owned and operated by the Buffalo Municipal Housing Authority were identified as cost effective and efficient use of these bonds on public lands.

As a condition of constructing green infrastructure on these lands, a Memorandum of Understanding between the Buffalo Municipal Housing Authority and Buffalo Sewer Authority will be required.

On November 21, 2024, the Board of the Buffalo Municipal Housing Authority authorized the Executive Director to enter into such a Memorandum of Understanding.

Upon finalization of terms between the Buffalo Sewer Authority and the Executive Director, a finalized Memorandum of Understanding shall be brought to the Board of the Buffalo Sewer Authority for approval and authorization to sign by the designated Authorized Representative of the Buffalo Sewer Authority.

RECEIVE & FILE
Board Meeting of December 4, 2024

2-K

INFORMATIVE: BUFFALO PUBLIC SCHOOLS MEMORANDUM OF UNDERSTANDING NEGOTIATIONS

On June 3, 2021, the Board of the Buffalo Sewer Authority Approved the Pricing and other Details of the Sewer System Environmental Impact Revenue Bonds, Series 2021 to fund the Raincheck 2.0 Green Infrastructure Program.

As a term of these bonds, green infrastructure constructed through this funding mechanism are required to be on publicly owned lands.

Twenty Buffalo Public School properties were identified as cost effective and efficient use of these bonds on public lands.

As a condition of constructing green infrastructure on these lands, a Memorandum of Understanding between the Buffalo Public Schools and Buffalo Sewer Authority will be required.

On November 20, 2024, the Board of the Buffalo Public Schools authorized the Superintendent to enter into such a Memorandum of Understanding.

Upon finalization of terms between the staff of the Buffalo Sewer Authority and the Superintendent, a finalized Memorandum of Understanding shall be brought to the Board of the Buffalo Sewer Authority for approval and authorization to sign by the designated Authorized Representative of the Buffalo Sewer Authority.

RECEIVE & FILE
Board Meeting of December 4, 2024

ITEM NO.3

TRAVEL AUTHORIZATION - NASHUA, NH

WHEREAS: The New England Regional Pretreatment Coordinators Association (NERPCA) is hosting the 2024 Annual Workshop and Training in Nashua, New Hampshire from October 29 - 31, 2024; and

WHEREAS: The Pretreatment Workshop and Training will highlight the regulatory issues that are important to pretreatment programs and on topics that impact the day-to-day management of pretreatment programs. Featured speakers and panel presentations will address PFAS, SIU Inspections, Enforcement Response Plans, source reduction, enforcement strategies, and case studies; and

WHEREAS: The Industrial Waste Administrator needs to stay current in the latest innovations, procedures, and methodologies in these areas; and

WHEREAS: The EPA Region 2 will be present to address State Updates, the NEW Annual Report Electronic Format, and to answer any questions; and

WHEREAS: The EPA strongly encourages municipal and state industrial pretreatment coordinators to attend this NERPCA Annual Workshop and Training.

WHEREAS: Due to time constraints, members of the Board were individually polled on October 10, 2024, and authorized acceptance of this proposal; and

WHEREAS: It is now necessary to formally ratify that authorization.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the Buffalo Sewer Authority Industrial Waste Administrator to travel to Nashua, NH from October 28-31, 2024, to attend the NERPCA Annual Workshop at a cost not to exceed $2,000.00. Expenses for this travel shall be charged to account nos. 00200104-458010 and 00200104-458012

MOTION TO APPROVE

MADE BY MR. ROOSEVELT

2ND BY MRS.PETRUCCI

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 4

AUTHORIZATION FOR RENEWAL PURCHASE OF MICROSOFT OFFICE 365

WHEREAS: The Buffalo Sewer Authority utilizes Microsoft Office 365, a cloud-based software that includes Microsoft Outlook, Word, Excel, Teams, and OneDrive; and

WHEREAS: This software requires an annual subscription that is due for renewal; and

WHEREAS: Upon request SHI International submitted a quote utilizing NYS contract PM69723, in the amount of $74,595.60 for the necessary software; and

WHEREAS: Board approval is required for purchases of goods over $20,000; and

WHEREAS: The Executive Secretary and the Director of Information Technology recommend this purchase.

WHEREAS: Due to time constraints, members of the Board were individually polled on November 21, 2024, and verbally authorized acceptance of this proposal; and

WHEREAS: It is now necessary to formally ratify that authorization.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to purchase a renewal subscription of Microsoft Office 365 software from SHI International utilizing NYS contract PM69723 in the amount of $74,595.60. This purchase will be charged to account no. 00200107-474300

MOTION TO APPROVE

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 5

AUTHORIZATION TO PURCHASE A VEHICLE UNDER THE ONONDAGA BID 106-19 2025

WHEREAS: The Director of Sewer Maintenance and Head Motor Equipment Mechanic, request approval to purchase the following vehicle, with additional options, available under Onondaga County Contract to add to the existing fleet for Green Infrastructure:

County Contract	Vendor	Vehicle	Cost
Bid No. 2024 Award No. 7974	Van Bortel Ford	One (1) 2024 Ford F-450 XL Crew Cab 4x4 203 WB 84 CA Oxford White	$55,051.07
		With various options as listed on quote#36075:	
		19' 130USD Steel Dump Body w18" sides 24" Gate. Stop/Turn with flashers in rear post. Cabshield with 8 flashers: 2-Forward, 2-side, 4 rear facing 4 grill flashers. Ladder driver/passenger side of body. Elec/HD subframe hoist poly fenders. Aluminum back pack tool box under body aluminum tool boxes. 10 Ton pintle hitch body painted to match fleet..	$29,993.00
		Delivery Charge:	$ 110.00
		Total Vehicle Cost:	$85,154.07

WHEREAS: The Director of Sewer Maintenance, Forester and Head Motor Equipment Mechanic recommend the purchase of the above vehicle at the total cost of $85,154.07

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority authorizes the General Manager to purchase the above vehicle and additional options indicated from Van Bortel Ford, at a total cost of $85,154.07 This purchase will be charged to account no. 00700107-474200.

MOTION TO APPROVE

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 6

REPORT ON BIDS RECEIVED - PURCHASE OF VARIOUS NEW & UNUSED STEEL PRODUCTS

WHEREAS: Formal bids were advertised and solicited for the purchase of the following various steel products:

1.) (50) Receiver Top Section; 6 inches; Steel; Dark
2.) (25) 4" Dark Curb Box
3.) (50) 5" Dark Curb Box
4.) (50) 6" Dark Curb Box

WHEREAS: The following bids were received and opened by the Buffalo Sewer Authority Purchase Department on October 21,2024 at 2:00 PM

Vendor	Cost
Melius Welding	No bid
EJ USA	$43,722.00

; and

WHEREAS: The Director of Sewer Maintenance and staff carefully reviewed the quotes received for each item needed and recommend the following awards, to the low bidder for each item:

Vendor	Items to award	Cost
EJ USA	ALL	$43,722.00

; and

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to purchase the above listed various steel products from the low bidder for all items listed from EJ USA at a total cost of $43,722.00. These purchases will be charged to account no. 00660105-466269.

MOTION TO APPROVE

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 7

REPORTS ON BIDS RECEIVED - PURCHASE OF THREE (3) NEW AND UNUSED 2025 RAM 1500 4X4 TRADESMAN QUAD CAB

WHEREAS: New York State Vehicle Marketplace Mini bids were advertised and solicited for the purchase of three (3) new and unused 2025 Ram 1500 4X4 Tradesman Quad Cab; and

WHEREAS: The following bids were received and opened by the Buffalo Sewer Authority Purchase Department:

VENDOR	BID RESULT	COST EACH	EXTENDED COST
Empire Automotive of Northern New York Inc DBA Empire CDJR	Ram 1500 4x4 Tradesman Quad Cab	$38,740.80	$116,222.40
Central Dodge Inc	Ram 1500 4x4 Tradesman Quad Cab	$38,358.00	$115,074.00
Maguire Motors LLC	Ram 1500 4x4 Tradesman Quad Cab	$39,057.88	$117,173.64
Sawyer Chrysler Dodge Inc DBA Sawyer Motors	Ram 1500 4x4 Tradesman Quad Cab	$37,608.00	$112,824.00
BJA 1695 LLC Bob Johnson CDJR	Ram 1500 4x4 Tradesman Quad Cab	$37,800.00	$113,400.00

; and

WHEREAS: The Director of Sewer Maintenance, Head Motor Equipment Mechanic, and staff reviewed the bids received and recommended the purchase to the lowest bidder, Sawyer Chrysler Dodge Inc., DBA Sawyer Motors, at a total cost of $112,824.00; and

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to enter into and execute a contract with SAWYER CHRYSLER DODGE INC DBA SAWYER MOTORS for the purchase of three (3) new and unused 2025 Ram 1500 4X4 Tradesman Quad Cab at a total cost not to exceed $112,824.00. This purchase will be charged to account nos. 00600107-474200 and 00700107-474200.

MOTION TO APPROVE

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 8

REPORTS ON BIDS RECEIVED - PURCHASE OF FIVE (5) NEW AND UNUSED 2025 FORD MAVERICK XL AWD

WHEREAS: New York State Vehicle Marketplace Mini bids were advertised and solicited for the purchase of Five (5) new and unused 2025 Ford Maverick XL AWD

WHEREAS: The following bids were received and opened by the Buffalo Sewer Authority Purchase Department:

VENDOR	BID RESULT	COST EACH	EXTENDED COST
Nielsen Ford	Ford Maverick XL Awd	$28,220.00	$141,544.20
C Basil Ford Inc	Ford Maverick XL Awd	$27,524.16	$137,590.60
Delacy Ford	Ford Maverick XL Awd	$27,518.12	$137,620.80
Van Bortel Ford	Ford Maverick XL Awd	$27,542.27	$137,711.35
Scorpio LLC Motors DBA Greenwich Ford	Ford Maverick XL Awd	$27,254.59	$136,272.95
Bob Johnson	Ford Maverick XL Awd	$28,220.00	$141,100.00

; and

WHEREAS: The Director of Sewer Maintenance, Head Motor Equipment Mechanic, and staff reviewed the bids received and recommended the purchase to the lowest bidder, Scorpio LLC DBA Greenwich Ford, at a total cost of $136,272.95; and

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to enter into and execute a contract with Scorpio LLC DBA Greenwich Ford for the purchase of five (5) new and unused 2025 FORD Maverick XL AWD at a total cost not to exceed $136,272.95. This purchase will be charged to account nos. 00200107-474200 and00520107-474200 .

MOTION TO APPROVE

MADE BY MR. ROOSEVELT

2ND BY MRS.PETRUCCI

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 9

CHANGE ORDER NO. 2– CONTRACT NO. 82000042

CONTRACTOR:	ORIGINAL CONTRACT COST	$4,512,455.00
Kandey Company, Inc.	PREVIOUS CHANGE ORDERS	$920,915.04
19 Ransier Drive	THIS CHANGE ORDER	($60,000.00)
West Seneca, NY 14224	ADJUSTED CONTRACT COST	$5,373,370.04

VENDOR# 4603 ACCOUNT# 02000497-490740

WORK: Mill Race Real Time Control Project

DESCRIPTION OF CHANGE OR EXTRA WORK:

Item #1 Final Adjustment to Contract Amount

REASON FOR CHANGE OR EXTRA WORK:

Item #1 Adjusting contract amounts for actual quantities used.

COST OF CHANGE OR EXTRA WORK:

Item #1 ($60,000.00)

THE TOTAL COST OF THE CHANGE OR EXTRA WORK: ($60,000.00)

The Total DECREASE to the Contract as a result of this Change Order is $60,000.00

WHEREAS: On November 22, 2021, the Board of the Buffalo Sewer Authority authorized the General Manager to enter into and execute a contract with Kandey Construction, Inc., for the Mill Race Real Time Control project at a cost not to exceed $4,512,455.00; and

WHEREAS: On October 19, 2022, the Board of the Buffalo Sewer Authority authorized a $482,585.83 Change Order No. 1 to this contract for costs associated with easement delays and inflationary forces, Carroll Street sewer interconnection, and flowmeter redesign; and

WHEREAS: On September 28, 2023 a Change Order No. 2 to Contract No. 82000042 was approved by the Board for additional work.

WHEREAS: The Principal Sanitary Engineer and staff and GHD have reviewed a Change Order No. 3 to Contract No. 82000042 as detailed above and recommend approval.

CONTRACT SUPPLEMENT CONDITIONS:

1. The contract completion date established in the original contract or as modified by previous contract supplements is hereby changed by 194 calendar days to set a new final completion date of December 4, 2024.

2. Any additional work to be performed under this contract supplement shall be carried out in compliance with the specifications included in the preceding description of changes involved with the supplemental contract drawings designated none and under the provisions of the original contract, including compliance with applicable equipment specifications, general specifications, and project specifications for the same type of work.

3. This contract supplement unless otherwise provided herein does not relieve the Contractor from strict compliance with the guarantee provisions of the original contract, particularly those pertaining to performance and operation of equipment.

4. The Contractor expressly agrees that he will place under coverage of his performance and payment bonds and Contractor's Insurance all work covered by this contract supplement. The Contractor will furnish to the Owner evidence of increased coverage of his performance and payment bonds for the accrued value of all contract supplements that exceeds the original contract price by twenty percent (20%).

5. The costs established under this contract supplement are acknowledged as including any and all costs associated with the work described herein and including any and all costs associated with any and all work performed or to be performed by the Contractor that may be affected in any manner by the work described herein.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves Change Order No. 3 to Contract No. 82000042 as written in the above Agenda Item, increasing the contract cost in the amount of $60,000.00 making the adjusted contract cost $5,373,370.04.

MOTION TO APPROVE

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 10

CERTIFICATE OF ACCEPTANCE AND OCCUPANCY

PROJECT: Mill Race Real Time Control Project

BID: $4,512,455.00

CONTRACTOR:

Kandey Company, Inc.
19 Ransier Drive
West Seneca, NY 14224

WHEREAS: The Principal Sanitary Engineer and staff have certified that the Contractor completed the work in accordance with the plans and specifications on December 4, 2024 and

WHEREAS In Item 10 of the Board meeting of December 4, 2024, the contract value was decreased by $60,000.00

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby finds and determines that:

a. The work to be performed under the terms of the Contract has been complete and is accepted;

b. The date of entrance and occupancy be fixed as of December 4, 2024;

c. The maintenance period commence on December 4, 2024;

d. The Board approved Change Order No. 3 on December 4, 2024 resulting in a net increase of $860,915.04, thereby making the adjusted contract cost $5,737,370.04.

MOTION TO APPROVE

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 11

CHANGE ORDER NO. 2 CONTRACT RENEWAL AND MODIFICATIONS CONTRACT NO. 82000026 WET WEATHER OPERATIONAL OPTIMIZATION AND REAL TIME CONTROL COORDINATION SYSTEM IMPLEMENTATION

CONSULTANT:	ORIGINAL CONTRACT COST	$4,293,633.00
EmNet/Xylem/Xylem Vue, Inc.	PREVIOUS CHANGE ORDERS	$475,000.00
121 S. Niles Ave Ste 22	THIS CHANGE ORDER	$1,573,400.00
South Bend, IN 46617	ADJUSTED CONTRACT COST	$6,342,033.00

VENDOR NO. 15497 ACCOUNT NO. 82000026 02000514-432004

PROJECT: Wet Weather Operational Optimization and Real Time Control Coordination System Implementation

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DESCRIPTION OF CHANGE OR EXTRA WORK:

Item #1 Sensor Network and Data Acquisition
Item #2 System Analysis and Data Analytics
Item #3 Globally Coordinated Control Strategy
Item #4 Optimization of Long Term Control Plan
Item #5 RTC Program Management

REASON FOR CHANGE OR EXTRA WORK:

Item #1	Additional year of maintenance of existing telemetry, flow metering, level sensors, and rain gauges including replacement of obsolete equipment.
Item #2	Integration of output data from facility to expand analytics and align functionality of pumping stations with RTCs as well as integrate Sewage Pollution Right to Know reporting into Xylem Vue platform.
Item #3	Creation of forecast model for facility to advise operators on modifications to modes of treatment to optimize throughput and treatment capacity.
Item #4	Provide design checks to various Queen City Clean Waters projects as they progress through engineering phases to verify achievement of performance goals.
Item #5	Standardization and upgrading of existing Real Time Control facility software and hardware.

COST OF CHANGE OR EXTRA WORK:

Item #1	$756,300.00
Item #2	$98,100.00
Item #3	$117,300.00
Item #4	$106,700.00
Item #5	$495,000.00

THE TOTAL COST OF THE CHANGE OR EXTRA WORK: $1,573,400.00

WHEREAS: In Item No. 19, on May 27, 2020, the Board of the Buffalo Sewer Authority awarded a three (3) year term agreement with optional three (3) one (1) year renewals thereafter for Wet Weather Operational Optimization and Real Time Control Coordination System Implementations to EmNet, LLC; and

WHEREAS: The original three (3) year term period expired in 2023; and

WHEREAS: On November 1, 2023, the Board approved the first of up to three one year extensions to this contract; and

WHEREAS: Upon request from the Principal Sanitary Engineer, Xylem, Inc. has submitted a change order proposal to incorporate these changes and to extend this contract for the second of three (3) one (1) year renewals; and

WHEREAS: The Principal Sanitary Engineer and staff have reviewed this Change Order No. 1 request to Contract No. 82000026 in the amount of $1,573,400.00 as detailed above and recommend its approval.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby approves Change Order No. 1 to Contract No. 82000026 as written in the above Agenda Item, increasing the contract cost in the amount of $1,573,4000.00, making the adjusted contract cost $6,342,033.00. These funds shall be drawn from account number 02000514-432004.

MOTION TO APPROVE

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 12

EXTENSION OF THE CONTRACT FOR AGREEMENT WITH GREELEY AND HANSEN, A TYLIN COMPANY FOR CAPITAL PROJECTS PROGRAM MANAGEMENT SERVICES

WHEREAS: The Buffalo Sewer Authority issued a request for proposals (RFP) for the purposes of securing the services of a consulting firm to provide Capital Projects Program Management Services for an initial five (5) year guaranteed period with up to five (5) additional one-year extensions on July 11, 2023; and

WHEREAS: Four (4) firms responded to this RFP; and

WHEREAS: A consultant selection committee appointed by the General Manager reviewed the submitted proposals and interviewed each team and ranked the firms on the basis of both their interviews and proposals; and

WHEREAS: The RFP provided a contract value not to exceed $6,000,000.00 (six million dollars) with future year's contract values to be negotiated between the Authority and the Consultant on the basis of work anticipated and the wage and fee structures provided in the Consultant's cost proposal; and

WHEREAS: On December 6, 2023, the Board of the Buffalo Sewer Authority approved Item No.18 on the Agenda authorizing the General Manager to enter into an agreement with Greeley and Hansen, a TYLin Company for these services as detailed in their proposal of August 18, 2023, at a cost not to exceed $6,000,000.00 for the first year with subsequent year's contract amounts to be approved for the first four years and up to five additional one-year contract extensions to be approved by the Board of the Buffalo Sewer Authority in the future.

WHEREAS: On January 1, 2025 the second year of the contract will commence and the General Manager, Executive Secretary, and Principal Sanitary Engineer have negotiated a budget in the amount of $9,998,903.00 for the 2025 calendar year with Greeley and Hansen/TYLin; and

WHEREAS: The Principal Sanitary Engineer now recommends a budget in the amount of $9,998,903.00 be extended for the 2025 calendar year bringing the total contract amount to $15,998,903.00.

NOW THEREFORE
BE IT RESOLVED: That the Board of the Buffalo Sewer Authority hereby authorizes the General Manager to extend the contract with Greeley and Hansen/TYLin to provide capital projects program management services at a cost not to exceed a total of $15,998,903.00 through December 31, 2025. Account no. 02000557-432004 will be utilized for these services.

MOTION TO APPROVE

MADE BY MR. ROOSEVELT

2ND BY MRS.PETRUCCI

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 13

ADOPTION OF NEGATIVE DECLARATION OF STATE ENVIRONMENTAL QUALITY REVIEW FOR THE BRECKENRIDGE STREET COMBINED SEWER OVERFLOW (CSO) CONTROL PROJECT

WHEREAS: The Buffalo Sewer Authority (the "Authority") was created by New York Public Authorities Law (the "Public Authorities Law") Section 1177 (the "Authority Act") and is authorized and empowered by the Public Authorities Law Article 5, Title 8 to provide for the jurisdiction, control, possession, supervision and use of the "facilities", as defined in Section 1176(10) of the Authority Act, including but not limited to the sewage treatment plant, storm water and sewage collection system constituting the sewer system that serves the City of Buffalo and neighboring communities (the "Sewer System"); and

WHEREAS: Pursuant to Section 1179 of the Authority Act, the City of Buffalo (the "City") assigned, transferred and dedicated to the Authority the jurisdiction, control, supervision, possession and use of the Sewer System; and

WHEREAS: In accordance with Article 8 (State Environmental Quality Review Act a/k/a "SEQRA") of the Environmental Conservation Law (the "Act"), and the statewide regulations under the Act (6 NYCRR Part 617) (the "Regulations"), the Authority has considered the proposed construction and implementation of the Breckenridge Combined Sewer Overflow (CSO) Project which is designed to address and abate combined sewer overflows to area waterways which occur during wet weather, typically rain and/or snow melt events (the "Action"); and

WHEREAS: This project will serve to protect the environment, water quality and the public health, safety and welfare by reducing discharges of pollutants from combined sewer overflows which would otherwise occur without construction and implementation of this project; and

WHEREAS: On August 9, 2024, the Authority determined that it would serve as Lead Agency pursuant to SEQRA and engage in a coordinated review process, and a notice of such Lead Agency designation and coordinated review process was mailed to various involved and interested agencies on August 9, 2024; and

WHEREAS: The Authority, through its appropriate officers has identified and contacted all potentially involved and interested agencies in the Action (the "Agencies"), and all of the identified potentially Involved Agencies, as defined in the SEQRA Regulations, have consented or not objected to the Authority's proposal to be Lead Agency for the Action; and

WHEREAS: The Authority, as Lead Agency, in making a Determination of Significance with respect to the Action, has considered the Action as a "Type 1 Action" pursuant to the Regulations, has examined the completed Full Environmental Assessment Form and has reviewed and discussed

each and every criteria for determining significance set out in Part 617.7 of the SEQRA Regulations.

NOW THEREFORE BE IT RESOLVED:

Based upon a consideration of the Action, an examination of the completed Full Environmental Assessment Forms, a review and discussion of each and every criteria for making a Determination of Significance set out in Part 617.7 of the SEQRA Regulations, and such further investigation of the Action and its environmental effects, if any, as the Authority has deemed appropriate (Attachments A-1, A-2, A-3) , the Authority makes the following findings with respect to the Action:

a) No potentially large impacts on the environment from the Action are identified in the Environmental Assessment Form.
b) The Action is not expected to trigger any significant adverse impacts, including those examples of impacts listed in Part 617.7 of the SEQRA Regulations.

BE IT FURTHER RESOLVED:

Based upon the foregoing investigation of the potential environmental impacts of the Action and considering both the magnitude and importance of each potential environmental impact, as more particularly stated in the attached Environmental Assessment Form and Negative Declaration attached hereto and made a part hereof, the Authority makes the following determinations:

a) The Action will not have a significant adverse impact on the environment and an environmental impact statement will not be prepared with respect to the Action; and
b) The Authority hereby authorizes and directs the General Manager, and its appropriate officers to execute and deliver a Notice of Determination of Non-Significance ("Negative Declaration"), in form and substance as attached hereto and made a part hereof, and to file such Notice, in accordance with the requirements of the SEQRA Regulations, and to take such other actions, upon the advice of legal counsel, in furtherance of this resolution as may be necessary or appropriate.

MOTION TO APPROVE

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 14

ADOPTION OF NEGATIVE DECLARATION OF STATE ENVIRONMENTAL QUALITY REVIEW FOR CSO-053 SEWER PATROL POINT (SPP) MODIFICATION AT GENESEE STREET (CSO053_8 SPP 341A MODIFICATION) PROJECT

WHEREAS: The Buffalo Sewer Authority (the "Authority") was created by New York Public Authorities Law (the "Public Authorities Law") Section 1177 (the "Authority Act") and is authorized and empowered by the Public Authorities Law Article 5, Title 8 to provide for the jurisdiction, control, possession, supervision and use of the "facilities", as defined in Section 1176(10) of the Authority Act, including but not limited to the sewage treatment plant, storm water and sewage collection system constituting the sewer system that serves the City of Buffalo and neighboring communities (the "Sewer System"); and

WHEREAS: Pursuant to Section 1179 of the Authority Act, the City of Buffalo (the "City") assigned, transferred and dedicated to the Authority the jurisdiction, control, supervision, possession and use of the Sewer System; and

WHEREAS: In accordance with Article 8 (State Environmental Quality Review Act a/k/a "SEQRA") of the Environmental Conservation Law (the "Act"), and the statewide regulations under the Act (6 NYCRR Part 617) (the "Regulations"), the Authority has considered the proposed construction and implementation of the Genesee Street CSO053_8 SPP 341A Modification Project which is designed to address and abate combined sewer overflows to area waterways which occur during wet weather, typically rain and/or snow melt events (the "Action"); and

WHEREAS: This project will serve to protect the environment, water quality and the public health, safety and welfare by reducing discharges of pollutants from combined sewer overflows which would otherwise occur without construction and implementation of this project; and

WHEREAS: On August 8, 2024, the Authority determined that it would serve as Lead Agency pursuant to SEQRA and engage in a coordinated review process, and a notice of such Lead Agency designation and coordinated review process was mailed to various involved and interested agencies on August 8, 2024; and

WHEREAS: The Authority, through its appropriate officers has identified and contacted all potentially involved and interested agencies in the Action (the "Agencies"), and all of the identified potentially Involved Agencies, as defined in the SEQRA Regulations, have consented or not objected to the Authority's proposal to be Lead Agency for the Action; and

WHEREAS: The Authority, as Lead Agency, in making a Determination of Significance with respect to the Action, has considered the Action as a "Type 1 Action" pursuant to the Regulations, has examined the completed

Full Environmental Assessment Form and has reviewed and discussed each and every criteria for determining significance set out in Part 617.7 of the SEQRA Regulations.

NOW THEREFORE BE IT RESOLVED: Based upon a consideration of the Action, an examination of the completed Full Environmental Assessment Forms, a review and discussion of each and every criteria for making a Determination of Significance set out in Part 617.7 of the SEQRA Regulations, and such further investigation of the Action and its environmental effects (Attachments B-1, B-2, B-3), if any, as the Authority has deemed appropriate, the Authority makes the following findings with respect to the Action:

a) No potentially large impacts on the environment from the Action are identified in the Environmental Assessment Form.
b) The Action is not expected to trigger any significant adverse impacts, including those examples of impacts listed in Part 617.7 of the SEQRA Regulations.

BE IT FURTHER RESOLVED: Based upon the foregoing investigation of the potential environmental impacts of the Action and considering both the magnitude and importance of each potential environmental impact, as more particularly stated in the attached Environmental Assessment Form and Negative Declaration attached hereto and made a part hereof, the BSA makes the following determinations:

a) The Action will not have a significant adverse impact on the environment and an environmental impact statement will not be prepared with respect to the Action; and
b) The Authority hereby authorizes and directs the General Manager, and its appropriate officers to execute and deliver a Notice of Determination of Non-Significance ("Negative Declaration"), in form and substance as attached hereto and made a part hereof, and to file such Notice, in accordance with the requirements of the SEQRA Regulations, and to take such other actions, upon the advice of legal counsel, in furtherance of this resolution as may be necessary or appropriate.

MOTION TO APPROVE

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 15

ADOPTION OF NEGATIVE DECLARATION OF STATE ENVIRONMENTAL QUALITY REVIEW FOR CSO-053 SEWER PATROL POINT (SPP) MODIFICATION AT COLORADO AVENUE AT SCAJAQUADA STREET (CSO053_2.5 SPP 337 MODIFICATION) PROJECT

WHEREAS: The Buffalo Sewer Authority (the "Authority") was created by New York Public Authorities Law (the "Public Authorities Law") Section 1177 (the "Authority Act") and is authorized and empowered by the Public Authorities Law Article 5, Title 8 to provide for the jurisdiction, control, possession, supervision and use of the "facilities", as defined in Section 1176(10) of the Authority Act, including but not limited to the sewage treatment plant, storm water and sewage collection system constituting the sewer system that serves the City of Buffalo and neighboring communities (the "Sewer System"); and

WHEREAS: Pursuant to Section 1179 of the Authority Act, the City of Buffalo (the "City") assigned, transferred and dedicated to the Authority the jurisdiction, control, supervision, possession and use of the Sewer System; and

WHEREAS: In accordance with Article 8 (State Environmental Quality Review Act a/k/a "SEQRA") of the Environmental Conservation Law (the "Act"), and the statewide regulations under the Act (6 NYCRR Part 617) (the "Regulations"), the Authority has considered the proposed construction and implementation of the Colorado Avenue CSO053_2.5 SPP 337 Modification Project which is designed to address and abate combined sewer overflows to area waterways which occur during wet weather, typically rain and/or snow melt events (the "Action"); and

WHEREAS: This project will serve to protect the environment, water quality and the public health, safety and welfare by reducing discharges of pollutants from combined sewer overflows which would otherwise occur without construction and implementation of this project; and

WHEREAS: On August 8, 2024, the Authority determined that it would serve as Lead Agency pursuant to SEQRA and engage in a coordinated review process, and a notice of such Lead Agency designation and coordinated review process was mailed to various involved and interested agencies on August 8, 2024; and

WHEREAS: The Authority, through its appropriate officers has identified and contacted all potentially involved and interested agencies in the Action (the "Agencies"), and all of the identified potentially Involved Agencies, as defined in the SEQRA Regulations, have consented or not objected to the Authority's proposal to be Lead Agency for the Action; and

WHEREAS: The Authority, as Lead Agency, in making a Determination of Significance with respect to the Action, has considered the Action as a "Type 1 Action" pursuant to the Regulations, has examined the completed

Full Environmental Assessment Form and has reviewed and discussed each and every criteria for determining significance set out in Part 617.7 of the SEQRA Regulations.

NOW THEREFORE BE IT RESOLVED:

Based upon a consideration of the Action, an examination of the completed Full Environmental Assessment Forms, a review and discussion of each and every criteria for making a Determination of Significance set out in Part 617.7 of the SEQRA Regulations, and such further investigation of the Action and its environmental effects, if any, as the Authority has deemed appropriate (Attachments C-1, C2, C3), the Authority makes the following findings with respect to the Action:

a) No potentially large impacts on the environment from the Action are identified in the Environmental Assessment Form.
b) The Action is not expected to trigger any significant adverse impacts, including those examples of impacts listed in Part 617.7 of the SEQRA Regulations.

BE IT FURTHER RESOLVED:

Based upon the foregoing investigation of the potential environmental impacts of the Action and considering both the magnitude and importance of each potential environmental impact, as more particularly stated in the attached Environmental Assessment Form and Negative Declaration attached hereto and made a part hereof, the BSA makes the following determinations:

c) The Action will not have a significant adverse impact on the environment and an environmental impact statement will not be prepared with respect to the Action; and
a) The Authority hereby authorizes and directs the General Manager, and its appropriate officers to execute and deliver a Notice of Determination of Non-Significance ("Negative Declaration"), in form and substance as attached hereto and made a part hereof, and to file such Notice, in accordance with the requirements of the SEQRA Regulations, and to take such other actions, upon the advice of legal counsel, in furtherance of this resolution as may be necessary or appropriate.

MOTION TO APPROVE

MADE BY MRS.PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 16

ADOPTION OF NEGATIVE DECLARATION OF STATE ENVIRONMENTAL QUALITY REVIEW FOR CSO-053 SEWER PATROL POINT (SPP) MODIFICATIONS AT EAST DELEVAN AVENUE (CSO053_13 SPP 165B MODIFICATION), BAILEY AVENUE (CSO-053_3.1 SPP 338 MODIFICATION), KENSINGTON EXPRESSWAY (CSO-053_1.5 SOO 336B MODIFICATION) AND MICHIGAN AVENUE (CSO-053_14 SPP 175 MODIFICATION) PROJECT

WHEREAS: The Buffalo Sewer Authority (the "Authority") was created by New York Public Authorities Law (the "Public Authorities Law") Section 1177 (the "Authority Act") and is authorized and empowered by the Public Authorities Law Article 5, Title 8 to provide for the jurisdiction, control, possession, supervision and use of the "facilities", as defined in Section 1176(10) of the Authority Act, including but not limited to the sewage treatment plant, storm water and sewage collection system constituting the sewer system that serves the City of Buffalo and neighboring communities (the "Sewer System"); and

WHEREAS: Pursuant to Section 1179 of the Authority Act, the City of Buffalo (the "City") assigned, transferred and dedicated to the Authority the jurisdiction, control, supervision, possession and use of the Sewer System; and

WHEREAS: In accordance with Article 8 (State Environmental Quality Review Act a/k/a "SEQRA") of the Environmental Conservation Law (the "Act"), and the statewide regulations under the Act (6 NYCRR Part 617) (the "Regulations"), the Authority has considered the proposed construction and implementation of the East Delevan Avenue CSO 053_13 SPP 165B, Bailey Avenue CSO 053_3.1 338, Kensington Expressway CSO 053_1.5 SPP 336B, and Michigan Avenue CSO-053_14 SPP 175 Modification Projects which are designed to address and abate combined sewer overflows to area waterways which occur during wet weather, typically rain and/or snow melt events (the "Action"); and

WHEREAS: This project will serve to protect the environment, water quality and the public health, safety and welfare by reducing discharges of pollutants from combined sewer overflows which would otherwise occur without construction and implementation of this project; and

WHEREAS: On August 8, 2024, the Authority determined that it would serve as Lead Agency pursuant to SEQRA and engage in a coordinated review process, and a notice of such Lead Agency designation and coordinated review process was mailed to various involved and interested agencies on August 8, 2024; and

WHEREAS: The Authority, through its appropriate officers has identified and contacted all potentially involved and interested agencies in the Action (the "Agencies"), and all of the identified potentially Involved Agencies, as defined in the SEQRA Regulations, have consented or not objected to the Authority's proposal to be Lead Agency for the Action; and

WHEREAS: The Authority, as Lead Agency, in making a Determination of Significance with respect to the Action, has considered the Action as a "Type 1 Action" pursuant to the Regulations, has examined the completed Full Environmental Assessment Form and has reviewed and discussed each and every criteria for determining significance set out in Part 617.7 of the SEQRA Regulations.

NOW THEREFORE BE IT RESOLVED: Based upon a consideration of the Action, an examination of the completed Full Environmental Assessment Forms, a review and discussion of each and every criteria for making a Determination of Significance set out in Part 617.7 of the SEQRA Regulations, and such further investigation of the Action and its environmental effects, if any, as the Authority has deemed appropriate (Attachments D-1, D-2, D-3, E-1, E-2, E-3, F-1, F-2, F-3, G-1, G-2, and G-3) the Authority makes the following findings with respect to the Action:

a) No potentially large impacts on the environment from the Action are identified in the Environmental Assessment Form.
b) The Action is not expected to trigger any significant adverse impacts, including those examples of impacts listed in Part 617.7 of the SEQRA Regulations.

BE IT FURTHER RESOLVED: Based upon the foregoing investigation of the potential environmental impacts of the Action and considering both the magnitude and importance of each potential environmental impact, as more particularly stated in the attached Environmental Assessment Form and Negative Declaration attached hereto and made a part hereof, the BSA makes the following determinations:

a) The Action will not have a significant adverse impact on the environment and an environmental impact statement will not be prepared with respect to the Action; and
b) The Authority hereby authorizes and directs the General Manager, and its appropriate officers to execute and deliver a Notice of Determination of Non-Significance ("Negative Declaration"), in form and substance as attached hereto and made a part hereof, and to file such Notice, in accordance with the requirements of the SEQRA Regulations, and to take such other actions, upon the advice of legal counsel, in furtherance of this resolution as may be necessary or appropriate.

MOTION TO APPROVE

MADE BY MR. ROOSEVELT

2ND BY MRS.PETRUCCI

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 16-1

SERIES 2024 BOND ANTICIPATION NOTE RESOLUTION

EXTRACT OF MINUTES
Meeting of the Buffalo Sewer Authority
of the City of Buffalo, County of Erie, New York
December 4, 2024

***

A regular meeting of the Buffalo Sewer Authority of the City of Buffalo, in the County of Erie, New York, was held at the Bird Island Treatment Facility, 90 West Ferry Street, Buffalo, New York, on December 4, 2024, at 9:00 o'clock A.M. (Prevailing Time).

There were present: 22

Members:3

There were absent:0

Also present:

The adoption of the Series 2024 Bond Anticipation Note Resolution with respect to the Breckenridge Street Combined Sewer Overflow Project was moved by Member MRS.PETRUCCI, seconded by Member MR. ROOSEVELT, and duly put to a vote on roll call, which resulted as follows:

AYES:3

NOES:0

BUFFALO SEWER AUTHORITY

SERIES 2024 BOND ANTICIPATION NOTE

NOTE RESOLUTION

Adopted: December 4, 2024

BUFFALO SEWER AUTHORITY
SERIES 2024 BOND ANTICIPATION NOTE
RESOLUTION

WHEREAS, the Buffalo Sewer Authority (the "Authority"), a body corporate and politic constituting a public benefit corporation organized and existing under the laws of the State of New York, owns and operates sewerage and stormwater drainage facilities within the environs of the City of Buffalo, New York (the "City"); and

WHEREAS, the Authority has determined to undertake certain improvements to the sewer system (as more fully defined below, the "Project"), to wit Breckenridge Street Combined Sewer Overflow; and

WHEREAS, the Authority proposes to issue notes hereunder pursuant to the Buffalo Sewer Authority Act, Title 8 of Article 5 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York, as amended (the "Act"), to provide for the temporary financing of the construction of the Project until such time as the Authority issues bonds to provide for the permanent financing of the Project; and

WHEREAS, the Authority is authorized by the Act to borrow money and issue notes, and to provide for the rights of the owners thereof; and

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF THE BUFFALO SEWER AUTHORITY AS FOLLOWS:

ARTICLE I

DEFINITIONS AND INTERPRETATION

Section 1.1 Short Title. This Note Resolution may hereafter be cited by the Authority as the "Series 2024 Bond Anticipation Note Resolution."

Section 1.2 Definitions. In this Note Resolution the following terms shall have the following meanings unless the context otherwise requires:

"Account" shall mean one of the special accounts created and established pursuant to this Note Resolution.

"Act" shall mean the Buffalo Sewer Authority Act, Title 8 of Article 5 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York, as amended from time to time.

"Authority" shall mean the Buffalo Sewer Authority, a body corporate and politic constituting a public benefit corporation of the State of New York, and any body, board, authority, agency, or political subdivision or instrumentality of the State which shall hereafter succeed to the powers, duties, and functions thereof.

"Authorized Officer" shall mean the Chairman, the Vice-Chairman, the Assistant Vice-Chairman, the Secretary, the Assistant Secretary, or the General Manager or other chief administrative officer of the

Authority, and when used with reference to any act or certificate or other document, also means any person duly authorized to perform such act or sign such document.

"Capital Costs" shall mean and include all costs of acquisition, construction or completion of any part of the Sewer System, including Costs of Issuance of any Notes issued to provide funds to pay the cost thereof, the costs of any demolitions or relocations necessary in connection therewith and any extensions, renewals, replacements, equipment, alterations, improvements, additions, machinery and equipment, betterments, paving, grading, excavation, blasting or removals and of all or any property, rights, easements and franchises deemed by the Authority to be necessary or useful or convenient therefor and may include, to the extent properly attributable to such acquisition, construction and completion:

(a) obligations incurred for labor and materials and payments made to contractors, builders, and materialmen in connection with construction or acquisition of any part of the Sewer System, and for the restoration of property damaged or destroyed in connection with such construction;

(b) fees and expenses of the Paying Agent, payments, taxes, or other governmental charges lawfully levied or assessed during construction or on any property acquired, and premiums on insurance (if any) during such construction or acquisition;

(c) fees and expenses for studies, surveys and reports, engineering, borings, testings, estimates of costs and revenues, preparation of plans and specifications and inspecting or supervising construction or acquisition, as well as for the performance of all other duties of engineers or architects in connection with the acquisition, construction, extension, renewal or improvement of the Sewer System or required by this Note Resolution;

(d) expenses of administration properly chargeable to the acquisition, construction, reconstruction, renewal, extension, or improvement of the Sewer System, including legal expenses and fees, financing charges, costs of audits and fiscal advice and all other items of expense not elsewhere in this definition specified, incident to the acquisition, construction, reconstruction, renewal, extension or improvement of the Sewer System, including the acquisition of real estate, franchises and rights-of-way therefor, including abstracts of title insurance;

(e) the cost and expense of acquiring by purchase or condemnation or by leasing such property, lands, rights-of-way, franchises, easements, and other interest in land as may be deemed necessary or convenient for the acquisition, construction or completion of any part of the Sewer System and options and partial payments thereon, and the amount of any damages incident to or consequent upon the same; and

(f) any obligations or expense heretofore or hereafter expended or incurred by the Authority and any amounts heretofore or hereafter advanced by the Authority for any of the foregoing purposes.

"Capital Improvement Fund" shall mean the Capital Improvement Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Certificate" shall mean a signed document attesting to or acknowledging the matters therein stated or setting forth matters to be determined pursuant to this Note Resolution.

"Certificate of Determination" shall mean a Certificate executed by the General Manager of the Authority pursuant to Section 2.8 hereof.

"City" shall mean the City of Buffalo, New York.

"Comptroller" shall mean, respectively, the Comptroller of the City.

"Construction Fund" shall mean the Construction Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Costs of Issuance" shall mean all items of expense, directly or indirectly payable or reimbursable and related to the authorization, sale and issuance of Notes, including but not limited to printing costs, costs of preparation and reproduction of documents, filing and recording fees, initial fees and charges of any Fiduciary, legal fees and charges, fees and disbursements of consultants and professionals, costs of credit ratings, fees and charges for preparation, execution, transportation and safekeeping of Notes, costs and expenses of refunding, premiums for the insurance of the payment of the Notes and any other cost, charge or fee in connection with the original issuance of Notes.

"Debt Reserve Fund" shall mean the Debt Reserve Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"EFC" shall mean the New York State Environmental Facilities Corporation, a body corporate and politic constituting a public benefit corporation, established and existing under and by virtue of the laws of the State of New York.

"Fiduciary" shall mean the Paying Agent.

"Investment Securities" shall mean and include any of the following securities, if and to the extent the same are at the time legal investments by the Authority of the funds to be invested therein:

(a) direct obligations of the United States of America and securities fully and unconditionally guaranteed as to the timely payment of principal and interest by the United States of America, provided, that the full faith and credit of the United States of America must be pledged to any such direct obligation or guarantee ("Direct Obligations");

(b) direct obligations and fully guaranteed certificates of beneficial interest of the Export-Import Bank of the United States; consolidated debt obligations and letter of credit-backed issues of the Federal Home Loan Banks; participation certificates and senior debt obligations of the Federal Home Loan Mortgage Corporation ("FHLMCs"); debentures of the Federal Housing Administration; mortgage-backed securities (except stripped mortgage securities which are valued greater than par on the portion of unpaid principal) and senior debt obligations of the Federal National Mortgage Association ("FNMAs"); participation certificates of the General Services Administration; guaranteed mortgage-backed securities and guaranteed participation certificates of the Government National Mortgage Association ("GNMAs"); guaranteed participation certificates and guaranteed pool certificates of the Small Business Administration; debt obligations and letter of credit-backed issues of the Student Loan Marketing Association; local authority bonds of the U.S. Department of Housing & Urban Development; guaranteed Title XI financing of the U.S. Maritime Administration; guaranteed transit bonds of the Washington Metropolitan Area Transit Authority; Resolution Funding Corporation securities;

(c) direct obligations of any state of the United States of America or any subdivision or agency thereof whose unsecured, uninsured and unguaranteed general obligation debt is rated, at the time of purchase, "A" or better by Moody's Investors Service ("Moody's") and "A" or better by Standard & Poor's ("S&P"), or any obligations fully and unconditionally guaranteed by any state, subdivision or agency whose unsecured, uninsured and unguaranteed general obligation debt is rated, at the time of purchase, "A" or better by Moody's and "A" or better by S&P;

(d) commercial paper (having original maturities of not more than 270 days) rated, at the time of purchase, "P-1" by Moody's and "A-1" or better by S&P;

(e) federal funds, unsecured certificates of deposit, time deposits or bankers acceptances (in each case having maturities of not more than 365 days) of any domestic bank including a branch office of a foreign bank which branch office is located in the United States, provided legal opinions are received to the effect that full and timely payment of such deposit or similar obligation is enforceable against the principal office or any branch of such bank, which, at the time of purchase, has a short-term "Bank Deposit" rating of "P-1" by Moody's and a "Short-Term CD" rating of "A-1" or better by S&P;

(f) deposits of any bank or savings and loan association which has combined capital, surplus and undivided profits of not less than $3 million, provided such deposits are continuously and fully insured by the Bank Insurance Fund or the Savings Association Insurance Fund of the Federal Deposit Insurance Corporation (the "FDIC");

(g) investments in money-market funds rated "AAAm" or "AAAm-G" by S&P;

(h) repurchase agreements collateralized by Direct Obligations, GNMAs, FNMAs or FHLMCs with any registered broker/dealer subject to the Securities Investors' Protection Corporation jurisdiction or any commercial bank insured by the FDIC, if such broker/dealer or bank has an uninsured, unsecured and unguaranteed obligation rated "P-1" or "A3" or better by Moody's, and "A-1" or "A-" or better by S&P, provided:

(i) a master repurchase agreement or specific written repurchase agreement governs the transaction; and

(ii) the securities are held free and clear of any lien by the Trustee or an independent third party acting solely as agent ("Agent") for the Trustee, and such third party is (1) a Federal Reserve Bank, or (2) a bank which is a member of the FDIC and which has combined capital, surplus and undivided profits of not less than $50 million, and the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Trustee; and

(iii) a perfected first security interest under the Uniform Commercial Code, or book entry procedures prescribed at 31 C.F.R. 306.1 et seq. or 31 C.F.R. 350.0 et seq. in such securities, is created for the benefit of the Trustee; and

(iv) the repurchase agreement has a term of 10 years or less, and the Trustee or the Agent will value the collateral securities no less frequently than weekly and will liquidate the collateral securities if any deficiency in the required

collateral percentage is not restored within two business days of such valuation; and

(v) the fair market value of the securities in relation to the amount of the repurchase obligation, including principal and interest, is equal to at least 103%.

"Net Revenue Fund" shall mean the Net Revenue Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Note" shall mean any note executed and delivered pursuant to this Note Resolution.

"Note Payment Account" shall mean the special account so designated which is established pursuant to Section 4.1 of this Note Resolution.

"Note Resolution" shall mean this Series 2024 Bond Anticipation Note Resolution.

"Noteowner" or "Holder" or words of similar import shall mean, when used with reference to a Note, the registered owner of such Note.

"Operating Fund" shall mean the Operating Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Outstanding," when used with reference to Notes, shall mean, as of any date, all Notes theretofore or thereupon being authenticated and delivered under this Note Resolution except:

(a) any Notes cancelled by the Paying Agent at or prior to such date;

(b) any Note in lieu of or in substitution for which other Notes have been executed and delivered; and

(c) any Note deemed to have been paid as provided in Section 7.4 of this Note Resolution.

"Paying Agent" shall mean Manufacturers and Traders Trust Company, Buffalo, New York and its successor or successor and any other person which may at any time be substituted in its place pursuant to this Note Resolution.

"Project" shall mean Breckenridge Street Combined Sewer Overflow (CWSRF Project No. 6602-32-04), and all such roadways, connections, structures, equipment, apparatus and other property necessary or desirable for efficient construction and operation of such sewerage facilities, subject to any modifications and revisions approved by the Authority as necessary or desirable for the purposes of the Authority or the Sewer System under the Act.

"Project Finance Agreement" or "PFA" shall mean the project finance agreement to be entered into between the Authority and the EFC relating to the Notes in accordance with this Resolution, as the same may be amended from time to time.

"Rate Stabilization Fund" shall mean the Rate Stabilization Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Registrar" shall mean the Paying Agent or its successors.

"Sewer System" shall mean the plants, structures and other real and personal property acquired, constructed or operated or to be acquired, constructed or operated by the Authority, or the City for the purposes of the Authority, including the Project, and including sewers, conduits, pipelines, mains, pumping and ventilating stations, sewage treatment or disposal systems, plants and works, connections, outfalls, compensating reservoirs, and other plants, structures, boats, conveyances, and other real and personal property, and rights therein, and appurtenances necessary or useful and convenient for the collection, treatment, purification or disposal in a sanitary manner of any sewage, liquid or solid wastes, night soil or industrial wastes.

"Sewer System Revenue Bond Resolution" shall mean the Amended and Restated Sewer System Revenue Bond Resolution adopted by the Authority on May 26, 2021, as amended, supplemented, and restated from time to time.

"State" shall mean the State of New York.

"Subordinated Indebtedness Fund" shall mean the Subordinated Indebtedness Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Surplus Fund" shall mean the Surplus Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Trustee" shall mean the Trustee under the Sewer System Revenue Bond Resolution.

Section 1.3 Interpretation. (A) In this Note Resolution, unless the context otherwise requires:

(1) Articles and Sections referred to by number shall mean the corresponding Articles and Sections of this Note Resolution.

(2) The terms "hereby," "hereof," "herein," "hereunder" and any similar terms, as used in this Note Resolution, refer to this Note Resolution, and the term "hereafter" shall mean after, and the term "heretofore" shall mean before, the date of this Note Resolution.

(3) Words of the masculine gender shall mean and include correlative words of the feminine and neuter genders and words importing the singular number shall mean and include the plural number and vice versa.

(4) Words importing persons shall include firms, associations, partnerships (including limited partnerships), limited liability companies, trusts, corporations, and other legal entities, including public bodies, as well as natural persons.

(5) Any headings preceding the texts of the several Articles and Sections of this Note Resolution, and any table of contents or marginal notes appended to copies hereof, shall be solely for convenience of reference, and shall not constitute a part of this Note Resolution, nor shall they affect its meaning, construction, or effect.

(6) This Note Resolution shall be deemed to be executed in the State and shall be governed by and construed in accordance with the applicable laws of the State.

(7) Any reference to the payment of a Note shall be a reference to the payment of the principal thereof and interest, if any, thereon.

(B) Whenever the Authority is named or referred to, it shall be deemed to include its successors and assigns whether so expressed or not. All of the covenants, stipulations, obligations and agreements by or on behalf of, and other provisions for the benefit of, the Authority contained in this Note Resolution shall bind and inure to the benefit of any officer, board, commission, authority, agency or instrumentality to whom or to which there shall be transferred by or in accordance with law any rights, power or duty of the Authority, or of its successors or assigns, the possession of which is necessary or appropriate in order to comply with any such covenant, stipulation, obligation, agreement or other provision hereof.

(C) Nothing in this Note Resolution express or implied is intended or shall be construed to confer upon, or to give to, any person, other than the Authority, the Fiduciaries and the owners of the Notes, any right, remedy or claim under or by reason of this Note Resolution or any covenant, condition or stipulation hereof. All of the covenants, stipulations, promises and agreements herein contained by and on behalf of the Authority, shall be for the sole and exclusive benefit of the Authority, the Fiduciaries, and the owners of the Notes.

(D) If any one or more of the covenants or agreements provided herein on the part of the Authority or any Fiduciary to be performed should be contrary to law, then such covenant or covenants or agreement or agreements shall be deemed separable from the remaining covenants and agreements hereof and shall in no way affect the validity of the other provisions of this Note Resolution or of the Notes.

ARTICLE II

TERMS OF NOTES

Section 2.1 Authorization for Note Resolution and Notes. This Note Resolution and the issuance of Notes hereunder have been duly authorized by the Authority and the principal amount of Notes that may be issued hereunder is not limited except as provided herein or by law. The Authority has ascertained and it is hereby determined and declared that the adoption of this Note Resolution is necessary to carry out the powers and duties expressly provided by the Act, that each and every act, matter, thing or course of conduct as to which provision is made herein is necessary or convenient in order to carry out and effectuate the purposes of the Authority in accordance with the Act and to carry out powers expressly given in the Act, and that each and every covenant or agreement herein contained and made is necessary, useful or convenient in order to better secure the Notes and are contracts or agreements necessary, useful and convenient to carry out and effectuate the purposes of the Authority under the Act.

Section 2.2 Note Resolution to Constitute Contract. In consideration of the purchase and acceptance of the Notes by the EFC, the provisions of this Note Resolution shall be a part of the PFA between the Authority and the EFC and shall be deemed to be and shall constitute a contract among the Authority, the Trustee, and the EFC. The Pledges made hereby and the provisions, covenants and agreements herein set forth to be performed by or on behalf of the Authority shall be for the equal benefit, protection and security of the owners of any and all of such Notes, each of which shall be of equal rank without preference, priority or distinction over any other thereof except as expressly provided in this Note Resolution.

Section 2.3 Obligation of Notes. (A) This Note Resolution creates an issue of Notes of the Authority and creates a continuing pledge and lien to secure the full and final payment of the principal of and interest, if any, on such Notes. The Notes shall be general obligations of the Authority payable from the moneys of the Authority available therefor and not otherwise pledged, which pledge shall be in all respects subordinate to the provisions of the Sewer System Revenue Bond Resolution and the lien and pledge of the Revenues (as such term is defined in the Sewer System Revenue Bond Resolution) created by the Sewer System Revenue Bond Resolution. In addition, the Notes may be paid in whole or in part from the proceeds of bonds or other notes issued by the Authority as contemplated by Section 5.1(B) hereof. The Notes shall not be a debt of the State or of the City and neither the State nor the City shall be liable thereon, nor shall the Notes be payable out of any funds other than those of the Authority pledged pursuant to this Note Resolution; and the Notes shall contain on the face thereof a statement to such effect.

(B) All amounts held in any Account, including investments thereof, are hereby pledged to secure the payment of the Notes in accordance with their terms and the provisions of this Note Resolution, subject only to the provisions of this Note Resolution permitting the application or exercise thereof for or to the purposes and on the terms and conditions herein set forth. To the fullest extent provided by the Act and other applicable laws, the money and property hereby pledged shall immediately be subject to the lien of such pledge without physical delivery thereof or further act and such lien shall be valid and binding against all parties having claims of any kind in tort, contract or otherwise, irrespective of whether such parties have notice hereof.

Section 2.4 Authorization, Principal Amount and Purpose of Notes. There is hereby established and created an issue of Notes of the Authority to be known and designated as "Series 2024 Bond Anticipation Notes." Said Notes shall be issued in an aggregate principal amount to be set forth in the Certificate of Determination and the Authority covenants and agrees that after the issuance of the Notes,

no other Notes shall thereafter be issued pursuant to this Note Resolution. The Notes are being issued for the purpose of providing interim financing of the Project, including the making of deposits in the amounts, if any, required by the PFA and this Note Resolution.

Section 2.5 Terms and Provisions of Notes. The Notes shall be dated the date of delivery and shall mature without interest in accordance with the Project Finance Agreement. Interest shall not accrue on the unpaid principal amount of the Notes prior to the earlier of (a) the maturity date thereof or on such date as may be established pursuant to the Project Finance Agreement or (b) the date of earlier redemption of such unpaid principal amount, but in the event of any default in the payment of such unpaid principal amount on the earlier of the maturity date (or such date established as aforesaid) or the date of earlier redemption, the Authority shall be obligated to pay interest on such unpaid principal amount to the Holders of the Notes at the rate specified in the Project Finance Agreement on and after such maturity date (or such date established as aforesaid) or date of earlier redemption until such unpaid principal amount is paid in full. The Notes will be payable as to principal thereof and interest (in respect of overdue principal), if any, thereon at the principal office of the registrar and paying agent (the "Registrar and Paying Agent") in its capacity as paying agent to the Holder of the Notes at its address set forth on the books of the Authority maintained for registration of the Notes. For so long as the EFC is the Holder of the Notes, the EFC may, by written instruction to the Authority, direct the Authority to pay any principal of or interest (in respect of overdue principal), if any, on the Notes, to any bank acting as custodian of the EFC. Notwithstanding the foregoing, if authorized by the General Manager of the Authority pursuant to Section 2.8 hereof, the Notes may bear interest at such other rate or rates as the General Manager determines to be appropriate.

Section 2.6. Determination as to Private Sale. The Authority being of the opinion it is in the best interests of the Authority to finance the purposes for which the Note is to be issued through the State Revolving Fund administered by the EFC, due to the favorable terms available to the Authority only through such Fund, and upon the favorable recommendation of the New York State Comptroller, if required, the Authority hereby determines pursuant to Section 1187(2) of the Act that the private sale of the Notes is in the best interests of the Authority.

Section 2.7 Sale of Notes. (A) The Chairman, Vice-Chairman or General Manager of the Authority are each hereby authorized to execute and deliver the PFA in such form and with such changes, insertions and omissions, including a change to the aggregate principal amount of the Notes, as may be approved by such Chairman, Vice-Chairman or General Manager, and such execution shall be conclusive evidence of any approval required by this Section 2.7(A). The Notes are hereby authorized to be sold to the EFC on the terms and conditions set forth in the PFA.

(B) The Authorized Officers of the Authority are hereby severally authorized to execute and deliver any and all papers, instruments, opinions, certificates, affidavits and other documents and to do and cause to be done all acts and things necessary, convenient or proper for carrying out this Note Resolution, the PFA and the issuance, sale and delivery of the Notes.

Section 2.8 Delegation to General Manager. There is hereby delegated to the General Manager of the Authority, subject to the limitations contained herein, the power with respect to the Notes to determine and carry out the following terms which shall be set forth in the Certificate of Determination:

(A) the principal amount of the Notes, which shall not exceed $36,738,300 in the aggregate, the rate or rates of interest to be paid on the Notes, if the General Manager determines that the Notes should bear interest, and the date and maturity date of the Notes; provided, however, that the maturity date of the Notes shall not be later than the third anniversary of the issuance of the Notes;

B) the disposition of the proceeds of the sale of the Notes for Costs of Issuance, Capital Costs in connection with the Project, deposit to the Construction Fund in accordance with the applicable provisions of the Sewer System Revenue Bond Resolution or such other uses as the General Manager may determine;

(C) the terms and conditions of the PFA and any other agreement, document or certificate reasonably required by the EFC in connection with the sale of the Notes; and

(D) any other provisions which may be required to be inserted in such Certificate of Determination by the provisions of this Note Resolution or any other necessary or desirable provisions not inconsistent or in conflict with the provisions of this Note Resolution; and the taking of any and all action necessary to provide for the issuance of the Notes, including the execution and delivery of the PFA and any required documents, certificates and agreements, closing documents and tax and arbitrage certificates.

ARTICLE III

GENERAL TERMS AND PROVISIONS OF NOTES

Section 3.1 Medium of Payment, Denominations, Maturities, Form and Date. (A) The Notes shall be payable with respect to interest (if any) and principal in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts.

(B) The Notes shall be issued in registered form only. Purchasers will not receive certificates representing their interests in the Notes.

(C) The Notes shall not bear interest except as set forth herein.

(D) The Notes shall be lettered "R" and numbered consecutively from (1) upwards.

Section 3.2 Legends. The Notes may contain or have endorsed thereon such provisions, specifications, and descriptive words not inconsistent with the provisions of this Note Resolution as may be necessary or desirable to comply with custom or otherwise.

Section 3.3 Notes Mutilated, Destroyed, Stolen or Lost. In case any Note shall become mutilated or be destroyed, stolen, or lost, the Authority shall execute a new Note of like interest rate, maturity, principal amount, and other terms as the Note so mutilated, destroyed, stolen, or lost. In the case of a mutilated Note, such new Note shall be delivered only upon surrender and cancellation of such mutilated Note. In the case of a Note issued in lieu of and substitution for a Note destroyed, stolen or lost, such new Note shall be delivered only upon the filing with the Authority of evidence satisfactory to the Authority that such Note has been destroyed, stolen or lost and proof of ownership thereof and upon furnishing the Authority with indemnity satisfactory to it. The person requesting the execution and delivery of a new Note pursuant to this Section 3.3 shall comply with such other reasonable regulations as the Authority may prescribe and pay such expenses as the Authority may incur in connection therewith. The Authority shall notify the Paying Agent of any Notes issued by it pursuant to this Section 3.3. All Notes so surrendered to the Authority shall be delivered to the Paying Agent and cancelled by it and evidence of such cancellation shall be given to the Authority.

Section 3.4 Cancellation and Destruction of Notes. All Notes paid by the Paying Agent shall be promptly cancelled. Notes so cancelled may at any time be cremated or otherwise destroyed by the Paying Agent, who shall execute a Certificate of cremation or destruction in duplicate by the signature of one of its Authorized Officers describing the Notes so cremated or otherwise destroyed, and one executed Certificate shall be filed with the Authority.

Section 3.5 Execution. The Notes shall be executed in the name of the Authority by the manual or facsimile signature of its Chairman, Vice-Chairman or General Manager, and its corporate seal (or a facsimile thereof) shall be thereunto affixed, imprinted, impressed, engraved or otherwise reproduced thereon and attested by the manual or facsimile signature of the Comptroller, Secretary, Executive Secretary or any Assistant Secretary, or in such other manner as may be required by law. Each Note shall bear thereon a certificate of authentication manually executed by the Paying Agent and Registrar. No Note shall be valid or obligatory for any purpose unless such certificate of authentication upon such Note shall have been duly executed by the Paying Agent and Registrar. In case any one or more of the officers or employees who shall have signed or sealed any of the Notes shall cease to be such officer or employee

before the Notes so signed and sealed shall have been actually delivered, such Notes may, nevertheless, be delivered as herein provided, and may be issued as if the person who signed or sealed such Notes had not ceased to hold such office or be so employed. Any Note may be signed and sealed on behalf of the Authority by such persons as at the actual time of the execution of such Note shall be duly authorized or hold the proper office in or employment by the Authority, although at the date of the Notes such persons may not have been so authorized or have held such office or employment.

Section 3.6 Registration of the Notes. Unless otherwise determined by the General Manager of the Authority, the Notes shall be initially issued in the form of a separate single authenticated fully registered note in a principal amount not to exceed $36,738,300 registered in the name of the New York State Environmental Facilities Corporation.

Section 3.7 Transfer of Notes. Each Note shall be transferable only upon the books of the Authority, which shall be kept for such purpose at the corporate trust office of the Registrar, by the registered owner thereof in person or by his attorney duly authorized in writing, upon surrender thereof together with a written instrument of transfer satisfactory to the Registrar duly executed by the registered owner or his duly authorized attorney. Upon transfer of any such fully registered Note, the Authority shall issue in the name of the transferee a new fully registered Note or Notes. The Authority and the Registrar may deem and treat the person in whose name any Note shall be registered upon the books of the Authority as the absolute owner of such Note, whether such Note shall be overdue or not, for the purpose of receiving payment of, or on account of, the principal of and interest, if any, on such Note and for all other purposes, and all such payments so made to any such registered owner or upon his order shall be valid and effectual to satisfy and discharge the liability upon such Note to the extent of the sum or sums so paid, and neither the Authority nor the Registrar shall be affected by any notice to the contrary.

Section 3.8 Regulations with Respect to the Exchanges and Transfers. In all cases in which the privilege of exchanging or transferring Notes is exercised, the Authority shall execute, and the Registrar shall deliver Notes in accordance with the provisions hereof. All Notes surrendered in any such exchanges or transfers shall forthwith be cancelled by the Registrar. For every such exchange or transfer of Notes, the Authority or the Registrar may make a charge sufficient to reimburse it for any tax, fee or other governmental charge required to be paid with respect to such exchange or transfer, and may charge a sum sufficient to pay the cost of preparing each new Note issued upon such exchange or transfer, which sum or sums shall be paid by the person requesting such exchange or transfer as a condition precedent to the exercise of the privileges of making such exchange or transfer.

Section 3.9 Form of Notes. Subject to the provisions of this Note Resolution and the PFA, the Notes shall be in substantially the following form and tenor, with such insertions, variations, omissions and endorsements as may be required by this Note Resolution or the PFA or to comply with any changes made by the Chairman, Vice-Chairman or General Manager of the Authority pursuant to this Note Resolution:

Registered
No. R

Registered
$

UNITED STATES OF AMERICA
STATE OF NEW YORK
BUFFALO SEWER AUTHORITY

E.F.C. Clean Water Facility Note – 2024

(Bond Anticipation Note)

REGISTERED OWNER: NEW YORK STATE ENVIRONMENTAL FACILITIES CORPORATION

MAXIMUM PRINCIPAL SUM:

INITIAL INTEREST RATE:

DATED DATE: _____, 2024 MATURITY DATE: _____, 202_

The BUFFALO SEWER AUTHORITY (the "Recipient"), a public benefit corporation of the State of New York, hereby acknowledges itself indebted and for value received promises to pay to the Registered Owner named above, the lesser of (x) the Maximum Principal Sum set forth above and (y) the unpaid principal amount of all disbursements (the "Disbursements") made by or on behalf of New York State Environmental Facilities Corporation (the "Corporation") to the Recipient pursuant to [**Article IV**] of the Project Finance Agreement dated as of _____, 2024 (the "Project Finance Agreement"), between the Corporation and the Recipient (the lesser of such amounts being hereinafter referred to as the "Unpaid Principal Sum" plus any and all interest then accrued, late fees and other fees and expenses then due), such amount to be paid on the Maturity Date stated above or upon such other date as may be established pursuant to the Project Finance Agreement in accordance with [**Exhibit E]** thereto. All Disbursements made by or on behalf of the Corporation to the Recipient pursuant to the Project Finance Agreement and all prepayments made on account of the Unpaid Principal Sum hereof, interest, fees and other charges shall be recorded by or on behalf of the Corporation and endorsed on the grid attached hereto in accordance with the terms of the Project Finance Agreement, which is hereby made a part hereof. Recordation of Disbursements, confirmed by a certificate of the Recipient given in accordance with the Project Finance Agreement, shall conclusively establish the principal amount outstanding hereunder. Interest shall not accrue on said Unpaid Principal Sum prior to the earlier of the Maturity Date or the date of earlier redemption of said Unpaid Principal Sum, but in the event of any default in the payment of said Unpaid Principal Sum on the earlier of the Maturity Date or the date of earlier redemption, the Recipient promises to pay interest on said Unpaid Principal Sum to the Registered Owner named above at the rate of _____ per centum (__%) per annum on and after said Maturity Date or date of earlier redemption until said Unpaid Principal Sum is paid in full. Principal of and interest (in respect of overdue principal), if any, on this Note shall be payable to the Registered Owner hereof, at its address set forth on the books of the Recipient maintained for registration of this Note. For so long as the Corporation is the Registered Owner of this Note, the Corporation may, by written instruction to the Recipient, direct the Recipient to pay any principal of and interest (in respect of overdue principal), if any, on this Note to any bank acting as custodian of the Corporation. Both principal of and interest (in respect of overdue principal), if any, on this Note will be paid, without presentment, in funds available on or before the due date and in any lawful coin or currency of the United States of America which at the date of payment is legal tender for the payment of public and private debts.

This Note shall be transferable or exchangeable, solely in accordance with the terms of the Project Finance Agreement, only upon presentation to the Recipient with a written transfer of title and the Recipient shall thereupon register this Note in the name of the transferee in his books and shall endorse a certificate of such registration hereon. Such transfer shall be dated and signed by the Registered Owner, or his legal representatives, and it shall be duly acknowledged or proved, or in the alternative the signature thereto shall be certified as to its genuineness by an officer of a bank or trust company located and authorized to do business in this State.

This Note may be called for redemption prior to maturity, in whole or in part by the Recipient in accordance with [**Section 4.3(b**)] and [**Exhibit E**] of the Project Finance Agreement, after the Recipient delivers a written notice to the Corporation at least thirty (30) days and not more than sixty (60) days prior to the date of redemption, including that the Recipient desires to redeem all or a specified amount of the Note outstanding, and specifying the date of redemption.

This Note shall be subject to mandatory redemption prior to maturity pursuant to, and in accordance with, [**Section 4.3(a)**] of the Project Finance Agreement upon the date specified in a notice from the Corporation delivered to the Recipient not less than sixty (60) days prior to such redemption date upon the occurrence, as specified in such notice, that the Project financed or to be financed by Disbursements under this Note has been abandoned by the Recipient.

This Note shall further be subject to mandatory redemption in whole or in part, prior to maturity, pursuant to and in accordance with [**Section 4.3(a)**] and [**Exhibit E]** of the Project Finance Agreement, within five Business Days next succeeding the date the Recipient shall have received any proceeds from any Third Party Funding which are intended to pay, in whole or part, any costs of the Project which have been, or were intended to be, financed with the short-term loan made pursuant to the Project Finance Agreement; provided, however, that this Note shall be subject to such mandatory redemption solely to the extent of, and in an amount equal to, the proceeds of such Third Party Funding received by the Recipient on or after the date of the Recipient Note.

This Note is issued under the authority of and pursuant to and in full compliance with the provisions of the Constitution and statutes of the State of New York, and the note resolution adopted by the Recipient on December 4, 2024, authorizing the issuance of notes not to exceed $36,738,300 (the "Note Resolution"), authorizing the issuance of indebtedness, and the Certificate of Determination executed by the Authorized Officer of the Recipient as of _____, 2024, as supplemented from time to time in accordance with the Project Finance Agreement.

This Note and the issue of which it is one are general obligations of the Recipient payable from the moneys of the Recipient available therefor and not otherwise pledged, which pledge shall be in all respects subordinate to the provisions of the Amended and Restated Sewer System Revenue Bond Resolution adopted by the Authority on May 26, 2021, as amended and restated (the "Bond Resolution"), and the lien and pledge of the Revenues (as such term is defined in said Bond Resolution) created by said Bond Resolution. The Notes are issuable in fully registered form only.

The Recipient has no taxing power, and its obligations are not debts of the State of New York or of any political subdivision of the State of New York, or of the United States of America. This Note will not constitute a pledge of the faith and credit of the State of New York or of any political subdivision thereof nor shall the Note be payable out of funds or properties other than those of the Recipient set forth in the Note Resolution. The issuance of this Note will not obligate the State of New York or any of its political subdivisions or the United States of America to levy or pledge the receipts from any form of taxation for the payment of the this Note.

This Note shall not be entitled to any benefit under the Note Resolution or Bond Resolution or become valid or obligatory for any purpose until it shall have been authenticated by the Registrar and Paying Agent by its execution of the certificate of authentication endorsed hereon.

It is hereby certified and recited that all conditions, acts and things required by the Constitution and statutes of the State of New York to exist, to have happened and to have been performed precedent to and in the issuance of this Note, exist, have happened and have been performed, and that this Note,

together with all other indebtedness of the Recipient, is within every debt and other limit prescribed by the Constitution and laws of such State.

IN WITNESS WHEREOF, the Recipient has caused this Note to be executed by its Authorized Officer by manual signature or a facsimile thereof, and its corporate seal (or a facsimile thereof) to be affixed, imprinted, engraved, or otherwise reproduced hereon and attested by its Secretary to the Board and this Note to be dated as of the Dated Date set forth above.

BUFFALO SEWER AUTHORITY

(SEAL)

By: _____
Name:
Title:

ATTEST:

_____

Name:
Title:

(FORM OF ASSIGNMENT)

FOR VALUE RECEIVED, the Undersigned hereby sells, assigns and transfers unto _____ (Please insert Social Security or other identifying number of Assignee(s); _____) the within note and all rights thereunder, and hereby irrevocably constitutes and appoints _____ attorney to transfer the within note on the books kept for registration thereof with full power of substitution in the premises.

Dated: _____

NOTICE: The signature to this assignment must correspond with the name as it appears upon the face of the within note in every particular, without alteration or enlargement or any change whatever.

Note Number: R
Maximum Principal Sum: $_____

Maturity Date:
Latest Extended Maturity Date:
Recipient: Buffalo Sewer Authority
SRF Project No.: 6602-32-04
Notation by:

DISBURSEMENTS AND PAYMENTS OF PRINCIPAL*Date	Requisition No.	Amount of Advance	Amount of Principal Paid	Unpaid Principal Sum	Notation Made By

*This grid may be extended if the number of Disbursements, payments and extensions so require.

CERTIFICATE OF AUTHENTICATION

It is hereby certified that this Note is one of the duly authorized issue of notes referred to in the Note Resolution and described on the reverse side hereof.

MANUFACTURERS AND TRADERS
TRUST COMPANY,
Paying Agent and Registrar

By: _____
Authorized Signature

ARTICLE IV

ACCOUNTS

Section 4.1 Establishment of Note Payment Account. (A) The Authority hereby establishes a special account, which shall be designated as the Note Payment Account. Said Note Payment Account shall be held by the Fiduciary, separate and apart from all other accounts, moneys and assets of the Authority, and shall be identified by the Authority and the Paying Agent and Registrar according to the designation herein provided in such manner as to distinguish such Note Payment Account from the accounts established by the Authority for any other of its obligations. All moneys or securities held by the Fiduciary pursuant to this Note Resolution shall be held and applied only in accordance with the provisions of this Note Resolution.

(B) Any amounts required to be deposited pursuant to Section 5.9 of this Note Resolution shall be deposited to the credit of the Note Payment Account.

(C) The proceeds of any notes, bonds or other obligations of the Authority issued to redeem the Notes, in whole or in part, as determined by the Authority, shall be deposited to the credit of the Note Payment Account.

(D) The Fiduciary shall, on or before the maturity date of the Notes, withdraw from the Note Payment Account an amount equal to the aggregate principal amount of and accrued interest, if any, on the Outstanding Notes, or, if the amount on deposit to the credit of the Note Payment Account is less than the aggregate principal amount of and accrued interest, if any, on the Outstanding Notes, the balance on deposit to the credit of the Note Payment Account, and shall apply such amount solely to the payment of Outstanding Notes.

Section 4.2 Deposits. (A) In lieu of investing in Investment Securities (except as provided in Section 7.4), the Fiduciary shall, at the written direction of an Authorized Officer, if permitted by law, deposit amounts or cause amounts to be deposited in the Note Payment Account held by the Fiduciary or under its control pursuant to the terms of this Note Resolution in interest-bearing time deposits or certificates of deposit, or shall make other similar banking arrangements with itself or a financial institution the deposits of which are insured by the Federal Deposit Insurance Corporation or its successor. Each such interest-bearing time deposit or certificate of deposit or other similar banking arrangement shall permit the moneys so placed to be available at the times at which moneys are needed by the Authority to be expended and, except to the extent that any such deposits shall be insured by the United States of America or the federal corporations enumerated above on terms which in the judgment of the Authority (as expressed in written instructions to the Fiduciary) provide reasonable liquidity, all moneys in each such interest-bearing time deposit or certificate of deposit or other similar banking arrangement shall be continuously and fully secured under the laws of the State by Investment Securities (or other obligations rated in either of the two highest rating categories by a nationally recognized rating service) having a market value equal at all times to the amount of the deposit, certificate or other similar banking arrangement.

(B) In order to permit such amounts to be available for use at the time when needed, any amounts held under this Note Resolution by any Fiduciary, as such, may, if and as directed by the Authority, be deposited in the commercial banking department of such Fiduciary which may honor checks and drafts on such deposit with the same force and effect as if it were not such Fiduciary. Any such

Fiduciary shall allow and credit on such amounts at least such interest, if any, as it customarily allows upon similar funds of similar size and under similar conditions or as required by law.

(C) All amounts deposited by any Fiduciary pursuant to Section 4.2(B) above shall be continuously and fully secured either (a) by lodging with any Federal Reserve Bank as custodian, as collateral security, Investment Securities having a market value (exclusive of accrued interest) not less than the amount of such deposit, or (b) in such other manner as may then be required by applicable federal or state laws and regulations regarding security for the deposit of public funds. It shall not be necessary, unless required by applicable law, for the Fiduciary to give security under this Section 4.3(C) for the deposit of any amounts to the extent that such deposit is insured by the Federal Deposit Insurance Corporation or its successor, or which are held in trust and set aside by the Fiduciary for the payment of the Notes.

(D) All amounts so deposited by the Fiduciary shall be credited to the Note Payment Account.

Section 4.3 Investment of Certain Funds. (A) Subject to the right of the Authority to direct the investment or deposit of funds hereunder, moneys in any Account shall be continuously invested and reinvested or deposited and redeposited by the Fiduciary in Investment Securities with a view toward maximizing yield (with proper preservation of principal) and minimizing the instances of uninvested funds. The Authority shall consult with the Fiduciary from time to time as to the investment of amounts in the Accounts established or confirmed by this Note Resolution. The Authority may direct the Fiduciary to, or in the absence of direction, the Fiduciary shall, invest and reinvest the moneys in any Account in Investment Securities so that the maturity dates shall coincide as nearly as practicable with the times at which moneys are needed to be expended. The Investment Securities purchased shall be held by the Fiduciary, or for its account as Fiduciary, and shall be deemed at all times to be part of such Account, and the Fiduciary shall keep the Authority advised as to the details of all such investments. The Fiduciary shall sell at the best price obtainable, or present for redemption, any Investment Securities purchased by it as an investment whenever it shall be necessary in order to provide moneys to meet any payment from such Account.

(B) Investment Securities purchased as an investment of moneys in any Account by the Fiduciary under the provisions of this Note Resolution shall be deemed at all times to be a part of such Account. Any income or interest earned, and gains realized in excess of losses suffered by the Note Payment Account shall be retained therein and used for the purposes of such Account.

(C) The Fiduciary shall sell at the best price obtainable, or present for redemption or exchange, any Investment Security purchased by it pursuant to this Note Resolution whenever it shall be necessary in order to provide moneys to meet any payment or transfer from the Account for which such investment was made. The Fiduciary shall advise the Authority in writing, on or before the twentieth day of each calendar month, of all investments held for the credit of each Account in its custody under the provisions of this Note Resolution as of the end of the preceding month.

Section 4.4 Valuation and Sale of Investments. (A) In computing the amount in any Account, obligations purchased as an investment of moneys therein shall be valued at the lower of cost or market value (exclusive of accrued interest).

(B) Except as otherwise provided herein, the Fiduciary shall sell at the best price obtainable, or present for redemption, any Investment Security whenever it shall be requested in writing by an Authorized Officer to do so or whenever it shall be necessary in order to provide moneys to meet any payment or transfer from any Account held by it.

ARTICLE V

PARTICULAR COVENANTS

The Authority covenants and agrees with the owners of the Notes as follows:

Section 5.1 Payment of Notes. (A) The Authority shall duly and punctually pay or cause to be paid the principal of every Note and the interest, if any, thereon, at the dates and places and in the manner stated in the Notes, according to the true intent and meaning thereof.

(B) The Authority will use its best efforts to issue, sell and deliver notes, bonds or other evidences of indebtedness so as to have available an amount, which when taken together with other moneys that may be available therefor, including moneys held pursuant to this Note Resolution, to pay the principal of and interest, if any, on the Notes as the same become due in accordance with the terms of the Notes.

Section 5.2 Extension of Payment of Notes. The Authority shall not directly or indirectly extend or assent to the extension of the maturity of any of the Notes or the time of the payment of any of the interest by the purchase or funding of such Notes, or claims for interest or by any other arrangement, and in case the maturity of any of the Notes or the time for payment of any such interest shall be extended, such Notes, or claims for interest shall not be entitled, in case of any default hereunder, to the benefit of this Note Resolution or to any payment out of the Account established pursuant to this Note Resolution, including the investments, if any, thereof, or out of any assets or revenues pledged hereunder (except moneys held in trust for the payment of particular Notes, or claims for interest pursuant to this Note Resolution) prior to benefits accorded to or the payment of the principal of all Notes Outstanding the maturity of which has not been extended and of such portion of the accrued interest on the Notes as shall not be represented by such extended claims for interest.

Section 5.3 Further Assurance. At any and all times the Authority shall, as far as it may be authorized by law, pass, make, do, execute, acknowledge and deliver, all and every such further resolutions, acts, deeds, conveyances, assignments, transfers and assurances as may be necessary or desirable for the better assuring, conveying, granting, pledging, assigning and confirming all and singular, the rights, assets, revenues and other moneys, securities, funds and property hereby pledged or assigned, or intended so to be, or which the Authority may become bound to pledge or assign.

Section 5.4 Power to Issue Notes and Pledge the Note Payment Account and Other Property. The Authority is duly authorized under all applicable laws to authorize and issue the Notes and to adopt this Note Resolution and to pledge the revenues and assets purported to be pledged hereby in the manner and to the extent herein provided. The revenues and assets so pledged are and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created hereby, except for the lien and pledge of the Revenues created by the Sewer System Revenue Bond Resolution, and all corporate or other action on the part of the Authority to that end has been and will be duly and validly taken. The Notes and the provisions of this Note Resolution are and will be the valid and legally enforceable obligations of the Authority in accordance with their terms and the terms of this Note Resolution. The Authority shall at all times, to the extent permitted by law, defend, preserve and protect the pledge of the amounts in the Note Payment Account and other assets and revenues, including rights therein pledged under this Note Resolution and all the rights of the Noteowners under this Note Resolution against all claims and demands of all persons whomsoever.

Section 5.5 Issuance of Additional Obligations. The Authority hereby expressly reserves the right to adopt one or more additional resolutions for its purposes, and reserves the right to issue other obligations for such purposes.

Section 5.6 General. The Authority shall do and perform or cause to be done and performed all acts and things required to be done and performed by or on behalf of the Authority under the provisions of the Act and this Note Resolution in accordance with the terms of such provisions.

Section 5.7 Waiver of Laws. The Authority shall not at any time insist upon or plead in any manner whatsoever, or claim or take the benefit or advantage of any stay or extension of law now or at any time hereafter in force which may affect the covenants and agreements contained in this Note Resolution or in the Notes, and all benefit or advantage of any such law is hereby expressly waived by the Authority.

Section 5.8 Tax Covenants. (A) The Authority shall at all times do and perform all acts and things necessary or desirable in order to assure any interest paid on the Notes shall, for the purposes of federal income taxation, be excludable from the gross income of the recipients thereof and exempt from such taxation.

(B) The Authority shall not permit at any time or times any of the proceeds of the Notes or any other funds of the Authority to be used directly or indirectly to acquire any securities or obligations, the acquisition of which would cause any Note to be an "arbitrage bond" as defined in Section 148 of the Code.

Section 5.9 Withdrawal from Net Revenue Fund. In the event that the Authority cannot issue notes, bonds or other obligations of the Authority to redeem the Notes at maturity, the Authority shall, at least 15 days prior to the maturity date of the Notes, cause to be transferred to the Paying Agent and Registrar for the credit of the Note Payment Account from the Net Revenue Fund, to the extent that moneys on deposit in the Net Revenue Fund are available therefor, or, to the extent that moneys on deposit in the Net Revenue Fund are insufficient to redeem the Notes, moneys shall be transferred to the Net Revenue Fund from the Surplus Fund, Rate Stabilization Fund, Capital Improvement Fund, Construction Fund, Debt Reserve Fund, Subordinated Indebtedness Fund and Operating Fund, in that order, to cure any such deficiency.

ARTICLE VI

CONCERNING FIDUCIARIES

Section 6.1 Paying Agent and Registrar; Appointment and Acceptance of Duties. (A) Manufacturers and Traders Trust Company, Buffalo, New York, is hereby appointed Paying Agent and Registrar. The Paying Agent and Registrar shall signify its acceptance of the duties and obligations imposed upon it by this Note Resolution by executing and delivering to the Authority a written acceptance thereof.

(B) The principal office of the Paying Agent and Registrar is designated as the office or agency of the Authority for the payment of the interest, if any, on and principal of the Notes.

Section 6.2 Responsibilities of Fiduciaries. The recitals of fact in this Note Resolution and in the Notes contained shall be taken as the statements of the Authority and no Fiduciary assumes any responsibility for the correctness of the same. No Fiduciary makes any representations as to the validity or sufficiency of this Note Resolution or of any Notes or coupons issued thereunder or in respect of the security afforded by this Note Resolution, and no Fiduciary shall incur any liability in respect thereof. No Fiduciary shall be under any responsibility or duty with respect to the issuance of the Notes for value or the application of the proceeds thereof or the application of any moneys paid to the Authority or for any losses incurred upon the sale or redemption of any securities purchased for or held in any Account under this Note Resolution. No Fiduciary shall be under any responsibility to any other Fiduciary. No Fiduciary shall be liable in connection with the performance of its duties under this Note Resolution except for its own willful misconduct, gross negligence, or willful default.

Section 6.3 Evidence on Which Fiduciaries May Act. (A) Each Fiduciary shall be protected in acting upon any notice, resolution, request, consent, order, certificate, report, opinion, bond, or other paper or document believed by it to be genuine, and to have been signed or presented by the proper party or parties. Each Fiduciary may consult with counsel, who may or may not be counsel to the Authority, and the opinion of such counsel shall be full and complete authorization and protection in respect of any action taken or suffered by such Fiduciary under this Note Resolution in good faith and in accordance therewith.

(B) Whenever any Fiduciary shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering any action under this Note Resolution, such matter (unless other evidence in respect thereof be therein specifically prescribed) may be deemed to be conclusively proved and established by a Certificate of an Authorized Officer, and such Certificate shall be full warrant for any action taken or suffered in good faith under the provisions of this Note Resolution upon the faith thereof; but in its discretion the Fiduciary may in lieu thereof accept other evidence of such fact or matter or acquire such further or additional evidence as to it may seem reasonable.

(C) Except as otherwise expressly provided in this Note Resolution, any request, order, notice, or other direction required or permitted to be furnished pursuant to any provision thereof by the Authority to any Fiduciary shall be sufficiently executed if executed in the name of the Authority by an Authorized Officer.

Section 6.4 Compensation. The Authority shall pay to such Fiduciary from time to time reasonable compensation for all services rendered under this Note Resolution, and also all reasonable expenses, charges, counsel fees and other disbursements, including those of its attorneys, agents and employees, incurred in and about the performance of their powers and duties under this Note Resolution.

The Authority further agrees to indemnify and save each Fiduciary harmless against any liabilities which it may incur in the exercise and performance of its powers and duties hereunder and which are not due to its willful misconduct, gross negligence, or bad faith.

Section 6.5 Certain Permitted Acts. Any Fiduciary may become the owner of any Notes or any other obligations of the Authority with the same rights it would have if it were not a Fiduciary. To the extent permitted by law, any Fiduciary may act as Fiduciary for, and permit any of its officers or directors to act as a member of, or in any other capacity with respect to, any committee formed to protect the rights of Noteowners or the owners of any other obligations of the Authority or to effect or aid in any reorganization growing out of the enforcement of the Notes or any other obligations of the Authority or this Note Resolution, whether or not any such committee shall represent the owners of a majority in principal amount of the Notes then outstanding.

Section 6.6 Merger or Consolidation. Any company into which any Fiduciary may be merged or converted or with which it may be consolidated or any company resulting from any merger, conversion or consolidation to which it shall be a part or any company to which any Fiduciary may sell or transfer all or substantially all of its corporate trust business, provided such company shall be a bank or trust company organized under the laws of any state of the United States or a national banking association and in the case of a successor Paying Agent, shall meet the requirements of Section 6.7(A), and shall be authorized by law to perform all the duties imposed upon it by this Note Resolution, shall be the successor to such Fiduciary without the execution or filing of any paper or the performance of any further act.

Section 6.7 Resignation or Removal of Paying Agent and Registrar and Appointment of Successor. (A) The Paying Agent and Registrar may at any time resign and be discharged of the duties and obligations created by this Note Resolution by giving at least sixty days' written notice to the Authority. The Paying Agent and Registrar may be removed at any time by an instrument filed with the Paying Agent and Registrar and signed by the Authority. Any successor Paying Agent and Registrar shall be appointed by the Authority, and (subject to the requirements of Section 6.1) shall be a bank or trust company organized under the laws of any state of the United States or national banking association, having a capital and surplus aggregating at least $5,000,000, and willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by this Note Resolution.

(B) In the event of the resignation or removal of any Paying Agent and Registrar, such Paying Agent and Registrar shall pay over, assign, and deliver any moneys held by it as Paying Agent and Registrar to its successor, or if there be no successor, to the Authority. In the event that for any reason there shall be a vacancy in the office of any Paying Agent and Registrar, the Authority shall act as such Paying Agent and Registrar.

Section 6.8 Evidence of Signatures of Noteowners and Ownership of Notes. (A) Any request, consent, revocation of consent or other instrument which this Note Resolution may require or permit to be signed and executed by the Noteowners may be in one or more instruments of similar tenor, and shall be signed or executed by such Noteowners in person or by their attorneys-in-fact appointed in writing. Proof of (i) the execution of any such instrument, or of an instrument appointing any such attorney, or (ii) the holding by any person of the Notes shall be sufficient for any purpose of this Note Resolution (except as otherwise therein expressly provided) if made in the following manner, or in any other manner satisfactory to the Authority, which may nevertheless in its discretion require further or other proof in cases where it deems the same desirable:

(1) the fact and date of the execution by any Noteowner or his attorney-in-fact of such instrument may be proved by the certificate, which need not be acknowledged or verified, of an officer of a bank or trust company or of any notary public or other officer authorized to take acknowledgements of deeds, that the person signing such request or other instrument acknowledged to him the execution thereof, or by an affidavit of a witness of such execution, duly sworn to before such notary public or other officer. Where such execution is by an officer of a corporation or association or a member of a partnership, on behalf of such corporation, association or partnership, such certificate or affidavit shall also constitute sufficient proof of his authority; and

(2) the amount of Notes registered in the name of any person executing any instrument as a Noteowner, the date of registration of such ownership and the numbers and other identification thereof, may be proved by a certificate, which need not be acknowledged or verified, in form satisfactory to the Authority, executed by a member of a financial firm or by an officer of a bank, trust company, insurance company or financial corporation or other fiduciary, showing at the date therein mentioned that such person exhibited to such member or officer or had on deposit with such fiduciary the Notes described in such certificate. Such certificate may be given by a member of a financial firm or by an officer of any bank, trust company, insurance company or financial corporation or other fiduciary with respect to Notes owned by it, if acceptable to the Authority.

(B) Any request or consent by the owner of any Note shall bind all future owners of such Note in respect of anything done or suffered to be done by the Authority or any Fiduciary in accordance therewith.

Section 6.9 Preservation and Inspection of Documents. All documents received by any Fiduciary under the provisions of this Note Resolution shall be retained in its possession and shall be subject at all reasonable times to the inspection of the Authority, any other Fiduciary, and any Noteowners and their agents and their representatives, any of whom may make copies thereof.

ARTICLE VII

MISCELLANEOUS

Section 7.1 Findings and Determinations. The Authority hereby finds and determines that the sale of the Notes to the EFC pursuant to the PFA in accordance with this Resolution is fair and reasonable and in the best interests of the Authority and that, on the basis of such finding and determination, the Notes shall be sold to the EFC. The Authority hereby authorizes the Chairman, Vice-Chairman or General Manager of the Authority to negotiate, execute and deliver to the EFC, or cause to be delivered to the EFC, the PFA for and on behalf of the Authority, on such and terms and conditions as the person executing the same shall determine to be customary and prudent taking into account the best interests of the Authority, including any supplements or amendments thereto, provided that the purchase price shall not be less than one hundred percent (100%) of the aggregate principal amount of the Notes sold thereunder. The execution of the PFA and delivery to the EFC thereof shall constitute conclusive evidence of such determination.

A copy of the PFA as executed and delivered shall be maintained in the records of the Authority.

Section 7.2 Official Intent. The Authority may pay certain expenses incurred in connection with the Project prior to the date the Notes are issued out of the Authority's general operating fund. The Authority intends to reimburse any such original expenditure with the proceeds of the Notes.

Section 7.3 Additional Findings and Determinations. The Authority hereby finds, determines and declares: (a) that the Notes are issued under and secured by this Note Resolution; (b) that the terms of sale do not contemplate an underwriting of the Notes; (c) that it is in the best interest of the Authority to sell, and the interest of the Authority will be best served by a sale of, the Notes to the EFC as provided in the PFA; and (d) that all provisions and conditions of applicable law have been complied with in the issuance of the Notes.

Section 7.4 Defeasance. (A) If the Authority shall pay or cause to be paid to the owners of all Notes then outstanding, the principal and interest, if any, to become due thereon, at the times and in the manner stipulated therein and in this Note Resolution, then the covenants, agreements and other obligations of the Authority to the Noteowners shall be discharged and satisfied.

(B) Notes for the payment of which moneys shall have been set aside and which money shall be held in trust by the Paying Agent (through deposit by the Authority of funds for such payment or otherwise) at the maturity thereof, shall be deemed to have been paid within the meaning and with the effect expressed in Section 7.4(A) above.

Section 7.5 Moneys Held for Particular Notes. The amounts held by any Fiduciary for the payment due on any date with respect to Notes shall, on and after such date and pending such payment, be set aside on its books, and held in trust by it for the owners of the Notes entitled thereto.

Section 7.6 No Recourse on the Notes. No recourse shall be had for the payment of the principal of or interest, if any, on the Notes or for any claim based thereon or on this Note Resolution against any member or officer of the Authority or any person executing the Note.

Section 7.7 Effective Date. This Note Resolution shall take effect from and after its adoption.

CERTIFICATE

I, ELEANOR PETRUCCI, Secretary of the Buffalo Sewer Authority in the County of Erie, State of New York, HEREBY CERTIFY that the foregoing annexed extract from the Minutes of a meeting of the Board of Directors of said Authority, duly called and held on December 4, 2024, and at which a quorum was present and acting throughout and the resolution contained therein is a true and complete copy of the resolution thereupon adopted and recorded in the Minutes of said Authority and that the foregoing extract has been compared by me with the original minutes as officially recorded in my office in the Minute Book of said Authority and is a true, complete and correct copy thereof and of the whole of said original minutes so far as the same relate to the subject matters referred to in said extract, and that said resolution has not been amended or repealed but is in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said Authority this ____ day of December, 2024.

(SEAL)

_____

Eleanor Petrucci, Secretary

ITEM NO. 17

ADJOURNMENT OF MEETING

MOTION TO ADJOURN

MADE BY MRS. PETRUCCI

2ND BY MR. ROOSEVELT

AYES 3 NOES 0

Board Meeting of December 4, 2024

ITEM NO. 16-1

SERIES 2024 BOND ANTICIPATION NOTE RESOLUTION

EXTRACT OF MINUTES
Meeting of the Buffalo Sewer Authority
of the City of Buffalo, County of Erie, New York
December 4, 2024

***

A regular meeting of the Buffalo Sewer Authority of the City of Buffalo, in the County of Erie, New York, was held at the Bird Island Treatment Facility, 90 West Ferry Street, Buffalo, New York, on December 4, 2024, at 9:00 o'clock A.M. (Prevailing Time).

There were present:

Members:

There were absent:

Also present:

The adoption of the Series 2024 Bond Anticipation Note Resolution with respect to the Breckenridge Street Combined Sewer Overflow Project was moved by Member _____, seconded by Member _____, and duly put to a vote on roll call, which resulted as follows:

AYES:

NOES:

BUFFALO SEWER AUTHORITY

SERIES 2024 BOND ANTICIPATION NOTE

NOTE RESOLUTION

Adopted: December 4, 2024

BUFFALO SEWER AUTHORITY
SERIES 2024 BOND ANTICIPATION NOTE
RESOLUTION

WHEREAS, the Buffalo Sewer Authority (the "Authority"), a body corporate and politic constituting a public benefit corporation organized and existing under the laws of the State of New York, owns and operates sewerage and stormwater drainage facilities within the environs of the City of Buffalo, New York (the "City"); and

WHEREAS, the Authority has determined to undertake certain improvements to the sewer system (as more fully defined below, the "Project"), to wit Breckenridge Street Combined Sewer Overflow; and

WHEREAS, the Authority proposes to issue notes hereunder pursuant to the Buffalo Sewer Authority Act, Title 8 of Article 5 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York, as amended (the "Act"), to provide for the temporary financing of the construction of the Project until such time as the Authority issues bonds to provide for the permanent financing of the Project; and

WHEREAS, the Authority is authorized by the Act to borrow money and issue notes, and to provide for the rights of the owners thereof; and

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF THE BUFFALO SEWER AUTHORITY AS FOLLOWS:

ARTICLE I

DEFINITIONS AND INTERPRETATION

Section 1.1 Short Title. This Note Resolution may hereafter be cited by the Authority as the "Series 2024 Bond Anticipation Note Resolution."

Section 1.2 Definitions. In this Note Resolution the following terms shall have the following meanings unless the context otherwise requires:

"Account" shall mean one of the special accounts created and established pursuant to this Note Resolution.

"Act" shall mean the Buffalo Sewer Authority Act, Title 8 of Article 5 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York, as amended from time to time.

"Authority" shall mean the Buffalo Sewer Authority, a body corporate and politic constituting a public benefit corporation of the State of New York, and any body, board, authority,

agency, or political subdivision or instrumentality of the State which shall hereafter succeed to the powers, duties, and functions thereof.

"Authorized Officer" shall mean the Chairman, the Vice-Chairman, the Assistant Vice-Chairman, the Secretary, the Assistant Secretary, or the General Manager or other chief administrative officer of the Authority, and when used with reference to any act or certificate or other document, also means any person duly authorized to perform such act or sign such document.

"Capital Costs" shall mean and include all costs of acquisition, construction or completion of any part of the Sewer System, including Costs of Issuance of any Notes issued to provide funds to pay the cost thereof, the costs of any demolitions or relocations necessary in connection therewith and any extensions, renewals, replacements, equipment, alterations, improvements, additions, machinery and equipment, betterments, paving, grading, excavation, blasting or removals and of all or any property, rights, easements and franchises deemed by the Authority to be necessary or useful or convenient therefor and may include, to the extent properly attributable to such acquisition, construction and completion:

(a) obligations incurred for labor and materials and payments made to contractors, builders, and materialmen in connection with construction or acquisition of any part of the Sewer System, and for the restoration of property damaged or destroyed in connection with such construction;

(b) fees and expenses of the Paying Agent, payments, taxes, or other governmental charges lawfully levied or assessed during construction or on any property acquired, and premiums on insurance (if any) during such construction or acquisition;

(c) fees and expenses for studies, surveys and reports, engineering, borings, testings, estimates of costs and revenues, preparation of plans and specifications and inspecting or supervising construction or acquisition, as well as for the performance of all other duties of engineers or architects in connection with the acquisition, construction, extension, renewal or improvement of the Sewer System or required by this Note Resolution;

(d) expenses of administration properly chargeable to the acquisition, construction, reconstruction, renewal, extension, or improvement of the Sewer System, including legal expenses and fees, financing charges, costs of audits and fiscal advice and all other items of expense not elsewhere in this definition specified, incident to the acquisition, construction, reconstruction, renewal, extension or improvement of the Sewer System, including the acquisition of real estate, franchises and rights-of-way therefor, including abstracts of title insurance;

(e) the cost and expense of acquiring by purchase or condemnation or by leasing such property, lands, rights-of-way, franchises, easements, and other interest in land as may be deemed necessary or convenient for the acquisition, construction or completion of any part of the Sewer System and options and partial payments thereon, and the amount of any damages incident to or consequent upon the same; and

(f) any obligations or expense heretofore or hereafter expended or incurred by the Authority and any amounts heretofore or hereafter advanced by the Authority for any of the foregoing purposes.

"Capital Improvement Fund" shall mean the Capital Improvement Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Certificate" shall mean a signed document attesting to or acknowledging the matters therein stated or setting forth matters to be determined pursuant to this Note Resolution.

"Certificate of Determination" shall mean a Certificate executed by the General Manager of the Authority pursuant to Section 2.8 hereof.

"City" shall mean the City of Buffalo, New York.

"Comptroller" shall mean, respectively, the Comptroller of the City.

"Construction Fund" shall mean the Construction Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Costs of Issuance" shall mean all items of expense, directly or indirectly payable or reimbursable and related to the authorization, sale and issuance of Notes, including but not limited to printing costs, costs of preparation and reproduction of documents, filing and recording fees, initial fees and charges of any Fiduciary, legal fees and charges, fees and disbursements of consultants and professionals, costs of credit ratings, fees and charges for preparation, execution, transportation and safekeeping of Notes, costs and expenses of refunding, premiums for the insurance of the payment of the Notes and any other cost, charge or fee in connection with the original issuance of Notes.

"Debt Reserve Fund" shall mean the Debt Reserve Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"EFC" shall mean the New York State Environmental Facilities Corporation, a body corporate and politic constituting a public benefit corporation, established and existing under and by virtue of the laws of the State of New York.

"Fiduciary" shall mean the Paying Agent.

"Investment Securities" shall mean and include any of the following securities, if and to the extent the same are at the time legal investments by the Authority of the funds to be invested therein:

(a) direct obligations of the United States of America and securities fully and unconditionally guaranteed as to the timely payment of principal and interest by the United

States of America, provided, that the full faith and credit of the United States of America must be pledged to any such direct obligation or guarantee ("Direct Obligations");

(b) direct obligations and fully guaranteed certificates of beneficial interest of the Export-Import Bank of the United States; consolidated debt obligations and letter of credit-backed issues of the Federal Home Loan Banks; participation certificates and senior debt obligations of the Federal Home Loan Mortgage Corporation ("FHLMCs"); debentures of the Federal Housing Administration; mortgage-backed securities (except stripped mortgage securities which are valued greater than par on the portion of unpaid principal) and senior debt obligations of the Federal National Mortgage Association ("FNMAs"); participation certificates of the General Services Administration; guaranteed mortgage-backed securities and guaranteed participation certificates of the Government National Mortgage Association ("GNMAs"); guaranteed participation certificates and guaranteed pool certificates of the Small Business Administration; debt obligations and letter of credit-backed issues of the Student Loan Marketing Association; local authority bonds of the U.S. Department of Housing & Urban Development; guaranteed Title XI financing of the U.S. Maritime Administration; guaranteed transit bonds of the Washington Metropolitan Area Transit Authority; Resolution Funding Corporation securities;

(c) direct obligations of any state of the United States of America or any subdivision or agency thereof whose unsecured, uninsured and unguaranteed general obligation debt is rated, at the time of purchase, "A" or better by Moody's Investors Service ("Moody's") and "A" or better by Standard & Poor's ("S&P"), or any obligations fully and unconditionally guaranteed by any state, subdivision or agency whose unsecured, uninsured and unguaranteed general obligation debt is rated, at the time of purchase, "A" or better by Moody's and "A" or better by S&P;

(d) commercial paper (having original maturities of not more than 270 days) rated, at the time of purchase, "P-1" by Moody's and "A-1" or better by S&P;

(e) federal funds, unsecured certificates of deposit, time deposits or bankers acceptances (in each case having maturities of not more than 365 days) of any domestic bank including a branch office of a foreign bank which branch office is located in the United States, provided legal opinions are received to the effect that full and timely payment of such deposit or similar obligation is enforceable against the principal office or any branch of such bank, which, at the time of purchase, has a short-term "Bank Deposit" rating of "P-1" by Moody's and a "Short-Term CD" rating of "A-1" or better by S&P;

(f) deposits of any bank or savings and loan association which has combined capital, surplus and undivided profits of not less than $3 million, provided such deposits are continuously and fully insured by the Bank Insurance Fund or the Savings Association Insurance Fund of the Federal Deposit Insurance Corporation (the "FDIC");

(g) investments in money-market funds rated "AAAm" or "AAAm-G" by S&P;

(h) repurchase agreements collateralized by Direct Obligations, GNMAs, FNMAs or FHLMCs with any registered broker/dealer subject to the Securities Investors' Protection Corporation jurisdiction or any commercial bank insured by the FDIC, if such broker/dealer or bank has an uninsured, unsecured and unguaranteed obligation rated "P-1" or "A3" or better by Moody's, and "A-1" or "A-" or better by S&P, provided:

(i) a master repurchase agreement or specific written repurchase agreement governs the transaction; and

(ii) the securities are held free and clear of any lien by the Trustee or an independent third party acting solely as agent ("Agent") for the Trustee, and such third party is (1) a Federal Reserve Bank, or (2) a bank which is a member of the FDIC and which has combined capital, surplus and undivided profits of not less than $50 million, and the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Trustee; and

(iii) a perfected first security interest under the Uniform Commercial Code, or book entry procedures prescribed at 31 C.F.R. 306.1 et seq. or 31 C.F.R. 350.0 et seq. in such securities, is created for the benefit of the Trustee; and

(iv) the repurchase agreement has a term of 10 years or less, and the Trustee or the Agent will value the collateral securities no less frequently than weekly and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within two business days of such valuation; and

(v) the fair market value of the securities in relation to the amount of the repurchase obligation, including principal and interest, is equal to at least 103%.

"Net Revenue Fund" shall mean the Net Revenue Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Note" shall mean any note executed and delivered pursuant to this Note Resolution.

"Note Payment Account" shall mean the special account so designated which is established pursuant to Section 4.1 of this Note Resolution.

"Note Resolution" shall mean this Series 2024 Bond Anticipation Note Resolution.

"Noteowner" or "Holder" or words of similar import shall mean, when used with reference to a Note, the registered owner of such Note.

"Operating Fund" shall mean the Operating Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Outstanding," when used with reference to Notes, shall mean, as of any date, all Notes theretofore or thereupon being authenticated and delivered under this Note Resolution except:

(a) any Notes cancelled by the Paying Agent at or prior to such date;

(b) any Note in lieu of or in substitution for which other Notes have been executed and delivered; and

(c) any Note deemed to have been paid as provided in Section 7.4 of this Note Resolution.

"Paying Agent" shall mean Manufacturers and Traders Trust Company, Buffalo, New York and its successor or successor and any other person which may at any time be substituted in its place pursuant to this Note Resolution.

"Project" shall mean Breckenridge Street Combined Sewer Overflow (CWSRF Project No. 6602-32-04), and all such roadways, connections, structures, equipment, apparatus and other property necessary or desirable for efficient construction and operation of such sewerage facilities, subject to any modifications and revisions approved by the Authority as necessary or desirable for the purposes of the Authority or the Sewer System under the Act.

"Project Finance Agreement" or "PFA" shall mean the project finance agreement to be entered into between the Authority and the EFC relating to the Notes in accordance with this Resolution, as the same may be amended from time to time.

"Rate Stabilization Fund" shall mean the Rate Stabilization Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Registrar" shall mean the Paying Agent or its successors.

"Sewer System" shall mean the plants, structures and other real and personal property acquired, constructed or operated or to be acquired, constructed or operated by the Authority, or the City for the purposes of the Authority, including the Project, and including sewers, conduits, pipelines, mains, pumping and ventilating stations, sewage treatment or disposal systems, plants and works, connections, outfalls, compensating reservoirs, and other plants, structures, boats, conveyances, and other real and personal property, and rights therein, and appurtenances necessary or useful and convenient for the collection, treatment, purification or disposal in a sanitary manner of any sewage, liquid or solid wastes, night soil or industrial wastes.

"Sewer System Revenue Bond Resolution" shall mean the Amended and Restated Sewer System Revenue Bond Resolution adopted by the Authority on May 26, 2021, as amended, supplemented, and restated from time to time.

"State" shall mean the State of New York.

"Subordinated Indebtedness Fund" shall mean the Subordinated Indebtedness Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Surplus Fund" shall mean the Surplus Fund established pursuant to Section 502 of the Sewer System Revenue Bond Resolution.

"Trustee" shall mean the Trustee under the Sewer System Revenue Bond Resolution.

Section 1.3 Interpretation. (A) In this Note Resolution, unless the context otherwise requires:

(1) Articles and Sections referred to by number shall mean the corresponding Articles and Sections of this Note Resolution.

(2) The terms "hereby," "hereof," "herein," "hereunder" and any similar terms, as used in this Note Resolution, refer to this Note Resolution, and the term "hereafter" shall mean after, and the term "heretofore" shall mean before, the date of this Note Resolution.

(3) Words of the masculine gender shall mean and include correlative words of the feminine and neuter genders and words importing the singular number shall mean and include the plural number and vice versa.

(4) Words importing persons shall include firms, associations, partnerships (including limited partnerships), limited liability companies, trusts, corporations, and other legal entities, including public bodies, as well as natural persons.

(5) Any headings preceding the texts of the several Articles and Sections of this Note Resolution, and any table of contents or marginal notes appended to copies hereof, shall be solely for convenience of reference, and shall not constitute a part of this Note Resolution, nor shall they affect its meaning, construction, or effect.

(6) This Note Resolution shall be deemed to be executed in the State and shall be governed by and construed in accordance with the applicable laws of the State.

(7) Any reference to the payment of a Note shall be a reference to the payment of the principal thereof and interest, if any, thereon.

(B) Whenever the Authority is named or referred to, it shall be deemed to include its successors and assigns whether so expressed or not. All of the covenants, stipulations, obligations and agreements by or on behalf of, and other provisions for the benefit of, the Authority contained in this Note Resolution shall bind and inure to the benefit of any officer, board, commission, authority, agency or instrumentality to whom or to which there shall be transferred by or in accordance with law any rights, power or duty of the Authority, or of its successors or assigns, the

possession of which is necessary or appropriate in order to comply with any such covenant, stipulation, obligation, agreement or other provision hereof.

(C) Nothing in this Note Resolution express or implied is intended or shall be construed to confer upon, or to give to, any person, other than the Authority, the Fiduciaries and the owners of the Notes, any right, remedy or claim under or by reason of this Note Resolution or any covenant, condition or stipulation hereof. All of the covenants, stipulations, promises and agreements herein contained by and on behalf of the Authority, shall be for the sole and exclusive benefit of the Authority, the Fiduciaries, and the owners of the Notes.

(D) If any one or more of the covenants or agreements provided herein on the part of the Authority or any Fiduciary to be performed should be contrary to law, then such covenant or covenants or agreement or agreements shall be deemed separable from the remaining covenants and agreements hereof and shall in no way affect the validity of the other provisions of this Note Resolution or of the Notes.

ARTICLE II

TERMS OF NOTES

Section 2.1 Authorization for Note Resolution and Notes. This Note Resolution and the issuance of Notes hereunder have been duly authorized by the Authority and the principal amount of Notes that may be issued hereunder is not limited except as provided herein or by law. The Authority has ascertained and it is hereby determined and declared that the adoption of this Note Resolution is necessary to carry out the powers and duties expressly provided by the Act, that each and every act, matter, thing or course of conduct as to which provision is made herein is necessary or convenient in order to carry out and effectuate the purposes of the Authority in accordance with the Act and to carry out powers expressly given in the Act, and that each and every covenant or agreement herein contained and made is necessary, useful or convenient in order to better secure the Notes and are contracts or agreements necessary, useful and convenient to carry out and effectuate the purposes of the Authority under the Act.

Section 2.2 Note Resolution to Constitute Contract. In consideration of the purchase and acceptance of the Notes by the EFC, the provisions of this Note Resolution shall be a part of the PFA between the Authority and the EFC and shall be deemed to be and shall constitute a contract among the Authority, the Trustee, and the EFC. The Pledges made hereby and the provisions, covenants and agreements herein set forth to be performed by or on behalf of the Authority shall be for the equal benefit, protection and security of the owners of any and all of such Notes, each of which shall be of equal rank without preference, priority or distinction over any other thereof except as expressly provided in this Note Resolution.

Section 2.3 Obligation of Notes. (A) This Note Resolution creates an issue of Notes of the Authority and creates a continuing pledge and lien to secure the full and final payment of the principal of and interest, if any, on such Notes. The Notes shall be general obligations of the Authority payable from the moneys of the Authority available therefor and not otherwise pledged, which pledge shall be in all respects subordinate to the provisions of the Sewer System Revenue Bond Resolution and the lien and pledge of the Revenues (as such term is defined in the Sewer System Revenue Bond Resolution) created by the Sewer System Revenue Bond Resolution. In addition, the Notes may be paid in whole or in part from the proceeds of bonds or other notes issued by the Authority as contemplated by Section 5.1(B) hereof. The Notes shall not be a debt of the State or of the City and neither the State nor the City shall be liable thereon, nor shall the Notes be payable out of any funds other than those of the Authority pledged pursuant to this Note Resolution; and the Notes shall contain on the face thereof a statement to such effect.

(B) All amounts held in any Account, including investments thereof, are hereby pledged to secure the payment of the Notes in accordance with their terms and the provisions of this Note Resolution, subject only to the provisions of this Note Resolution permitting the application or exercise thereof for or to the purposes and on the terms and conditions herein set forth. To the fullest extent provided by the Act and other applicable laws, the money and property hereby pledged shall immediately be subject to the lien of such pledge without physical delivery

thereof or further act and such lien shall be valid and binding against all parties having claims of any kind in tort, contract or otherwise, irrespective of whether such parties have notice hereof.

Section 2.4 Authorization, Principal Amount and Purpose of Notes. There is hereby established and created an issue of Notes of the Authority to be known and designated as "Series 2024 Bond Anticipation Notes." Said Notes shall be issued in an aggregate principal amount to be set forth in the Certificate of Determination and the Authority covenants and agrees that after the issuance of the Notes, no other Notes shall thereafter be issued pursuant to this Note Resolution. The Notes are being issued for the purpose of providing interim financing of the Project, including the making of deposits in the amounts, if any, required by the PFA and this Note Resolution.

Section 2.5 Terms and Provisions of Notes. The Notes shall be dated the date of delivery and shall mature without interest in accordance with the Project Finance Agreement. Interest shall not accrue on the unpaid principal amount of the Notes prior to the earlier of (a) the maturity date thereof or on such date as may be established pursuant to the Project Finance Agreement or (b) the date of earlier redemption of such unpaid principal amount, but in the event of any default in the payment of such unpaid principal amount on the earlier of the maturity date (or such date established as aforesaid) or the date of earlier redemption, the Authority shall be obligated to pay interest on such unpaid principal amount to the Holders of the Notes at the rate specified in the Project Finance Agreement on and after such maturity date (or such date established as aforesaid) or date of earlier redemption until such unpaid principal amount is paid in full. The Notes will be payable as to principal thereof and interest (in respect of overdue principal), if any, thereon at the principal office of the registrar and paying agent (the "Registrar and Paying Agent") in its capacity as paying agent to the Holder of the Notes at its address set forth on the books of the Authority maintained for registration of the Notes. For so long as the EFC is the Holder of the Notes, the EFC may, by written instruction to the Authority, direct the Authority to pay any principal of or interest (in respect of overdue principal), if any, on the Notes, to any bank acting as custodian of the EFC. Notwithstanding the foregoing, if authorized by the General Manager of the Authority pursuant to Section 2.8 hereof, the Notes may bear interest at such other rate or rates as the General Manager determines to be appropriate.

Section 2.6. Determination as to Private Sale. The Authority being of the opinion it is in the best interests of the Authority to finance the purposes for which the Note is to be issued through the State Revolving Fund administered by the EFC, due to the favorable terms available to the Authority only through such Fund, and upon the favorable recommendation of the New York State Comptroller, if required, the Authority hereby determines pursuant to Section 1187(2) of the Act that the private sale of the Notes is in the best interests of the Authority.

Section 2.7 Sale of Notes. (A) The Chairman, Vice-Chairman or General Manager of the Authority are each hereby authorized to execute and deliver the PFA in such form and with such changes, insertions and omissions, including a change to the aggregate principal amount of the Notes, as may be approved by such Chairman, Vice-Chairman or General Manager, and such execution shall be conclusive evidence of any approval required by this Section 2.7(A). The Notes are hereby authorized to be sold to the EFC on the terms and conditions set forth in the PFA.

(B) The Authorized Officers of the Authority are hereby severally authorized to execute and deliver any and all papers, instruments, opinions, certificates, affidavits and other documents and to do and cause to be done all acts and things necessary, convenient or proper for carrying out this Note Resolution, the PFA and the issuance, sale and delivery of the Notes.

Section 2.8 Delegation to General Manager. There is hereby delegated to the General Manager of the Authority, subject to the limitations contained herein, the power with respect to the Notes to determine and carry out the following terms which shall be set forth in the Certificate of Determination:

(A) the principal amount of the Notes, which shall not exceed $36,738,300 in the aggregate, the rate or rates of interest to be paid on the Notes, if the General Manager determines that the Notes should bear interest, and the date and maturity date of the Notes; provided, however, that the maturity date of the Notes shall not be later than the third anniversary of the issuance of the Notes;

B) the disposition of the proceeds of the sale of the Notes for Costs of Issuance, Capital Costs in connection with the Project, deposit to the Construction Fund in accordance with the applicable provisions of the Sewer System Revenue Bond Resolution or such other uses as the General Manager may determine;

(C) the terms and conditions of the PFA and any other agreement, document or certificate reasonably required by the EFC in connection with the sale of the Notes; and

(D) any other provisions which may be required to be inserted in such Certificate of Determination by the provisions of this Note Resolution or any other necessary or desirable provisions not inconsistent or in conflict with the provisions of this Note Resolution; and the taking of any and all action necessary to provide for the issuance of the Notes, including the execution and delivery of the PFA and any required documents, certificates and agreements, closing documents and tax and arbitrage certificates.

ARTICLE III

GENERAL TERMS AND PROVISIONS OF NOTES

Section 3.1 Medium of Payment, Denominations, Maturities, Form and Date. (A) The Notes shall be payable with respect to interest (if any) and principal in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts.

(B) The Notes shall be issued in registered form only. Purchasers will not receive certificates representing their interests in the Notes.

(C) The Notes shall not bear interest except as set forth herein.

(D) The Notes shall be lettered "R" and numbered consecutively from (1) upwards.

Section 3.2 Legends. The Notes may contain or have endorsed thereon such provisions, specifications, and descriptive words not inconsistent with the provisions of this Note Resolution as may be necessary or desirable to comply with custom or otherwise.

Section 3.3 Notes Mutilated, Destroyed, Stolen or Lost. In case any Note shall become mutilated or be destroyed, stolen, or lost, the Authority shall execute a new Note of like interest rate, maturity, principal amount, and other terms as the Note so mutilated, destroyed, stolen, or lost. In the case of a mutilated Note, such new Note shall be delivered only upon surrender and cancellation of such mutilated Note. In the case of a Note issued in lieu of and substitution for a Note destroyed, stolen or lost, such new Note shall be delivered only upon the filing with the Authority of evidence satisfactory to the Authority that such Note has been destroyed, stolen or lost and proof of ownership thereof and upon furnishing the Authority with indemnity satisfactory to it. The person requesting the execution and delivery of a new Note pursuant to this Section 3.3 shall comply with such other reasonable regulations as the Authority may prescribe and pay such expenses as the Authority may incur in connection therewith. The Authority shall notify the Paying Agent of any Notes issued by it pursuant to this Section 3.3. All Notes so surrendered to the Authority shall be delivered to the Paying Agent and cancelled by it and evidence of such cancellation shall be given to the Authority.

Section 3.4 Cancellation and Destruction of Notes. All Notes paid by the Paying Agent shall be promptly cancelled. Notes so cancelled may at any time be cremated or otherwise destroyed by the Paying Agent, who shall execute a Certificate of cremation or destruction in duplicate by the signature of one of its Authorized Officers describing the Notes so cremated or otherwise destroyed, and one executed Certificate shall be filed with the Authority.

Section 3.5 Execution. The Notes shall be executed in the name of the Authority by the manual or facsimile signature of its Chairman, Vice-Chairman or General Manager, and its corporate seal (or a facsimile thereof) shall be thereunto affixed, imprinted, impressed, engraved

or otherwise reproduced thereon and attested by the manual or facsimile signature of the Comptroller, Secretary, Executive Secretary or any Assistant Secretary, or in such other manner as may be required by law. Each Note shall bear thereon a certificate of authentication manually executed by the Paying Agent and Registrar. No Note shall be valid or obligatory for any purpose unless such certificate of authentication upon such Note shall have been duly executed by the Paying Agent and Registrar. In case any one or more of the officers or employees who shall have signed or sealed any of the Notes shall cease to be such officer or employee before the Notes so signed and sealed shall have been actually delivered, such Notes may, nevertheless, be delivered as herein provided, and may be issued as if the person who signed or sealed such Notes had not ceased to hold such office or be so employed. Any Note may be signed and sealed on behalf of the Authority by such persons as at the actual time of the execution of such Note shall be duly authorized or hold the proper office in or employment by the Authority, although at the date of the Notes such persons may not have been so authorized or have held such office or employment.

Section 3.6 Registration of the Notes. Unless otherwise determined by the General Manager of the Authority, the Notes shall be initially issued in the form of a separate single authenticated fully registered note in a principal amount not to exceed $36,738,300 registered in the name of the New York State Environmental Facilities Corporation.

Section 3.7 Transfer of Notes. Each Note shall be transferable only upon the books of the Authority, which shall be kept for such purpose at the corporate trust office of the Registrar, by the registered owner thereof in person or by his attorney duly authorized in writing, upon surrender thereof together with a written instrument of transfer satisfactory to the Registrar duly executed by the registered owner or his duly authorized attorney. Upon transfer of any such fully registered Note, the Authority shall issue in the name of the transferee a new fully registered Note or Notes. The Authority and the Registrar may deem and treat the person in whose name any Note shall be registered upon the books of the Authority as the absolute owner of such Note, whether such Note shall be overdue or not, for the purpose of receiving payment of, or on account of, the principal of and interest, if any, on such Note and for all other purposes, and all such payments so made to any such registered owner or upon his order shall be valid and effectual to satisfy and discharge the liability upon such Note to the extent of the sum or sums so paid, and neither the Authority nor the Registrar shall be affected by any notice to the contrary.

Section 3.8 Regulations with Respect to the Exchanges and Transfers. In all cases in which the privilege of exchanging or transferring Notes is exercised, the Authority shall execute, and the Registrar shall deliver Notes in accordance with the provisions hereof. All Notes surrendered in any such exchanges or transfers shall forthwith be cancelled by the Registrar. For every such exchange or transfer of Notes, the Authority or the Registrar may make a charge sufficient to reimburse it for any tax, fee or other governmental charge required to be paid with respect to such exchange or transfer, and may charge a sum sufficient to pay the cost of preparing each new Note issued upon such exchange or transfer, which sum or sums shall be paid by the person requesting such exchange or transfer as a condition precedent to the exercise of the privileges of making such exchange or transfer.

Section 3.9 Form of Notes. Subject to the provisions of this Note Resolution and the PFA, the Notes shall be in substantially the following form and tenor, with such insertions,

variations, omissions and endorsements as may be required by this Note Resolution or the PFA or to comply with any changes made by the Chairman, Vice-Chairman or General Manager of the Authority pursuant to this Note Resolution:

Registered
No. R

Registered
$

UNITED STATES OF AMERICA
STATE OF NEW YORK
BUFFALO SEWER AUTHORITY

E.F.C. Clean Water Facility Note – 2024
(Bond Anticipation Note)

REGISTERED OWNER: NEW YORK STATE ENVIRONMENTAL FACILITIES CORPORATION

MAXIMUM PRINCIPAL SUM:

INITIAL INTEREST RATE:

DATED DATE: _____, 2024 MATURITY DATE: _____, 202_

The BUFFALO SEWER AUTHORITY (the "Recipient"), a public benefit corporation of the State of New York, hereby acknowledges itself indebted and for value received promises to pay to the Registered Owner named above, the lesser of (x) the Maximum Principal Sum set forth above and (y) the unpaid principal amount of all disbursements (the "Disbursements") made by or on behalf of New York State Environmental Facilities Corporation (the "Corporation") to the Recipient pursuant to [**Article IV**] of the Project Finance Agreement dated as of _____, 2024 (the "Project Finance Agreement"), between the Corporation and the Recipient (the lesser of such amounts being hereinafter referred to as the "Unpaid Principal Sum" plus any and all interest then accrued, late fees and other fees and expenses then due), such amount to be paid on the Maturity Date stated above or upon such other date as may be established pursuant to the Project Finance Agreement in accordance with [**Exhibit E]** thereto. All Disbursements made by or on behalf of the Corporation to the Recipient pursuant to the Project Finance Agreement and all prepayments made on account of the Unpaid Principal Sum hereof, interest, fees and other charges shall be recorded by or on behalf of the Corporation and endorsed on the grid attached hereto in accordance with the terms of the Project Finance Agreement, which is hereby made a part hereof. Recordation of Disbursements, confirmed by a certificate of the Recipient given in accordance with the Project Finance Agreement, shall conclusively establish the principal amount outstanding hereunder. Interest shall not accrue on said Unpaid Principal Sum prior to the earlier of the Maturity Date or the date of earlier redemption of said Unpaid Principal Sum, but in the event of any default in the payment of said Unpaid Principal Sum on the earlier of the Maturity Date or the date of earlier redemption, the Recipient promises to pay interest on said Unpaid Principal Sum to the Registered Owner named above at the rate of _____ per centum (__%) per annum on and after said Maturity Date or date of earlier redemption until said Unpaid Principal Sum is paid in full. Principal of and

interest (in respect of overdue principal), if any, on this Note shall be payable to the Registered Owner hereof, at its address set forth on the books of the Recipient maintained for registration of this Note. For so long as the Corporation is the Registered Owner of this Note, the Corporation may, by written instruction to the Recipient, direct the Recipient to pay any principal of and interest (in respect of overdue principal), if any, on this Note to any bank acting as custodian of the Corporation. Both principal of and interest (in respect of overdue principal), if any, on this Note will be paid, without presentment, in funds available on or before the due date and in any lawful coin or currency of the United States of America which at the date of payment is legal tender for the payment of public and private debts.

This Note shall be transferable or exchangeable, solely in accordance with the terms of the Project Finance Agreement, only upon presentation to the Recipient with a written transfer of title and the Recipient shall thereupon register this Note in the name of the transferee in his books and shall endorse a certificate of such registration hereon. Such transfer shall be dated and signed by the Registered Owner, or his legal representatives, and it shall be duly acknowledged or proved, or in the alternative the signature thereto shall be certified as to its genuineness by an officer of a bank or trust company located and authorized to do business in this State.

This Note may be called for redemption prior to maturity, in whole or in part by the Recipient in accordance with [**Section 4.3(b**)] and [**Exhibit E**] of the Project Finance Agreement, after the Recipient delivers a written notice to the Corporation at least thirty (30) days and not more than sixty (60) days prior to the date of redemption, including that the Recipient desires to redeem all or a specified amount of the Note outstanding, and specifying the date of redemption.

This Note shall be subject to mandatory redemption prior to maturity pursuant to, and in accordance with, [**Section 4.3(a)**] of the Project Finance Agreement upon the date specified in a notice from the Corporation delivered to the Recipient not less than sixty (60) days prior to such redemption date upon the occurrence, as specified in such notice, that the Project financed or to be financed by Disbursements under this Note has been abandoned by the Recipient.

This Note shall further be subject to mandatory redemption in whole or in part, prior to maturity, pursuant to and in accordance with [**Section 4.3(a)**] and [**Exhibit E]** of the Project Finance Agreement, within five Business Days next succeeding the date the Recipient shall have received any proceeds from any Third Party Funding which are intended to pay, in whole or part, any costs of the Project which have been, or were intended to be, financed with the short-term loan made pursuant to the Project Finance Agreement; provided, however, that this Note shall be subject to such mandatory redemption solely to the extent of, and in an amount equal to, the proceeds of such Third Party Funding received by the Recipient on or after the date of the Recipient Note.

This Note is issued under the authority of and pursuant to and in full compliance with the provisions of the Constitution and statutes of the State of New York, and the note resolution adopted by the Recipient on December 4, 2024, authorizing the issuance of notes not to exceed $36,738,300 (the "Note Resolution"), authorizing the issuance of indebtedness, and the Certificate of Determination executed by the Authorized Officer of the Recipient as of _____, 2024, as supplemented from time to time in accordance with the Project Finance Agreement.

This Note and the issue of which it is one are general obligations of the Recipient payable from the moneys of the Recipient available therefor and not otherwise pledged, which pledge shall be in all respects subordinate to the provisions of the Amended and Restated Sewer System Revenue Bond Resolution adopted by the Authority on May 26, 2021, as amended and restated (the "Bond Resolution"), and the lien and pledge of the Revenues (as such term is defined in said Bond Resolution) created by said Bond Resolution. The Notes are issuable in fully registered form only.

The Recipient has no taxing power, and its obligations are not debts of the State of New York or of any political subdivision of the State of New York, or of the United States of America. This Note will not constitute a pledge of the faith and credit of the State of New York or of any political subdivision thereof nor shall the Note be payable out of funds or properties other than those of the Recipient set forth in the Note Resolution. The issuance of this Note will not obligate the State of New York or any of its political subdivisions or the United States of America to levy or pledge the receipts from any form of taxation for the payment of the this Note.

This Note shall not be entitled to any benefit under the Note Resolution or Bond Resolution or become valid or obligatory for any purpose until it shall have been authenticated by the Registrar and Paying Agent by its execution of the certificate of authentication endorsed hereon.

It is hereby certified and recited that all conditions, acts and things required by the Constitution and statutes of the State of New York to exist, to have happened and to have been performed precedent to and in the issuance of this Note, exist, have happened and have been performed, and that this Note, together with all other indebtedness of the Recipient, is within every debt and other limit prescribed by the Constitution and laws of such State.

IN WITNESS WHEREOF, the Recipient has caused this Note to be executed by its Authorized Officer by manual signature or a facsimile thereof, and its corporate seal (or a facsimile thereof) to be affixed, imprinted, engraved, or otherwise reproduced hereon and attested by its Secretary to the Board and this Note to be dated as of the Dated Date set forth above.

BUFFALO SEWER AUTHORITY

(SEAL)

By: _____
Name:
Title:

ATTEST:

_____

Name:
Title:

(FORM OF ASSIGNMENT)

FOR VALUE RECEIVED, the Undersigned hereby sells, assigns and transfers unto _____ (Please insert Social Security or other identifying number of Assignee(s); _____) the within note and all rights thereunder, and hereby irrevocably constitutes and appoints _____ attorney to transfer the within note on the books kept for registration thereof with full power of substitution in the premises.

Dated: _____

NOTICE: The signature to this assignment must correspond with the name as it appears upon the face of the within note in every particular, without alteration or enlargement or any change whatever.

Note Number: R
Maximum Principal Sum: $_____

Maturity Date:
Latest Extended Maturity Date:
Recipient: Buffalo Sewer Authority
SRF Project No.: 6602-32-04
Notation by:

DISBURSEMENTS AND PAYMENTS OF PRINCIPAL*Date	Requisition No.	Amount of Advance	Amount of Principal Paid	Unpaid Principal Sum	Notation Made By

*This grid may be extended if the number of Disbursements, payments and extensions so require.

CERTIFICATE OF AUTHENTICATION

It is hereby certified that this Note is one of the duly authorized issue of notes referred to in the Note Resolution and described on the reverse side hereof.

MANUFACTURERS AND TRADERS
TRUST COMPANY,
Paying Agent and Registrar

By: _____
Authorized Signature

ARTICLE IV

ACCOUNTS

Section 4.1 Establishment of Note Payment Account. (A) The Authority hereby establishes a special account, which shall be designated as the Note Payment Account. Said Note Payment Account shall be held by the Fiduciary, separate and apart from all other accounts, moneys and assets of the Authority, and shall be identified by the Authority and the Paying Agent and Registrar according to the designation herein provided in such manner as to distinguish such Note Payment Account from the accounts established by the Authority for any other of its obligations. All moneys or securities held by the Fiduciary pursuant to this Note Resolution shall be held and applied only in accordance with the provisions of this Note Resolution.

(B) Any amounts required to be deposited pursuant to Section 5.9 of this Note Resolution shall be deposited to the credit of the Note Payment Account.

(C) The proceeds of any notes, bonds or other obligations of the Authority issued to redeem the Notes, in whole or in part, as determined by the Authority, shall be deposited to the credit of the Note Payment Account.

(D) The Fiduciary shall, on or before the maturity date of the Notes, withdraw from the Note Payment Account an amount equal to the aggregate principal amount of and accrued interest, if any, on the Outstanding Notes, or, if the amount on deposit to the credit of the Note Payment Account is less than the aggregate principal amount of and accrued interest, if any, on the Outstanding Notes, the balance on deposit to the credit of the Note Payment Account, and shall apply such amount solely to the payment of Outstanding Notes.

Section 4.2 Deposits. (A) In lieu of investing in Investment Securities (except as provided in Section 7.4), the Fiduciary shall, at the written direction of an Authorized Officer, if permitted by law, deposit amounts or cause amounts to be deposited in the Note Payment Account held by the Fiduciary or under its control pursuant to the terms of this Note Resolution in interest-bearing time deposits or certificates of deposit, or shall make other similar banking arrangements with itself or a financial institution the deposits of which are insured by the Federal Deposit Insurance Corporation or its successor. Each such interest-bearing time deposit or certificate of deposit or other similar banking arrangement shall permit the moneys so placed to be available at the times at which moneys are needed by the Authority to be expended and, except to the extent that any such deposits shall be insured by the United States of America or the federal corporations enumerated above on terms which in the judgment of the Authority (as expressed in written instructions to the Fiduciary) provide reasonable liquidity, all moneys in each such interest-bearing time deposit or certificate of deposit or other similar banking arrangement shall be continuously and fully secured under the laws of the State by Investment Securities (or other obligations rated in either of the two highest rating categories by a nationally recognized rating service) having a market value equal at all times to the amount of the deposit, certificate or other similar banking arrangement.

(B) In order to permit such amounts to be available for use at the time when needed, any amounts held under this Note Resolution by any Fiduciary, as such, may, if and as directed by the Authority, be deposited in the commercial banking department of such Fiduciary which may honor checks and drafts on such deposit with the same force and effect as if it were not such Fiduciary. Any such Fiduciary shall allow and credit on such amounts at least such interest, if any, as it customarily allows upon similar funds of similar size and under similar conditions or as required by law.

(C) All amounts deposited by any Fiduciary pursuant to Section 4.2(B) above shall be continuously and fully secured either (a) by lodging with any Federal Reserve Bank as custodian, as collateral security, Investment Securities having a market value (exclusive of accrued interest) not less than the amount of such deposit, or (b) in such other manner as may then be required by applicable federal or state laws and regulations regarding security for the deposit of public funds. It shall not be necessary, unless required by applicable law, for the Fiduciary to give security under this Section 4.3(C) for the deposit of any amounts to the extent that such deposit is insured by the Federal Deposit Insurance Corporation or its successor, or which are held in trust and set aside by the Fiduciary for the payment of the Notes.

(D) All amounts so deposited by the Fiduciary shall be credited to the Note Payment Account.

Section 4.3 Investment of Certain Funds. (A) Subject to the right of the Authority to direct the investment or deposit of funds hereunder, moneys in any Account shall be continuously invested and reinvested or deposited and redeposited by the Fiduciary in Investment Securities with a view toward maximizing yield (with proper preservation of principal) and minimizing the instances of uninvested funds. The Authority shall consult with the Fiduciary from time to time as to the investment of amounts in the Accounts established or confirmed by this Note Resolution. The Authority may direct the Fiduciary to, or in the absence of direction, the Fiduciary shall, invest and reinvest the moneys in any Account in Investment Securities so that the maturity dates shall coincide as nearly as practicable with the times at which moneys are needed to be expended. The Investment Securities purchased shall be held by the Fiduciary, or for its account as Fiduciary, and shall be deemed at all times to be part of such Account, and the Fiduciary shall keep the Authority advised as to the details of all such investments. The Fiduciary shall sell at the best price obtainable, or present for redemption, any Investment Securities purchased by it as an investment whenever it shall be necessary in order to provide moneys to meet any payment from such Account.

(B) Investment Securities purchased as an investment of moneys in any Account by the Fiduciary under the provisions of this Note Resolution shall be deemed at all times to be a part of such Account. Any income or interest earned, and gains realized in excess of losses suffered by the Note Payment Account shall be retained therein and used for the purposes of such Account.

(C) The Fiduciary shall sell at the best price obtainable, or present for redemption or exchange, any Investment Security purchased by it pursuant to this Note Resolution whenever it shall be necessary in order to provide moneys to meet any payment or transfer from the Account for which such investment was made. The Fiduciary shall advise the Authority in writing, on or

before the twentieth day of each calendar month, of all investments held for the credit of each Account in its custody under the provisions of this Note Resolution as of the end of the preceding month.

Section 4.4 Valuation and Sale of Investments. (A) In computing the amount in any Account, obligations purchased as an investment of moneys therein shall be valued at the lower of cost or market value (exclusive of accrued interest).

(B) Except as otherwise provided herein, the Fiduciary shall sell at the best price obtainable, or present for redemption, any Investment Security whenever it shall be requested in writing by an Authorized Officer to do so or whenever it shall be necessary in order to provide moneys to meet any payment or transfer from any Account held by it.

ARTICLE V

PARTICULAR COVENANTS

The Authority covenants and agrees with the owners of the Notes as follows:

Section 5.1 Payment of Notes. (A) The Authority shall duly and punctually pay or cause to be paid the principal of every Note and the interest, if any, thereon, at the dates and places and in the manner stated in the Notes, according to the true intent and meaning thereof.

(B) The Authority will use its best efforts to issue, sell and deliver notes, bonds or other evidences of indebtedness so as to have available an amount, which when taken together with other moneys that may be available therefor, including moneys held pursuant to this Note Resolution, to pay the principal of and interest, if any, on the Notes as the same become due in accordance with the terms of the Notes.

Section 5.2 Extension of Payment of Notes. The Authority shall not directly or indirectly extend or assent to the extension of the maturity of any of the Notes or the time of the payment of any of the interest by the purchase or funding of such Notes, or claims for interest or by any other arrangement, and in case the maturity of any of the Notes or the time for payment of any such interest shall be extended, such Notes, or claims for interest shall not be entitled, in case of any default hereunder, to the benefit of this Note Resolution or to any payment out of the Account established pursuant to this Note Resolution, including the investments, if any, thereof, or out of any assets or revenues pledged hereunder (except moneys held in trust for the payment of particular Notes, or claims for interest pursuant to this Note Resolution) prior to benefits accorded to or the payment of the principal of all Notes Outstanding the maturity of which has not been extended and of such portion of the accrued interest on the Notes as shall not be represented by such extended claims for interest.

Section 5.3 Further Assurance. At any and all times the Authority shall, as far as it may be authorized by law, pass, make, do, execute, acknowledge and deliver, all and every such further resolutions, acts, deeds, conveyances, assignments, transfers and assurances as may be necessary or desirable for the better assuring, conveying, granting, pledging, assigning and confirming all and singular, the rights, assets, revenues and other moneys, securities, funds and property hereby pledged or assigned, or intended so to be, or which the Authority may become bound to pledge or assign.

Section 5.4 Power to Issue Notes and Pledge the Note Payment Account and Other Property. The Authority is duly authorized under all applicable laws to authorize and issue the Notes and to adopt this Note Resolution and to pledge the revenues and assets purported to be pledged hereby in the manner and to the extent herein provided. The revenues and assets so pledged are and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created hereby, except for the lien and pledge of the Revenues created by the Sewer System Revenue Bond Resolution, and all corporate or other action on the part of the Authority to that end has been and will be duly and validly taken.

The Notes and the provisions of this Note Resolution are and will be the valid and legally enforceable obligations of the Authority in accordance with their terms and the terms of this Note Resolution. The Authority shall at all times, to the extent permitted by law, defend, preserve and protect the pledge of the amounts in the Note Payment Account and other assets and revenues, including rights therein pledged under this Note Resolution and all the rights of the Noteowners under this Note Resolution against all claims and demands of all persons whomsoever.

Section 5.5 Issuance of Additional Obligations. The Authority hereby expressly reserves the right to adopt one or more additional resolutions for its purposes, and reserves the right to issue other obligations for such purposes.

Section 5.6 General. The Authority shall do and perform or cause to be done and performed all acts and things required to be done and performed by or on behalf of the Authority under the provisions of the Act and this Note Resolution in accordance with the terms of such provisions.

Section 5.7 Waiver of Laws. The Authority shall not at any time insist upon or plead in any manner whatsoever, or claim or take the benefit or advantage of any stay or extension of law now or at any time hereafter in force which may affect the covenants and agreements contained in this Note Resolution or in the Notes, and all benefit or advantage of any such law is hereby expressly waived by the Authority.

Section 5.8 Tax Covenants. (A) The Authority shall at all times do and perform all acts and things necessary or desirable in order to assure any interest paid on the Notes shall, for the purposes of federal income taxation, be excludable from the gross income of the recipients thereof and exempt from such taxation.

(B) The Authority shall not permit at any time or times any of the proceeds of the Notes or any other funds of the Authority to be used directly or indirectly to acquire any securities or obligations, the acquisition of which would cause any Note to be an "arbitrage bond" as defined in Section 148 of the Code.

Section 5.9 Withdrawal from Net Revenue Fund. In the event that the Authority cannot issue notes, bonds or other obligations of the Authority to redeem the Notes at maturity, the Authority shall, at least 15 days prior to the maturity date of the Notes, cause to be transferred to the Paying Agent and Registrar for the credit of the Note Payment Account from the Net Revenue Fund, to the extent that moneys on deposit in the Net Revenue Fund are available therefor, or, to the extent that moneys on deposit in the Net Revenue Fund are insufficient to redeem the Notes, moneys shall be transferred to the Net Revenue Fund from the Surplus Fund, Rate Stabilization Fund, Capital Improvement Fund, Construction Fund, Debt Reserve Fund, Subordinated Indebtedness Fund and Operating Fund, in that order, to cure any such deficiency.

ARTICLE VI

CONCERNING FIDUCIARIES

Section 6.1 Paying Agent and Registrar; Appointment and Acceptance of Duties. (A) Manufacturers and Traders Trust Company, Buffalo, New York, is hereby appointed Paying Agent and Registrar. The Paying Agent and Registrar shall signify its acceptance of the duties and obligations imposed upon it by this Note Resolution by executing and delivering to the Authority a written acceptance thereof.

(B) The principal office of the Paying Agent and Registrar is designated as the office or agency of the Authority for the payment of the interest, if any, on and principal of the Notes.

Section 6.2 Responsibilities of Fiduciaries. The recitals of fact in this Note Resolution and in the Notes contained shall be taken as the statements of the Authority and no Fiduciary assumes any responsibility for the correctness of the same. No Fiduciary makes any representations as to the validity or sufficiency of this Note Resolution or of any Notes or coupons issued thereunder or in respect of the security afforded by this Note Resolution, and no Fiduciary shall incur any liability in respect thereof. No Fiduciary shall be under any responsibility or duty with respect to the issuance of the Notes for value or the application of the proceeds thereof or the application of any moneys paid to the Authority or for any losses incurred upon the sale or redemption of any securities purchased for or held in any Account under this Note Resolution. No Fiduciary shall be under any responsibility to any other Fiduciary. No Fiduciary shall be liable in connection with the performance of its duties under this Note Resolution except for its own willful misconduct, gross negligence, or willful default.

Section 6.3 Evidence on Which Fiduciaries May Act. (A) Each Fiduciary shall be protected in acting upon any notice, resolution, request, consent, order, certificate, report, opinion, bond, or other paper or document believed by it to be genuine, and to have been signed or presented by the proper party or parties. Each Fiduciary may consult with counsel, who may or may not be counsel to the Authority, and the opinion of such counsel shall be full and complete authorization and protection in respect of any action taken or suffered by such Fiduciary under this Note Resolution in good faith and in accordance therewith.

(B) Whenever any Fiduciary shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering any action under this Note Resolution, such matter (unless other evidence in respect thereof be therein specifically prescribed) may be deemed to be conclusively proved and established by a Certificate of an Authorized Officer, and such Certificate shall be full warrant for any action taken or suffered in good faith under the provisions of this Note Resolution upon the faith thereof; but in its discretion the Fiduciary may in lieu thereof accept other evidence of such fact or matter or acquire such further or additional evidence as to it may seem reasonable.

(C) Except as otherwise expressly provided in this Note Resolution, any request, order, notice, or other direction required or permitted to be furnished pursuant to any provision thereof

by the Authority to any Fiduciary shall be sufficiently executed if executed in the name of the Authority by an Authorized Officer.

Section 6.4 Compensation. The Authority shall pay to such Fiduciary from time to time reasonable compensation for all services rendered under this Note Resolution, and also all reasonable expenses, charges, counsel fees and other disbursements, including those of its attorneys, agents and employees, incurred in and about the performance of their powers and duties under this Note Resolution. The Authority further agrees to indemnify and save each Fiduciary harmless against any liabilities which it may incur in the exercise and performance of its powers and duties hereunder and which are not due to its willful misconduct, gross negligence, or bad faith.

Section 6.5 Certain Permitted Acts. Any Fiduciary may become the owner of any Notes or any other obligations of the Authority with the same rights it would have if it were not a Fiduciary. To the extent permitted by law, any Fiduciary may act as Fiduciary for, and permit any of its officers or directors to act as a member of, or in any other capacity with respect to, any committee formed to protect the rights of Noteowners or the owners of any other obligations of the Authority or to effect or aid in any reorganization growing out of the enforcement of the Notes or any other obligations of the Authority or this Note Resolution, whether or not any such committee shall represent the owners of a majority in principal amount of the Notes then outstanding.

Section 6.6 Merger or Consolidation. Any company into which any Fiduciary may be merged or converted or with which it may be consolidated or any company resulting from any merger, conversion or consolidation to which it shall be a part or any company to which any Fiduciary may sell or transfer all or substantially all of its corporate trust business, provided such company shall be a bank or trust company organized under the laws of any state of the United States or a national banking association and in the case of a successor Paying Agent, shall meet the requirements of Section 6.7(A), and shall be authorized by law to perform all the duties imposed upon it by this Note Resolution, shall be the successor to such Fiduciary without the execution or filing of any paper or the performance of any further act.

Section 6.7 Resignation or Removal of Paying Agent and Registrar and Appointment of Successor. (A) The Paying Agent and Registrar may at any time resign and be discharged of the duties and obligations created by this Note Resolution by giving at least sixty days' written notice to the Authority. The Paying Agent and Registrar may be removed at any time by an instrument filed with the Paying Agent and Registrar and signed by the Authority. Any successor Paying Agent and Registrar shall be appointed by the Authority, and (subject to the requirements of Section 6.1) shall be a bank or trust company organized under the laws of any state of the United States or national banking association, having a capital and surplus aggregating at least $5,000,000, and willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by this Note Resolution.

(B) In the event of the resignation or removal of any Paying Agent and Registrar, such Paying Agent and Registrar shall pay over, assign, and deliver any moneys held by it as Paying Agent and Registrar to its successor, or if there be no successor, to the Authority. In the event that

for any reason there shall be a vacancy in the office of any Paying Agent and Registrar, the Authority shall act as such Paying Agent and Registrar.

Section 6.8 Evidence of Signatures of Noteowners and Ownership of Notes. (A) Any request, consent, revocation of consent or other instrument which this Note Resolution may require or permit to be signed and executed by the Noteowners may be in one or more instruments of similar tenor, and shall be signed or executed by such Noteowners in person or by their attorneys-in-fact appointed in writing. Proof of (i) the execution of any such instrument, or of an instrument appointing any such attorney, or (ii) the holding by any person of the Notes shall be sufficient for any purpose of this Note Resolution (except as otherwise therein expressly provided) if made in the following manner, or in any other manner satisfactory to the Authority, which may nevertheless in its discretion require further or other proof in cases where it deems the same desirable:

(1) the fact and date of the execution by any Noteowner or his attorney-in-fact of such instrument may be proved by the certificate, which need not be acknowledged or verified, of an officer of a bank or trust company or of any notary public or other officer authorized to take acknowledgements of deeds, that the person signing such request or other instrument acknowledged to him the execution thereof, or by an affidavit of a witness of such execution, duly sworn to before such notary public or other officer. Where such execution is by an officer of a corporation or association or a member of a partnership, on behalf of such corporation, association or partnership, such certificate or affidavit shall also constitute sufficient proof of his authority; and

(2) the amount of Notes registered in the name of any person executing any instrument as a Noteowner, the date of registration of such ownership and the numbers and other identification thereof, may be proved by a certificate, which need not be acknowledged or verified, in form satisfactory to the Authority, executed by a member of a financial firm or by an officer of a bank, trust company, insurance company or financial corporation or other fiduciary, showing at the date therein mentioned that such person exhibited to such member or officer or had on deposit with such fiduciary the Notes described in such certificate. Such certificate may be given by a member of a financial firm or by an officer of any bank, trust company, insurance company or financial corporation or other fiduciary with respect to Notes owned by it, if acceptable to the Authority.

(B) Any request or consent by the owner of any Note shall bind all future owners of such Note in respect of anything done or suffered to be done by the Authority or any Fiduciary in accordance therewith.

Section 6.9 Preservation and Inspection of Documents. All documents received by any Fiduciary under the provisions of this Note Resolution shall be retained in its possession and shall be subject at all reasonable times to the inspection of the Authority, any other Fiduciary, and any Noteowners and their agents and their representatives, any of whom may make copies thereof.

ARTICLE VII

MISCELLANEOUS

Section 7.1 Findings and Determinations. The Authority hereby finds and determines that the sale of the Notes to the EFC pursuant to the PFA in accordance with this Resolution is fair and reasonable and in the best interests of the Authority and that, on the basis of such finding and determination, the Notes shall be sold to the EFC. The Authority hereby authorizes the Chairman, Vice-Chairman or General Manager of the Authority to negotiate, execute and deliver to the EFC, or cause to be delivered to the EFC, the PFA for and on behalf of the Authority, on such and terms and conditions as the person executing the same shall determine to be customary and prudent taking into account the best interests of the Authority, including any supplements or amendments thereto, provided that the purchase price shall not be less than one hundred percent (100%) of the aggregate principal amount of the Notes sold thereunder. The execution of the PFA and delivery to the EFC thereof shall constitute conclusive evidence of such determination.

A copy of the PFA as executed and delivered shall be maintained in the records of the Authority.

Section 7.2 Official Intent. The Authority may pay certain expenses incurred in connection with the Project prior to the date the Notes are issued out of the Authority's general operating fund. The Authority intends to reimburse any such original expenditure with the proceeds of the Notes.

Section 7.3 Additional Findings and Determinations. The Authority hereby finds, determines and declares: (a) that the Notes are issued under and secured by this Note Resolution; (b) that the terms of sale do not contemplate an underwriting of the Notes; (c) that it is in the best interest of the Authority to sell, and the interest of the Authority will be best served by a sale of, the Notes to the EFC as provided in the PFA; and (d) that all provisions and conditions of applicable law have been complied with in the issuance of the Notes.

Section 7.4 Defeasance. (A) If the Authority shall pay or cause to be paid to the owners of all Notes then outstanding, the principal and interest, if any, to become due thereon, at the times and in the manner stipulated therein and in this Note Resolution, then the covenants, agreements and other obligations of the Authority to the Noteowners shall be discharged and satisfied.

(B) Notes for the payment of which moneys shall have been set aside and which money shall be held in trust by the Paying Agent (through deposit by the Authority of funds for such payment or otherwise) at the maturity thereof, shall be deemed to have been paid within the meaning and with the effect expressed in Section 7.4(A) above.

Section 7.5 Moneys Held for Particular Notes. The amounts held by any Fiduciary for the payment due on any date with respect to Notes shall, on and after such date and pending such payment, be set aside on its books, and held in trust by it for the owners of the Notes entitled thereto.

Section 7.6 No Recourse on the Notes. No recourse shall be had for the payment of the principal of or interest, if any, on the Notes or for any claim based thereon or on this Note Resolution against any member or officer of the Authority or any person executing the Note.

Section 7.7 Effective Date. This Note Resolution shall take effect from and after its adoption.

CERTIFICATE

I, ELEANOR PETRUCCI, Secretary of the Buffalo Sewer Authority in the County of Erie, State of New York, HEREBY CERTIFY that the foregoing annexed extract from the Minutes of a meeting of the Board of Directors of said Authority, duly called and held on December 4, 2024, and at which a quorum was present and acting throughout and the resolution contained therein is a true and complete copy of the resolution thereupon adopted and recorded in the Minutes of said Authority and that the foregoing extract has been compared by me with the original minutes as officially recorded in my office in the Minute Book of said Authority and is a true, complete and correct copy thereof and of the whole of said original minutes so far as the same relate to the subject matters referred to in said extract, and that said resolution has not been amended or repealed but is in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said Authority this ____ day of December, 2024.

(SEAL)

_____

Eleanor Petrucci, Secretary