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# NFPWA

## Niagara Falls Public Water Authority

### MEETING NOTICE AND AGENDA

June 8, 2026 at 12:00 p.m.  
Michael C. O’Laughlin Municipal Water Plant  
5815 Buffalo Avenue, Niagara Falls, NY 14304

#### **1. Call to Order**

**Roll Call:** Michael Monaco \_\_\_\_\_ Jason Murgia \_\_\_\_\_

**2. Public Speakers** (All speakers must register with Chairman prior to Roll Call and are limited to 3 minutes per person – total time for all speakers may not exceed one hour).

#### **3. Items for Action from Secretary**

- A. Resolution 2026-01 - Authorizing the Issuance of the Authority's Sewer System Revenue Bonds and Execution of Related Documents
  - a. Summary of Project Costs and Funding - WWTP Capital Projects CWSRF C9-6603-16-00
  - b. Engineering Report for WWTP Capital Improvements Projects CWSRF C9-6603-16-00

#### **4. New Business & Additional Items**

#### **5. Adjournment of Meeting**

NIAGARA FALLS PUBLIC WATER AUTHORITY RESOLUTION 2026-01

RESOLUTION AUTHORIZING THE ISSUANCE OF THE AUTHORITY'S WATER AND SEWER SYSTEM REVENUE NOTES AND BONDS AND THE APPROVAL AND EXECUTION OF RELATED DOCUMENTS

WHEREAS, Title 10-B of the Public Authorities Law of the State of New York, as amended (the "Act") created the Niagara Falls Public Water Authority (the "Authority") with the authority and power to issue its revenue bonds for the purpose of among other things, planning, developing, acquiring, constructing and financing the cost of any facility (as defined in the Act), including the acquisition of facilities of the City of Niagara Falls ("the City") (the "System") by the Niagara Falls Water Board (the "Board") or for any other corporate purpose, including the establishment of reserves to secure the bonds, the payment of principal of, premium, if any, and interest on the bonds and the payment of incidental expenses in connection therewith; and

WHEREAS, the City has sold, transferred and otherwise conveyed the City's title and interest in the System to the Board; and

WHEREAS, the Board has approved various capital improvements to be undertaken to the System and has requested that the Authority finance same; and

WHEREAS, in connection therewith, it is now desired to authorize the issuance of not exceeding \$5,900,000 of bonds, including any notes issued in anticipation thereof (the "Bonds") plus any amounts necessary to fund reserves and to pay costs of issuance, and to approve and authorize the execution of related documents; NOW, THEREFORE,

BE IT RESOLVED by the Niagara Falls Public Water Authority as follows:

Section 1.

The Authority hereby finds and determines:

- (a) By virtue of the Act, the Authority has been vested with all powers necessary and convenient to carry out and effectuate the purposes and provisions of the Act and to exercise all powers granted to it under the Act.
- (b) It is desirable and in the public interest for the Authority to issue and sell the Bonds pursuant to a certain General Revenue Bond Resolution dated as of May 1, 2003 (the "General Resolution"), adopted by the Authority, and pursuant to a Supplemental Resolution(s) (the "Supplemental Resolution") by and between the Authority and Manufacturers and Traders Trust Company, as trustee (the "Trustee") (the Supplemental Resolution, collectively with the General Resolution, the "Resolution") and to use the proceeds of said Bonds to pay for improvements to the System, any required reserves and costs of issuance.

Section 2.

In consequence of the foregoing, the Authority hereby determines to: (i) issue and sell the Bonds pursuant to the Supplemental Resolution and the General Resolution; (ii) use the proceeds of the Bonds as previously described and as provided in the Supplemental Resolution, (iii) enter into each agreement hereafter identified in this resolution; and (iv) execute such other documents and take such other action as may be necessary to effectuate the purposes of this resolution.

Section 3.

The Authority is hereby authorized to issue, execute, sell and deliver the Bonds in the aggregate principal amount, maturing in such years at such amounts, in serial or term form, at the rate of interest and upon such terms as shall be approved by the Chairman or the vice-Chairman and in substantially the form heretofore approved in this resolution, provided that:

- (a) The Bonds are hereby authorized to be issued, executed and delivered and shall be issued, executed and delivered at such time as the Chairman or the Vice-Chairman of the Authority shall determine.
- (b) The Bonds shall be issued solely for the purposes previously described.
- (c) The Bonds and the interest thereon are not and shall never be a debt of the State of New York or any political subdivision thereof other than the Authority, including without limitation the City of Niagara Falls, and neither the State of New York nor any political subdivision thereof other than the Authority, including without limitation the City of Niagara Falls, shall be liable thereon.

Section 4.

The Authority is hereby authorized to enter into a Project Finance Agreement (the "Finance Agreement") with the New York State Environmental Facilities Corporation ("EFC") and such other agreements and documents relating to the Bonds as required by EFC.

Section 5.

The Bonds shall not be issued, executed or delivered until the prior approval of the State Comptroller shall have been obtained as required by the Act.

Section 6.

- (a) The Chairman or the vice-Chairman of the Authority are hereby authorized, on behalf of the Authority, to execute and deliver the Supplemental Resolution, the Bonds, and the Finance Agreement, all as described above (collectively, the "Financing Documents"), and the Secretary of the Authority is hereby authorized to affix the seal of the Authority to the Supplemental Resolution and the Bonds and to attest the same. The execution thereof by the Chairman or the Vice-Chairman shall constitute conclusive evidence of such approval.
- (b) The Chairman or the vice-Chairman of the Authority are further hereby authorized, on behalf of the Authority, to designate any additional Authorized Representatives of the Authority (as used or defined in and pursuant to the Resolution) to execute, on behalf of the Authority, any Financing Documents.

Section 7.

The members, officers, employees and agents of the Authority are hereby authorized and directed for and in the name and on behalf of the Authority to do all acts and things required or provided for by the provisions of the Financing Documents, and to execute and deliver all such additional certificates, instruments and documents, pay all such fees, charges and expenses and to do all such further acts and things as may be necessary or, in the opinion of the member, officer, employee or agent acting, desirable and proper to effect the purposes of this resolution and to cause compliance by the Authority with all of the terms, covenants and provisions

of the Financing Documents.

Section 8.

This resolution shall take effect immediately and the Bonds are hereby ordered to be issued in accordance with this resolution.

At a regular meeting of the Niagara Falls Public Water Authority, held at the Authority's office, 5815 Buffalo Avenue, Niagara Falls, New York 14304, Niagara Falls, New York 14304, at 12:00 o'clock P.M., on the 8th day of June, 2026, the following members of the Authority were:

PRESENT:

ABSENT:

ALSO PRESENT:

After the meeting had been duly called to order, the Chairman announced that among the purposes of the meeting was to consider and take action on certain matters pertaining to the issuance and sale of the Authority's proposed Water and Sewer System Revenue Bonds.

The following resolution was duly moved, seconded, discussed and adopted with the *following members voting in open session:*

AYE

NAY

STATE OF NEW YORK            )  
  ss.:  
COUNTY OF NIAGARA         )

I, the undersigned Secretary of the Niagara Falls Public Water Authority, DO HEREBY CERTIFY:

That I have compared the annexed extract of the minutes of the meeting of the Niagara Falls Public Water Authority, including the resolution contained therein, held on June 8, 2026, with the original thereof on file in my office, and that the same is a true and correct transcript therefrom and of the whole of said original so far as the same relates to the subject matters therein referred to.

I FURTHER CERTIFY that all members of said Authority had due notice of said meeting.

I FURTHER CERTIFY that, pursuant to Section 103 of the Public Officers Law (Open Meetings Law), said meeting was open to the general public.

I FURTHER CERTIFY that, PRIOR to the time of said meeting, I duly caused a public notice of the time and place of said meeting to be given to the following newspapers and/or other news media as follows:

<u>Newspaper and/or other news media</u>	<u>Date given</u>
--	-------------------

I FURTHER CERTIFY that PRIOR to the time of said meeting, I duly caused public notice of the time and place of said meeting to be conspicuously posted in the following designated public location on the following dates:

<u>Designated Location of Posted Notice</u>	<u>Date of posting</u>
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None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Authority on June \_\_\_\_\_, 2026.

(CORPORATE SEAL)

\_\_\_\_\_, Secretary

EXHIBIT C

ESTIMATED PROJECT COSTS

SRF Project No.: C9-6603-16-00  
 Recipient: Niagara Falls Public Water Authority  
 County: Niagara

**ESTIMATED PROJECT COSTS**

Engineering - AECOM USA, Inc., 3/25/24 (Not to Exceed)  
 Engineering Services \$ 400,000.00

Other Costs  
 Miscellaneous (Estimate) 25,000.00

**DISBURSEMENT SUBJECT TO PENDING APPROVAL (\$)**

Construction Costs (Estimate) (Pending Executed Contract, P&S w/approval, Compliance, Title) [1]  
 Sewer System Improvements 3,525,000.00

Engineering - AECOM USA, Inc., 3/25/24 (Not to Exceed) (Pending P&S w/approval, Title)  
 Engineering Services - Construction 156,000.00

Bond Counsel (Estimate) (Pending Executed Agreement) 23,500.00

Other Costs  
 Technical Force Account (Estimate) (Pending Proposal w/approval) 30,843.75  
 Administrative Force Account (Estimate) (Pending Proposal w/approval) 30,843.75

Contingency 1,645,000.50

**TOTAL PROJECT COSTS FUNDED** \$ 5,836,188.00

**2022 WIIA GRANT [2]** \$ 1,350,000.00

**IJA-GS GRANT** \$ 2,350,000.00

**SRF SHORT-TERM INTEREST-FREE HARDSHIP FINANCING** \$ 2,136,188.00

[1] EFC may require other contract-specific documents that may need to be submitted prior to the disbursement of construction funds. Please refer to the EFC plan and specification approval/eligibility letter, once available, or contact the assigned EFC engineer for detailed information. After further review of the submittals, we may require additional information, but will assist you in identifying these items.

[2] Maximum 2022 WIIA Grant not-to-exceed 25% of eligible project costs up to \$1,350,000.

**NIAGARA FALLS WATER BOARD**



**WASTEWATER TREATMENT PLANT  
CAPITAL IMPROVEMENT PROJECTS  
ENGINEERING REPORT AND  
ESTIMATES**

**CWSRF #6603-16-00  
SPDES #NY0026336**

**SEPTEMBER 2022  
AMENDED AUGUST 2025**



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## I. General

The Niagara Falls Water Board (NFWB), is a public benefit corporation created in 2002 by a special act of the New York State Legislature and is not a facet or function of the municipal government of the City of Niagara Falls, NY. It does, however, presently own and operate the potable water and wastewater treatment systems and the storm water conveyance facilities within the corporate boundary of the City of Niagara Falls, New York, and has done so since September 25th, 2003. The Niagara Falls Public Water Authority oversees the bonding and financing of the NFWB's assets and has annual operating revenue of approximately \$30 Million (USD).

The NFWB continuously plans for improvements to the water system and treatment plant for which a Capital Improvement Plan (Appendix C) has been created and frequently updated. Several projects noted on this Plan have been selected to be implemented. These projects have been identified as having the potential for the greatest positive impact on daily operations and system reliability. This is anticipated to be achieved via the elimination of aging/failing piping and its replacement with hydraulically sound and structurally stable materials. Ancillary benefits to be achieved include: decreased overtime/emergency repair crew costs, elimination of ancillary pavement, margin and related right-of-way restoration costs, and the reduction in loss of service/private property damage claims. Improvements are needed for the treatment plant to provide control, security, chemical storage, chemical injections, and backup power to permit safe and continued supply of drinking water to the City of Niagara Falls.

As always, it is the Niagara Falls Water Board's intent through these projects to provide a safe and reliable potable water, fire protection, and to provide continuous year-round water service to the residential, commercial (including tourism industry) and industrial users of the City of Niagara Falls, New York.

**In 2017, an accidental discharge of sediment basin material was made into the Lower Niagara River that caused discolored water. As this event impacted tourism activities, significant attention was received from the City of Niagara Falls and New York State. To address this, the NYS DEC became involved in ensuring improvements were made to the plant and operation practices through Consent Order R9-20170906-129. In 2018, to assist with these improvements, New York State offered a grant from the Dormitory Authority of New York State (DASNY ID #15688) and a loan from the Environmental Facilities Corporation (EFC ID #C9-6603-12-00). As this funding totals \$27 million**

**dollars, these improvements are referred as to the “2018 \$27 million dollar sewer plant improvements”. Please note that these improvements are for only certain portions of the treatment plant. Additional improvements are required to maintain a functional treatment plant. This report details these additional improvements for which further financing is being sought from the EFC under the Clean Water State Revolving Fund (CWSRF). The NFWB is committed to maintaining its wastewater treatment plant and seeks to continue improving the facility.**

A brief description of the objectives for each proposed improvement is as follows. Each of the project are scheduled to be under design through summer of 2026, and begin construction in multiple phases through the end of 2027:

WWTP – 1.3: Sediment Bason #5 Treatment of Backwash - \$1,000,000

The objective of this project is to install a new treatment system for carbon bed backwash water produced by Sedimentation Basin #5, and analysis of sludge removal as the sludge produced by this tank differs from Basin #1-4. The project will include pilot testing, demolition of existing structures and installation of new treatment equipment to determine the most effective and efficient means of backwash treatment and sludge removal for this tank.

WWTP - 3.2: Grit Pump Flow Meters - \$300,000

The objective of this project is to design a new flow metering system to measure the flow of grit at the NFWB. At present, there are pressure gauges on the grit pump discharge piping, but most of the pressure gauges are inoperable. This project will review and design flow metering systems to measure the flow of grit and water exiting the tanks exclusive of any flush water subsequently added to maintain the grit in suspension. The number of flow meters needed and potential to modify the sedimentation basin sludge/grit piping system to reduce the number meters will be considered.

WWTP – 3.3: Rapid Mix Tank Cleaning- \$400,000

The objective of this project is to replace one of the two high pressure flush water lines that was found to be nonfunctional during cleaning and inspection of the tanks performed by

facility staff. In addition, the existing top mounted mixers and grit removal equipment is in need of repair or replacement which will be performed as part of this project.

WWTP – 5.5: New Public Announcement and Fire Alarm Systems - \$300,000

The objective of this project is to install a new PA system to replace the existing system that no longer works, and to install a Fire Alarm system to the facility.

WWTP – 5.6: Carbon Area Lighting, Switchyard Improvements - \$500,000

The objective of this project is to improve the existing lighting system in the carbon area, as well as address existing electrical deficiencies at the switchyard to ensure the WWTP is fully operational at all times.

WWTP - 6.2: Carbon Bed Effluent Cleaning & Inspection - \$500,000

The objective of this project is to design the requirements needed for a Contractor to clean and inspect the Carbon Bed Effluent (CBE) Wet Wells at the NFWB WWTP. AECOM will work with the NFWB operations and maintenance staff to develop CBE wet well isolation sequencing to minimize impact to the upstream and downstream treatment process. Contractor inspection and reporting requirements will be specified and shown using record drawings.

WWTP - 6.3: Carbon Filter Mud Valve Replacements - \$700,000

The objective of this project is to design the replacement of 28 mud/gate valves in the Carbon Filter system at the NFWB WWTP. This project will include the development of plans and specifications of the removal and replacement of the twenty-eight (28) manually operated, 6-inch valves that are used to drain the filter through the underdrain system.

WWTP - 11.6: Removal and Replacement of Plant Water Piping - \$1,000,000

The objective of this project is to design an improved Plant Water Piping system that delivers plant water to the Sludge Building at the WWTP. The project will include a hydraulic evaluation of the existing and proposed process water piping that serve the following process:

- Belt filter presses (3 existing) and potential for one additional future press
- Existing polymer makeup system
- Polymer motive water system
- Thickened sludge pump seal water system
- Wash down water hose bibs within the belt press room

The design of system upgrades will include multiple booster pumps capable of supplying a range of flows at varying pressure requirements, upsizing process water piping, pressure regulating systems, pressure gauges, and controls. This system upgrade is assumed to include:

- Two booster pump skid mounted package units.
- Approximately 300-feet of 6-inch or larger pipe to be replaced.
- Three pressure reducing zones.
- New control cabinet to automatically operate and control the booster pumping systems. This is expected to include a stand-alone control panel that will allow for local (i.e., hand) operation, but also interconnects to the SCADA system and allow for remote (i.e., automatic) operation. SCADA startup and operation sequence for the booster pumps and pressure regulating systems/gauges for implementation by others (i.e., existing contracted WWTP integrator or contracted with general or electrical contractor for this project).

## II. Project Planning Areas

### A. Location(s)

There are eight (8) separate wastewater treatment improvement projects, located at the treatment plant in City of Niagara Falls, New York:

1. WWTP-1.3 Sediment Basin #5 Treatment of Backwash
2. WWTP-3.2 Grit Pump Flow Meters
3. WWTP-3.3 Rapid Mix Tank Cleaning
4. WWTP-5.5 New Public Announcement and Fire Alarm Systems
5. WWTP-5.6 Carbon Area Lighting, Switchyard Improvements
6. WWTP-6.2 Carbon Bed Effluent Cleaning & Inspection
7. WWTP-6.3 Carbon Filter Mud Valve Replacements
8. WWTP-11.6 Removal and Replacement of Plant Water Piping

Please note that Appendix A consists of an annotated City-Wide Site Map locating the wastewater treatment plant. Appendix B notes location of improvements at the wastewater treatment plant.

### B. Joint Venture

The water distribution system and treatment plant lies exclusively within the City of Niagara Falls' right-of-way. For that reason, as well as to insure the most efficient use of resources within both entities for the residents they jointly serve, the Niagara Falls Water Board enters into all of its distribution projects with the municipality of Niagara Falls as eager and willing partners although the City generally is not a party to engineering or construction contracts and does not exercise control over NFWB work. Accommodations with respect to traffic control and detouring, emergency service response, refuse disposal/recycling during construction are all examples of the unique relationship the NFWB and the City of Niagara Falls shares. The NFWB and City are parties to various agreements with respect to the acquisition, financing, and operation (including pilot equipment and certain services) of the NFWB system.

### C. Environmental Resources Present

The proposed improvements are located within boundaries of the existing wastewater treatment plant. Work will be performed in areas of previous disturbance such as under lawn areas, parking lots and to existing buildings and equipment. There are no anticipated sources of chemical, petroleum-based, or radioactive contaminants within the project areas as they are presently defined, and no known wetland or historic preservation issues are expected.

The Adams Power Plant Transformer House is located adjacent to the east. This facility is designated as a National Resource (90NR01966). No impacts will occur to this adjacent facility as improvements are located away from the plant boundaries that border this facility.

#### D. Environmental Justice Areas

Per New York State GIS website “DEC info Locator”, a majority of the City of Niagara Falls has areas of “Potential Environmental Justice Areas”. The proposed improvements are located within these Environmental Justice areas as shown in Appendix H.

#### E. Growth Areas and Population Trends

According to the United States Census, the City of Niagara Falls, NY had a population of 50,193 in 2010 and 48,027 in 2020 per US Census estimates. This number reflects a population decrease of approximately 4.5%. This percentage reflects a slight slowing of the shrinkage rate the City has been experiencing for decades. Appendix I outlines the area of disadvantaged communities around the project site.

### III. Existing Facilities

#### A. Location Map

The projects are located at the existing wastewater treatment plant within the corporate boundary of the City of Niagara Falls, Niagara County, New York, as shown in Appendix A and Appendix B. This area is located within the 500-year flood plain, and a FEMA map of the area can be found in Appendix J.

#### B. Existing Wastewater Treatment Plant

The wastewater treatment plant was constructed in the mid 1970’s and placed into operation in April 1977. The plant utilizes a physical-chemical process to treat municipal and industrial wastewaters. This type of process was selected to treat an anticipated large amount of organic and inorganic chemicals from industrial users within the City. The plant consists of four (4) 250 hp main influent pumps, four (4) 250 hp intermediate pumps, mechanical bar screens, ferric chloride chemical feed systems, five (5) sedimentation basins, acid mix tanks, twenty-eight (28) activated carbon filters, hydrogen peroxide & sodium hypochlorite chemical feed systems, grit separators, three (3) sludge belt presses ,and a final chlorination tank. Sewer influent is directed to the plant through three large sewers: (1) the 72-inch diameter

Southside Interceptor; (2) the 36-inch Gorge Pump Station force main; and (3) a 30-inch diameter gravity sewer main.

The plant currently operates under SPDES permit (NY0026336) from the NYS DEC, last issued in 2018 (Appendix K). The plant is permitted to treat 48 million gallons of water per day with a peak flow of 85 million gallons per day. Once treated, wastewater is discharged into Lower Niagara River in close proximity to the American Falls.

C. Districts

In the City of Niagara Falls, NY in general, and the proposed project location herein specified, the Niagara Falls Water Board is solely responsible for providing sewer service.

D. Treatment Capacity

The treatment plant is currently permitted to receive and process following amounts of sewer flow:

Average Day	<b><u>48.0M</u></b> g.p.d.
Peak Hourly Rate	<b><u>85.0M</u></b> g.p.d.

## IV. Need for Project

A. Wastewater Treatment Plant

The wastewater treatment plant was constructed in the mid 1970's with various improvements over the years. Improvements are continuously needed as equipment is utilized 24 hours a day and are situated in a corrosive environment. Having plant facilities in full operating condition is paramount to properly treating sewage flows before discharge into the Lower Niagara River, which is within close proximity to the American Falls. The NFWB has identified several improvements from their Capital Improvement Plan (Appendix C). Below is a detailed description of these improvements.

1. Sed. Basin #5 Treatment of Backwash

A treatment system for the sedimentation basin no.5 carbon bed backwash water and for sludge removal needs to be investigated and installed. As this sludge differs from basins 1 through 4, a review of sludge from basin 5 and the configuration of basin is necessary. Next, pilot testing can occur to determine optimal method of removing sludge and conveying it to the gravity thickeners.

Then, demolition of existing structure and equipment can occur to allow for installation of new equipment and structure modifications. Last, performance and calibration testing can be undertaken to ensure proper sludge removal and conveyance. Each of the five basins is critical to function of the plant, particularly during storm events where all basins are used for temporary storage to allow for full treatment after storm events.

2. Grit Pump Flow Meters

The plant needs to have the ability to monitor the amount of wastewater flow from the grit pumps to the cyclones. The grit lines have a tendency to plug. New flow meters will be installed on each of the seven (7) grit pumps. This will allow operating conditions on each pump to be monitored and recorded to improve plant performance. These pumps are important to daily operation of avoiding grit backup within system and not resulting in unfavorable conditions that led to the 2017 discharge incident.

3. Rapid Mix Tank Cleaning

The debris in the bottom of the two rapid mix tanks need to be cleaned out in order to restore the volume and create an optimal condition for the raw water influent flow. Each tank would be taken offline for removal of accumulated debris and inspected for any needed repairs. If repairs are needed, they would be made as necessary so that the mix tank can be brought back online. Functional mixing tanks are critical to plant operation by allowing proper mixing of chemicals and coagulants needed for the downstream treatment and filtering processes.

*Update June 2025:*

*To date, operation and maintenance staff have performed cleaning and inspection of the rapid mix tanks. During cleaning and inspection activities for the rapid mix tank, it was identified that one of the two high-pressure flush water lines that are intended to prevent plugging was non-functional, along with mechanical issues of the top mounted mixers which require repair and/or replacement. These issues along with reduced grit removal ability constituted a capital project.*

4. New PA and Fire Alarm System

The current plant public announcement system is nonfunctional and there is no fire alarm system. The existing public announcement system will be removed and new, up to date system installed. A new fire alarm system will be installed per current building codes. Both systems are critical to a functional plant as well as safety for employees.

5. Carbon Area Lighting, Switchyard Improvements

The carbon area lighting needs to be improved for operations and maintenance staff to identify and repair critical equipment. The switchyard for the incoming power to the WWTP has numerous deficiencies that need to be corrected in order to keep the plant fully operational at all times.

6. Carbon Bed Effluent Cleaning & Inspection

The carbon bed effluent lines need to be cleaned and inspected. Settled solids need to be removed from the channels, which will free up volume and allow for better flow and treatment of the effluent. This would significantly improve plant performance as there are twenty carbons beds which are the main treatment and filtering process for the plant.

Due to the carbon bed effluent being located downstream of the carbon beds, there is concern with accumulation of carbon and solids along with the potential for H<sub>2</sub>S presence in the head space of the wet well, which would lead to degradation of the concrete over time. It is expected that concrete repairs may be needed, and following cleaning and inspection of the spaces a report amendment will be provided that includes the results of the investigation and proposed improvements. Furthermore, this space has not been inspected since installation in the 1970s.

7. Carbon Filter Mud Valve Replacements

The carbon bed filter mud valves need to be replaced as they are deficient, not operational, and critical to the treatment process. The existing valves will be removed and replaced with new valves.

8. Removal and Replacement of Plant Water Piping

Current operating pressures within the plant water piping are insufficient for optimal process usage. Refer to Appendix L for the pressure testing study performed in 2023. This study verified that pressure requirements for critical

equipment such as the belt filter presses were insufficient, as proper functionality requires 110 psi to be provided, while the plant water piping was only able to provide 90 psi at the lowest demand, while at the highest demand pressure dropped to single-digits.

## V. Alternatives Considered

### A. Description

#### 1. Existing System — "Null Alternative"

Estimated Capital Cost: \$0

This alternative proposes to "do nothing". The sewer treatment plant would continue to be operated as is. The plant performance will degrade from equipment failure and result in treatment non-compliance and harmful discharges of sewage effluent into the Lower Niagara River.

#### 2. Alternative 1— Wastewater Treatment Plant Improvements

These facilities are aged with system components between 20 and 40 years old. Continued maintenance, repairs and replacement of these items is required to provide safe and uninterrupted sewer service to the City of Niagara Falls. The NFWB maintains a Capital Improvement Plan (Appendix C) that identifies improvements necessary to allow for providing this safe and reliable water. Below are items from this Capital Plan that have been selected by the NFWB for improvements. Refer to Appendix D for Engineer's Cost Estimate.

Estimated Capital Cost: \$4,700,000

#### Wastewater Treatment Plant Estimate Capital Costs

a) WWTP-1.3 Sediment Basin #5 Treatment of Backwash	\$1,000,000
b) WWTP-3.2 Grit Pump Flow Meters	\$300,000
c) WWTP-3.3 Rapid Mix Tank Cleaning	\$400,000
d) WWTP-5.5 New PA and Fire Alarm System	\$300,000
e) WWTP-5.6 Carbon Area Lighting, Switchyard Improvements	\$500,000
f) WWTP-6.2 Carbon Bed Effluent Cleaning & Inspection	\$500,000
g) WWTP-6.3 Carbon Filter Mud Valve Replacements	\$700,000
h) WWTP-11.6 Removal and Replacement of Plant Water Piping	\$1,000,000

## B. Design Criteria

The proposed water distribution system improvements system will be designed in accordance with the following reference standards:

- Any/all applicable AWWA Standard Requirements governing the Installation of Piping and Valves
- The Recommended Standards for Wastewater Facilities (Ten-State Standards, 2014)
- TR-16 Guides for The Design of Wastewater Treatment Works.
- NYS Department of Environmental Conservation
- NYS Building Code
- Electrical Standards

## C. Map

The existing wastewater treatment plant location within City of Niagara Falls is depicted in Appendix A. Proposed wastewater treatment plant improvements are also shown on the annotated facility plan included in Appendix B.

## D. Environmental Impacts

There are no anticipated negative environmental impacts associated with the project. A SEQR review was performed by the NFWB along with SHPO consultation. A Type 2 SEQR action was processed as proposed work in maintenance to existing facilities and no environmental or historic impacts were found. All construction will be done within existing plant boundaries and proper construction mitigation and restoration efforts will be implemented as dictated by the above-referenced construction standards.

## E. Advantages/Disadvantages

Although there are significant costs associated with Alternative 1, it is the only viable alternative that addresses known or foreseeable deficiencies of the existing wastewater plant more effectively than the "Null Alternative". The advantages of Alternative 1 are as follows:

1. Avoid costly future breakdowns by performing improvements now such as sediment basin #5 treatment of backwash, installation of grit pump flow meters, rapid mix tank cleaning, new public announcement and fire alarm systems, carbon area lighting, switchyard improvements, carbon bed effluent cleaning & inspection, carbon filter mud valve replacements, and removal and replacement of plant water piping along with booster pump
2. Reduce plant staff maintenance costs while improving worker safety.

3. Reduce operating costs at treatment plant and emergency repairs at plant.
4. Allow treatment plant to continue treating wastewater under emergency conditions.
5. Help to avoid unwanted discharges of sewage effluent into the Lower Niagara River.

## VI. Recommended Alternative

The recommended alternative is Alternative 1— Wastewater Treatment Plant Improvements

### A. Proposed Project Costs

Engineer's estimates for the Scoping/Preliminary Design portion of these proposed distribution system improvements are listed in Appendix D of this report.

They are based upon preliminary review of the plant facilities, NFWB Capital Improvement Plan, working with various equipment suppliers, and experience of prior projects that are similar in nature. Also, prices are to include the NFWB self-enforced MWBE requirements and NYS DOL prevailing wage rates.

[NOTE: These estimates are reflective of budgeted capital improvement project as a portion of a standard five year plan and as such, offer no calculations for borrowing or bonding costs.]

### B. Proposed Project Schedule

Month	2025					2026					2027																
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
<b>Task 1 – Project Initiation &amp; EFC Reporting</b>																											
Project Kickoff Meeting & Site Visit																											
EFC Reporting																											
<b>Task 2 – Detailed Design &amp; Contract Documents</b>																											
30% Design																											
75% Design																											
Issued for Construction Design																											
<b>Task 3 – Bid Assistance</b>																											
Coordination and Plan Room Setup																											
Contractor Outreach & Prebid Meeting																											
Bid Review and Recommendation																											
<b>Task 4 – Construction Admin.</b>																											
<b>Task 5 – Construction Inspection</b>																											

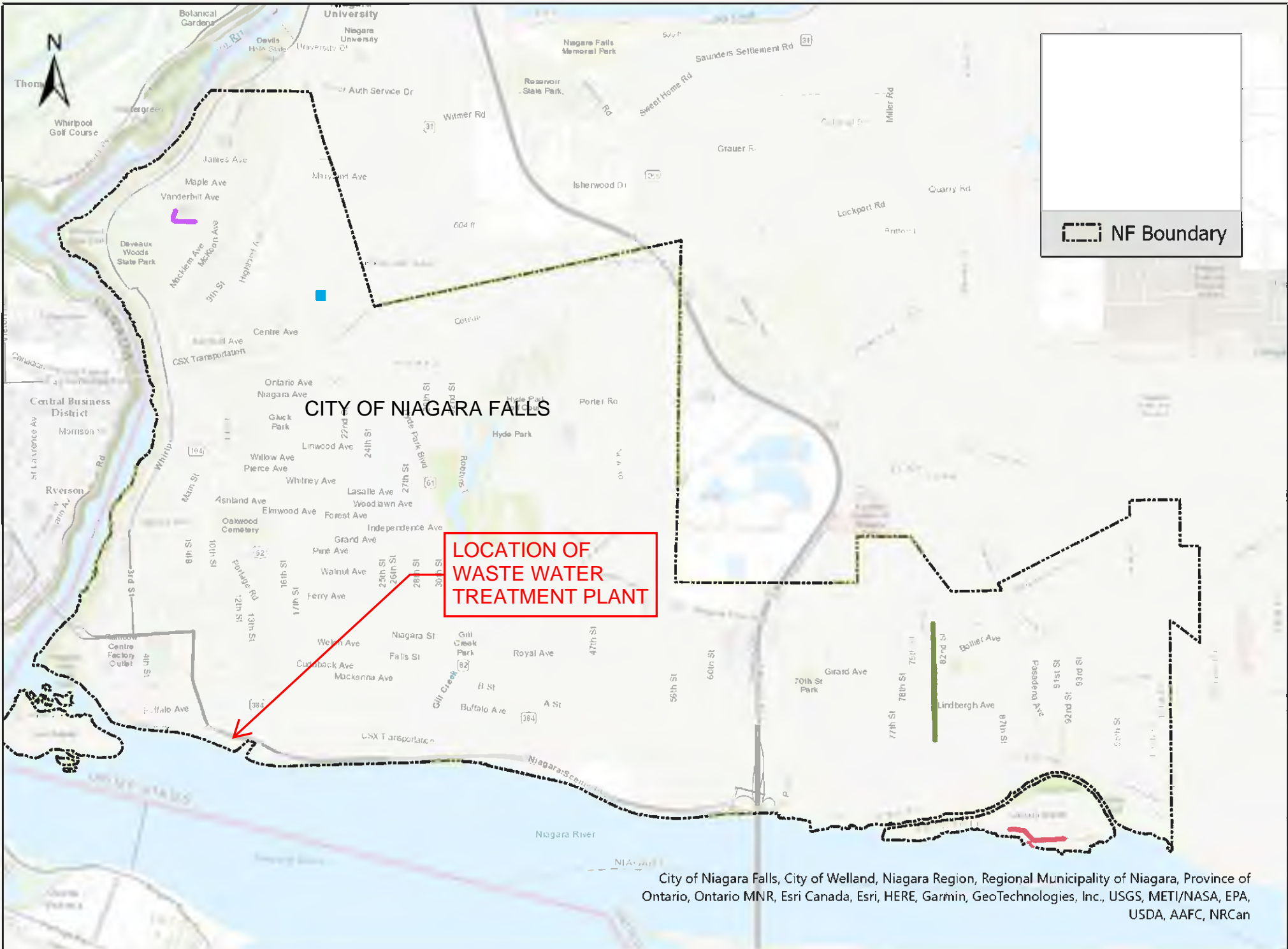
## VII. Conclusions

The Niagara Falls Water Board is committed to providing safe, reliable, sewage service to its residents and also properly treated effluent which is discharged into the Lower Niagara River. These specific capital improvement projects will be instrumental in meeting these goals. It is recommended that the Niagara Falls Public

Water Authority, through the actions of its Board and the commissioning/submission of this report, seek funding for completion of the aforementioned projects.

**Appendix A**

**ANNOTATED NFWB SYSTEM MAP**

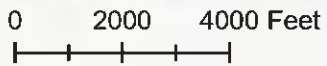


CITY OF NIAGARA FALLS

LOCATION OF WASTE WATER TREATMENT PLANT

Legend: NF Boundary

City of Niagara Falls, City of Welland, Niagara Region, Regional Municipality of Niagara, Province of Ontario, Ontario MNR, Esri Canada, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA, AAFC, NRCan



DISCLAIMER:  
 FOR INFORMATION ONLY  
 ACCURACY OF THIS PLAN  
 SHALL BE CHECKED IN FIELD



**Appendix B**

**WASTEWATER TREATMENT PLANT SITE PLAN**

PROJECTS THROUGHOUT WWTP

WWTP 5.5  
NEW PA & FIRE  
ALARM SYSTEM

WWTP 11.6  
PLANT WATER PIPING

WWTP 3.2  
GRIT PUMP  
FLOW METERS

WWTP 1.2  
INFLUENT CHANNEL  
LEAK REPAIR

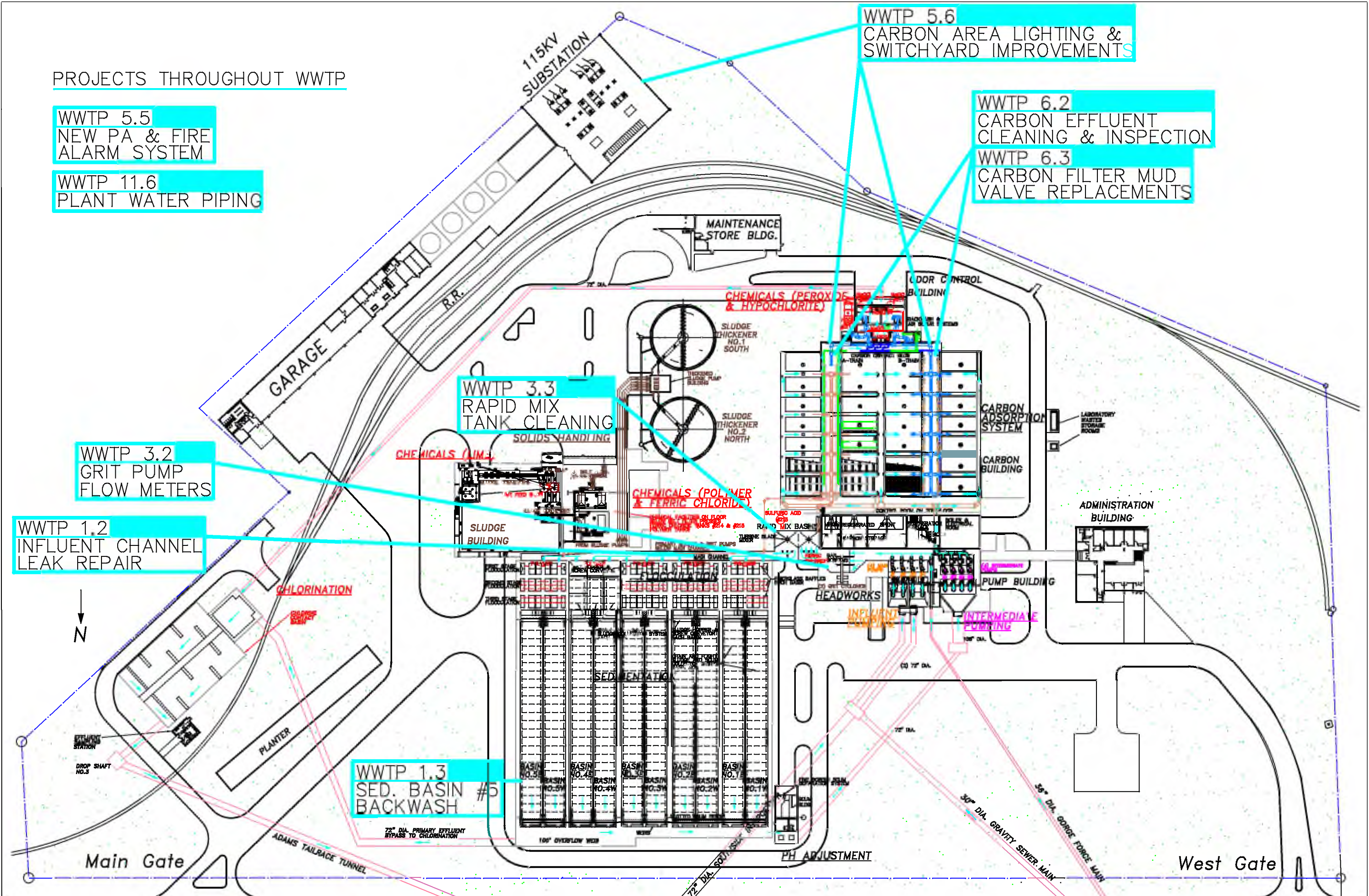
WWTP 3.3  
RAPID MIX  
TANK CLEANING

WWTP 1.3  
SED. BASIN #5  
BACKWASH

WWTP 5.6  
CARBON AREA LIGHTING &  
SWITCHYARD IMPROVEMENTS

WWTP 6.2  
CARBON EFFLUENT  
CLEANING & INSPECTION

WWTP 6.3  
CARBON FILTER MUD  
VALVE REPLACEMENTS



<b>LEGEND</b>	← WASTEWATER FLOW	← BACKWASH DRAIN FLOW	← SLUDGE FLOW	● MAIN SEWAGE PUMPS	<b>BUFFALO AVENUE</b>
— EXTERIOR PIPE	— BACKWASH AIR PIPE	■ SLUDGE FEED PUMPS	● INTERMEDIATE SEWAGE PUMPS	Designed by: WWTP Controls	NIAGARA FALLS WWTP SCHEMATIC 2022 WIA GRANT APPLICATION WASTEWATER TREATMENT PLANT
← BACKWASH SUPPLY FLOW	● BACKWASH AIR BLOWERS	— PLANT WATER PIPE	● CHEMICAL TANKS	NFPWA June 8, 2026 Agenda Packet Page 28 NIAGARA FALLS WATER BOARD	
● BACKWASH PUMPS	● PLANT WATER PUMPS				1

**Appendix C**

**NFWB 2022 CAPITAL IMPROVEMENT PLAN**



ITEM	NO.	CAT.	PROJECT NAME	PROJECT DESCRIPTION	RATING	COST ESTIMATE	GRANT FUNDING			
							WWTP PHASE I	WWTP PHASE II	2021 WIIA	2022 WIIA
WASTEWATER TREATMENT PLANT INFRASTRUCTURE PROJECTS - WWTP										
WWTP	1	G E ENG	Project No.1 - SEDIMENTATION BASINS AND SCUM COLLECTION SYSTEM MODIFICATION (WWTP Rehab Phase 4A)	Conversion of (4) sedimentation basins to chain and flight and rehabilitation work, scum building upgrades	HIGH	\$9,180,110	\$9,180,110			
WWTP	1.2	G	Project No.1 - Phase 2	Influent channel leak repair of expansion joints	LOW	\$700,000				\$700,000
WWTP	1.3	M	Project No.1 - Phase 3	Sed. Basin #5 treatment of backwash water	MEDIUM	\$1,000,000				\$1,000,000
WWTP	2	G E H ENG	Project No.2 - GORGE PUMP STATION REHABILITATION (WWTP Rehab Phase 4B)	Three (3) new 600 hp pumps with new motors and drives, heating and ventilation improvements	HIGH	\$4,469,730	\$4,469,730			
WWTP	3	G E ENG	Project No.3 - SCREENINGS AND GRIT TRANSPORT EQUIPMENT IMPROVEMENTS, POLYMER EQUIPMENT UPGRADES, AND DEWATERING EQUIPMENT CONTROL UPGRADES (WWTP Rehab Phase 4C)	New screenings belt conveyor, grit screw conveyor, sedimentation basin no. 5 polymer feed pump and variable frequency drive, and dry polymer mixing systems	HIGH	\$1,982,115	\$1,982,115			
WWTP	3.3	G	Project No.3 - Phase 2	Belt filter press repair	HIGH	\$210,000		\$210,000		
WWTP	3.3	G	Project No.3 - Phase 3	Additional belt filter press and conveyor	HIGH	\$2,000,000		\$2,000,000		
WWTP	3.2	M	Project No.3 - Phase 4	Grit pump flow meters	MEDIUM	\$300,000				\$300,000
WWTP	3.3	G	Project No.3 - Phase 5	Rapid Mix Tank Cleaning	MEDIUM	\$400,000				\$400,000
WWTP	4	G ENG	Project No.4 - GRANULAR ACTIVATED CARBON AND CARBON SUPPORT GRAVEL REPLACEMENT (WWTP Rehab Phase 4D)	Replacement of carbon from within approximately 30 percent to 40 percent of the carbon filters, Support gravel within five filters (Filter Nos. 3, 4, 12, 13, and 26)	HIGH	\$1,717,668	\$1,717,668			
WWTP	5	E ENG	Project No.5 - ELECTRICAL SYSTEMS IMPROVEMENTS (WWTP Rehab Phase 4E)	Electrical assessment of high voltage system, power centers and transformers and replacement of defective electrical systems	HIGH	\$366,435	\$366,435			
WWTP	5.1	E	Project No.5 - Electrical Systems Improvements (Phase 1)	Repairs to (20) defective 480 volt circuit breakers, Installation of (3) 15,000 volt vacuum breakers for the main substation	HIGH	\$55,200	\$55,200			
WWTP	5.1	E ENG	Project No.5 - Electrical Systems Improvements (Phase 1)	Replacement of stone and grounding grid at electrical substation, Retrofit of the spare 480 volt breakers draw-out circuit breakers with a new electronic trip unit	HIGH	\$146,562	\$146,562			
WWTP	5.2	E ENG	Project No.5 - Electrical Systems Improvements (Phase 2)	Power center #2 and #5 transformer replacement	HIGH	\$2,064,555	\$2,064,555			
WWTP	5.4	E	Project No.5 - Electrical Systems Improvements (Phase 3)	Power center #4 and #1B transformer replacement	HIGH	\$2,000,000		\$2,000,000		
WWTP	5.5	E	Project No.5 - Electrical Systems Improvements (Phase 4)	New PA and fire alarm system	LOW	\$300,000				\$300,000
WWTP	5.6	E	Project No.5 - Electrical Systems Improvements (Phase 5)	Carbon area lighting, switchyard improvements	MEDIUM	\$500,000				\$500,000
WWTP	6	G ENG	Project No.6 - EFFLUENT DISINFECTION (WWTP Rehab Phase 4F)	New sodium hypochlorite feedline from the Odor Control Building to the chlorine contact tank, new sodium hypochlorite feed pumps and control panel	COMPLETED	\$2,064,233	\$2,064,233			
WWTP	6.2	G	Project No.6 - Effluent Disinfection (Phase 2)	Carbon bed effluent cleaning & inspection	MEDIUM	\$500,000				\$500,000
WWTP	6.3	G	Project No.6 - Effluent Disinfection (Phase 3)	Carbon filter mud valve replacements	MEDIUM	\$700,000				\$700,000
WWTP	7	H E ENG	Project No.7 - HVAC IMPROVEMENTS (WWTP Rehab Phase 4G)	Sludge building, belt filter press area, carbon storage area, main pump building and wet well, headworks area heating and ventilation improvements	HIGH	\$1,099,683	\$1,099,683			
WWTP	7.2	H	Project No.7 - HVAC Improvements (Phase 2)	New BFP, control room and odor control building HVAC units	MEDIUM	\$1,000,000	\$1,000,000			
WWTP	8	M ENG	Project No.8 - Backwash Blower & Piping (WWTP Rehab Phase 4H)	Removal and replacement of the existing blower with a new blower and ancillary equipment	COMPLETED	\$90,118	\$90,118			
WWTP	8.2	M	Project No.8 - Backwash Pump, Motor, VFD & Controls (Phase 2)	New backwash pump, motor, VFD & controls	HIGH	\$1,500,000	\$1,500,000			
WWTP	9	M ENG	Project No.9 - INTERIOR PIPING IMPROVEMENTS (WWTP Rehab Phase 4I)	Replacement of existing plant water line, including the installation, temporary waterline bypass system, and waterline connections	COMPLETED	\$602,630	\$602,630			
WWTP	10	E	Project No.10 - SCADA IMPROVEMENTS (WWTP Rehab Phase 4J)	Improvements to the existing SCADA system for the new WWTP equipment	HIGH	\$498,650	\$498,650			



ITEM	NO.	CAT.	PROJECT NAME	PROJECT DESCRIPTION	RATING	COST ESTIMATE	GRANT FUNDING			
							WWTP PHASE I	WWTP PHASE II	2021 WIIA	2022 WIIA
WWTP	11		<b>WWTP PHASE II GRANT PROJECTS</b>							
WWTP	11.2	G	Project No.2 (WWTP Phase II Grant) - Relocate Outfall 003 from the Falls Street Tunnel to the Gorge Pump Station	Falls Street Tunnel CSO closure that included replacement of weir structures within the Gorge Pump Station overflow channels	COMPLETED	\$599,400		\$599,400		
WWTP	11.3	G ENG	Project No.11 (WWTP Phase II Grant) - Exterior Piping Improvements (Upgrades to the Sewer Line from Sedimentation Basin No.5)	Installation of a new drain pipe and manholes for sedimentation basin no. 5, new casing pipe and poly tubing for hypo. transport to the scum building	MEDIUM	\$184,890		\$184,890		
WWTP	11.4	G ENG	Project No.11 (WWTP Phase II Grant) - Exterior Piping Improvements (Replacement of Sludge and Hypochlorite Pipelines)	Removal of a portion of existing sludge lines and the installation of new sludge lines from the Sludge Building to the Thickened Sludge Pump Building (TSPB)	MEDIUM	\$510,765		\$510,765		
WWTP	11.5	G ENG	Project No.12 (WWTP Phase II Grant) - WWTP Intermediate Pump Upgrades	Assessment and replacement of (4) intermediate pumps and check valves	HIGH	\$3,075,000		\$3,075,000		
WWTP	11.6	G	Project No. (WWTP Phase II Grant) - Plant Water System Upgrades	Removal and replacement of plant water piping	MEDIUM	\$1,000,000				\$1,000,000
WWTP	11.7	G	Project No. (WWTP Phase II Grant) - Interior and Exterior City Water System Upgrades	Removal and replacement of interior and exterior city water piping	HIGH	\$2,000,000		\$2,000,000		
WWTP	12		<b>WWTP ROOF REPAIRS</b>	Replace & repair large sections of the WWTP roofs	LOW	\$2,000,000			\$2,000,000	
WWTP	12.1	G	WWTP Roof Repairs (Phase 1) - Carbon Area Roof	Replacement of carbon area roof	LOW	\$2,200,000				
WWTP	13		<b>WWTP CHEMICAL BULK STORAGE</b>	Replacement of sodium hypochlorite tank no.216 and (2) ferric chloride tanks	HIGH	\$150,000			\$150,000	
WWTP	13.1	M	WWTP Chemical Bulk Storage (Phase 1)	Replacement of (2) ferric chloride tanks	HIGH	\$750,000				
WWTP	13.2	M	WWTP Chemical Bulk Storage (Phase 2)	Tank #216 secondary containment lining	HIGH	\$40,000				
WWTP	13.3	M	WWTP Chemical Bulk Storage (Phase 3)	Tank #216 replacement	HIGH	\$300,000				
WWTP	14		<b>WWTP STRUCTURAL /MASONRY REPAIRS</b>	Repair aging and failing structural components	MEDIUM	\$850,000			\$850,000	
WWTP	14.1	G	WWTP Masonry Repairs (Phase 1) - Misc. repairs, replace brick soldier course	Necessary masonry repairs to buildings	MEDIUM	\$850,000				
WWTP	14.2	NFWB	WWTP Structural Demolition - Old Lime Feed System	Removal of old lime feed system in Sludge Bldg.	LOW	\$100,000				
WWTP	14.3	G	WWTP Structural Demolition - Chemical Building	Removal old equipment in chemical bldg.	LOW	\$100,000				
WWTP	14.4	G	WWTP Structural Demolition - Sulfuric Acid Tank and Piping	Removal of abandoned sulfuric acid tank and piping	LOW	\$300,000				
WWTP	14.5	G	WWTP Structural Demolition - Carbon Furnace Area	Removal of unused carbon furnace equipment	LOW	\$4,000,000				
WWTP	16		<b>WWTP BUILDING AND SITE PROJECTS</b>	Necessary repairs and improvements to building and site	LOW TO MEDIUM	\$1,500,000				
WWTP	16.1	E	Standby Generator	Standby generator system capable of temp. power to complete WWTP	LOW	\$1,500,000			\$1,500,000	
WWTP	16.2	G	Plant Road Repaving	Necessary repaving of WWTP roads	MEDIUM	\$600,000				
WWTP	17	NFWB	<b>WWTP INFRASTRUCTURE PROJECTS - MISCELLANEOUS</b>	As needed	HIGH	\$200,000				
<b>PROJECT GRANT FUNDING LEGEND</b>				<b>CATEGORIES</b>	<b>CURRENT GRANT PROJECT TOTALS</b>					
WWTP PHASE I GRANT PROJECTS - SAM Grant #15688 (total grant amount = \$13,500,000)				NFWB - Niagara Falls Water Board	\$24,337,689	\$4,370,055	\$4,500,000	\$5,400,000		
WWTP PHASE II GRANT PROJECTS - SAM Grant #By Project (total grant amount = \$6,500,000)				ENG - Engineering and Bidding	<b>OVERALL GRANTS PROJECT BUDGET</b>					
2021 NYS EFC WIIA Grant Projects - Wastewater Treatment Plant Grant Application Approved				G - General Construction	\$27,000,000	\$13,000,000				
				M - Mechanical Construction	<b>ADDITIONAL PROJECTS ADDED</b>					
				E - Electrical Construction	\$2,500,000	\$6,210,000				
				H - HVAC Construction	<b>TOTAL PROJECT BUDGET</b>					
					\$26,837,689	\$10,580,055				
					<b>REMAINING PROJECT BUDGET</b>					
					\$162,311	\$2,419,945				

Project or work is ongoing  
 TBD - To Be Determined  
 Project or work has been completed

**Appendix D**

**ENGINEERS ESTIMATES**

<b>Item WWTP-1.3 Sediment Basin #5 Treatment of Backwash</b>				
QUANTITY	UNITS	DESCRIPTION	UNIT COST	TOTAL COST
1	LS	Review basin configuration	\$20,000.00	\$20,000.00
1	LS	Pilot test of sludge removal	\$50,000.00	\$50,000.00
1	LS	Demolish equipment and structures	\$100,000.00	\$100,000.00
1	LS	Install new equipment and structures	\$800,000.00	\$800,000.00
1	LS	Calibrate and performance testing	\$30,000.00	\$30,000.00
<b>TOTAL</b>				<b>\$1,000,000.00</b>

<b>Item WWTP-3.2 Grit Pump Flow Meters</b>				
QUANTITY	UNITS	DESCRIPTION	UNIT COST	TOTAL COST
1	LS	Demo work for each pump	\$30,000.00	\$30,000.00
1	LS	Install new meter on each pump	\$255,000.00	\$255,000.00
1	LS	Calibrate and performance testing	\$15,000.00	\$15,000.00
<b>TOTAL</b>				<b>\$300,000.00</b>

<b>Item WWTP-3.3 Rapid Mix Tank Cleaning</b>				
QUANTITY	UNITS	DESCRIPTION	UNIT COST	TOTAL COST
1	LS	Isolate and shut down tank #1	\$20,000.00	\$20,000.00
1	LS	Clean & repair tank #1	\$180,000.00	\$180,000.00
1	LS	Isolate and shut down tank #2	\$20,000.00	\$20,000.00
1	LS	Clean & repair tank #2	\$180,000.00	\$180,000.00
<b>TOTAL</b>				<b>\$400,000.00</b>

<b>Item WWTP-5.5 New Public Announcement and Fire Alarm Systems</b>				
QUANTITY	UNITS	DESCRIPTION	UNIT COST	TOTAL COST
1	LS	Remove existing PA system	\$24,000.00	\$24,000.00
1	LS	Install new PA system	\$90,000.00	\$90,000.00
1	LS	Install new fire alarm system	\$186,000.00	\$186,000.00
<b>TOTAL</b>				<b>\$300,000.00</b>

<b>Item WWTP-5.6 Carbon Area Lighting, Switchyard Improvements</b>				
QUANTITY	UNITS	DESCRIPTION	UNIT COST	TOTAL COST
1	LS	Remove existing lighting	\$25,000.00	\$25,000.00
1	LS	Install new lighting	\$100,000.00	\$100,000.00
1	LS	Inspect switchyard equipment	\$25,000.00	\$25,000.00
1	LS	Remove switchyard equipment	\$75,000.00	\$75,000.00
1	LS	Install switchyard equipment	\$275,000.00	\$275,000.00
<b>TOTAL</b>				<b>\$500,000.00</b>

<b>Item WWTP-6.2 Carbon Bed Effluent Cleaning &amp; Inspection</b>				
QUANTITY	UNITS	DESCRIPTION	UNIT COST	TOTAL COST
1	LS	Inspect effluent lines	\$ 100,000.00	\$100,000.00
1	LS	Clean effluent line	\$ 400,000.00	\$400,000.00
<b>TOTAL</b>				<b>\$500,000.00</b>

<b>Item WWTP-6.3 Carbon Filter Mud Valve Replacements</b>				
QUANTITY	UNITS	DESCRIPTION	UNIT COST	TOTAL COST
1	LS	Remove valves	\$ 210,000.00	\$210,000.00
1	LS	Install valves	\$ 490,000.00	\$490,000.00
<b>TOTAL</b>				<b>\$700,000.00</b>

<b>Item WWTP-11.6 Removal and Replacement of Plant Water Piping</b>				
QUANTITY	UNITS	DESCRIPTION	UNIT COST	TOTAL COST
1	LS	Remove pipe	\$ 250,000.00	\$250,000.00
1	LS	Install pipe	\$ 750,000.00	\$750,000.00
<b>TOTAL</b>				<b>\$1,000,000.00</b>

**TOTAL COST OF ALL PROJECTS \$4,700,000.00**

**Appendix E**

**ENGINEERING REPORT CERTIFICATION**

### Engineering Report Certification

To Be Provided by the Professional Engineer Preparing the Report

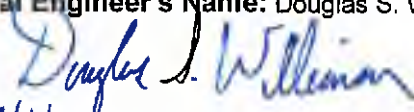
During the preparation of this Engineering Report, I have studied and evaluated the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is being sought from the New York State Clean Water State Revolving Fund. In my professional opinion, I have recommended for selection, to the maximum extent practicable, a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account the cost of constructing the project or activity, the cost of operating and maintaining the project or activity over the life of the project or activity, and the cost of replacing the project and activity.

**Title of Engineering Report:** SEWER TREATMENT PLANT CAPITAL IMPROVEMENT PROJECTS  
ENGINEERING REPORT AND ESTIMATES

**Date of Report:** September 2022

**Professional Engineer's Name:** Douglas S. Williamson, P.E., Niagara Falls Water Board

**Signature:**



**Date:**

9/1/2022

**Appendix F**

**SMART GROWTH ASSESSMENT FORM**



# Smart Growth Assessment Form

This form should be completed by an authorized representative of the applicant, preferably the project engineer or other design professional.<sup>1</sup>

## Section 1 – General Applicant and Project Information

Applicant:

Project No.:

Project Name:

Is project construction complete?  Yes, date:

No

Please provide a brief project summary in plain language including the location of the area the project serves:

## Section 2 – Screening Questions

### A. Prior Approvals

1. Has the project been previously approved for Environmental Facilities Corporation (EFC) financial assistance?  Yes  No
2. If yes to A(1), what is the project number(s) for the prior approval(s)? Project No.:
3. If yes to A(1), is the scope of the previously-approved project substantially the same as the current project?  Yes  No

**If your responses to A(1) and A(3) are both yes, please proceed to Section 5, Signature.**

### B. New or Expanded Infrastructure

1. Does the project involve the construction or reconstruction of new or expanded infrastructure?  Yes  No

Examples of new or expanded infrastructure include, but are not limited to:

- (i) The addition of new wastewater collection/new water mains or a new wastewater treatment system/water treatment plant where none existed previously;
- (ii) An increase of the State Pollutant Discharge Elimination System (SPDES) permitted flow capacity for an existing wastewater treatment system; and OR

<sup>1</sup> If project construction is complete and the project was not previously financed through EFC, an authorized municipal representative may complete and sign this assessment.

- (iii) An increase of the permitted water withdrawal or the permitted flow capacity for the water treatment system such that a Department of Environmental Conservation (DEC) water withdrawal permit will need to be obtained or modified, or result in the Department of Health (DOH) approving an increase in the capacity of the water treatment plant.

**If your response to B(1) is no, please proceed to Section 5, Signature.**

### **Section 3 –Smart Growth Criteria**

---

Your project must be consistent will all relevant Smart Growth criteria. For each question below please provide a response and explanation.

1. Does the project use, maintain, or improve existing infrastructure?  
 Yes     No

Explain your response:

2. Is the project located in a (1) municipal center, (2) area adjacent to a municipal center, or (3) area designated as a future municipal center, as such terms are defined herein (please select one response)?

- Yes, my project is located in a municipal center, which is an area of concentrated and mixed land uses that serves as a center for various activities, including but not limited to: central business districts, main streets, downtown areas, brownfield opportunity areas (see [www.dos.ny.gov](http://www.dos.ny.gov) for more information), downtown areas of local waterfront revitalization program areas (see [www.dos.ny.gov](http://www.dos.ny.gov) for more information), areas of transit-oriented development, environmental justice areas (see [www.dec.ny.gov/public/899.html](http://www.dec.ny.gov/public/899.html) for more information), and hardship areas (projects that primarily serve census tracts or block numbering areas with a poverty rate of at least twenty percent according to the latest census data).
- Yes, my project is located in an area adjacent to a municipal center which has clearly defined borders, is designated for concentrated development in the future in a municipal or regional comprehensive plan, and exhibits strong land use, transportation, infrastructure, and economic connections to an existing municipal center.
- Yes, my project is located in an area designated as a future municipal center in a municipal or comprehensive plan and is appropriately zoned in a municipal zoning ordinance
- No, my project is not located in a (1) municipal center, (2) area adjacent to a municipal center, or (3) area designated as a future municipal center.

Explain your response and reference any applicable plans:

3. Is the project located in a developed area or an area designated for concentrated infill development in a municipally-approved comprehensive land use plan, local waterfront revitalization plan, and/or brownfield opportunity area plan?

Yes No

Explain your response and reference any applicable plans:

4. Does the project protect, preserve, and enhance the State's resources, including surface and groundwater, agricultural land, forests, air quality, recreation and open space, scenic areas, and significant historic and archaeological resources?

Yes No

Explain your response:

5. Does the project foster mixed land uses and compact development, downtown revitalization, brownfield redevelopment, the enhancement of beauty in public spaces, the diversity and affordability of housing in proximity to places of employment, recreation and commercial development, and the integration of all income and age groups?

Yes No

Explain your response:

6. Does the project provide mobility through transportation choices including improved public transportation and reduced automobile dependency?

Yes No N/A

Explain your response:

7. Does the project involve coordination between State and local government, intermunicipal planning, or regional planning?

Yes No

Explain your response and reference any applicable plans:

8. Does the project involve community-based planning and collaboration?

Yes No

Explain your response and reference any applicable plans:

9. Does the project support predictability in building and land use codes?

Yes No N/A

Explain your response:

10. Does the project promote sustainability by adopting measures such as green infrastructure techniques, decentralized infrastructure techniques, or energy efficiency measures?

Yes No

Explain your response and reference any applicable plans:

11. Does the project mitigate future physical climate risk due to sea-level rise, storm surges, and/or flooding, based on available data predicting the likelihood of future extreme weather events, including hazard risk analysis data, if applicable?

Yes No

Explain your response and reference any applicable plans:

**Section 4 – Miscellaneous**

1. Is the project expressly required by a court or administrative consent order?  Yes  No

If yes, and you have not previously provided the applicable order to EFC/DOH, please submit it with this form.

**Section 5 – Signature**

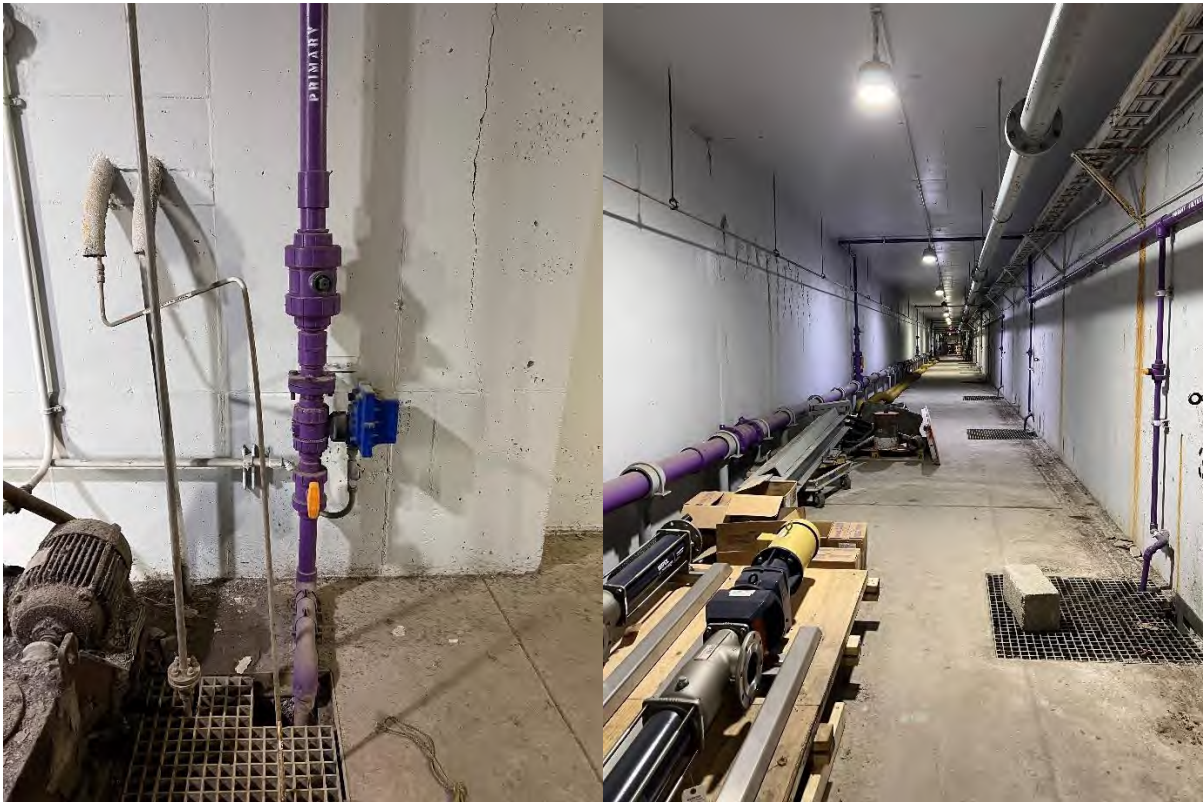
By signing below, you agree that you are authorized to act on behalf of the applicant and that the information contained in this Smart Growth Assessment is true, correct and complete to the best of your knowledge and belief.

Applicant:	Phone Number:
Name and Title of Signatory:	
Signature:	Date:

**Appendix G**

**PHOTOGRAPHS**

1 WWTP-1.2 Influent Channel Leak Repair of Expansion Joints



2 WWTP-1.3 Sediment Basin #5 Treatment of Backwash



3 WWTP-3.2 Grit Pump Flow Meters



#### 4 WWTP-3.3 Rapid Mix Tank Cleaning



5 WWTP-5.6 Carbon Area Lighting, Switchyard Improvements



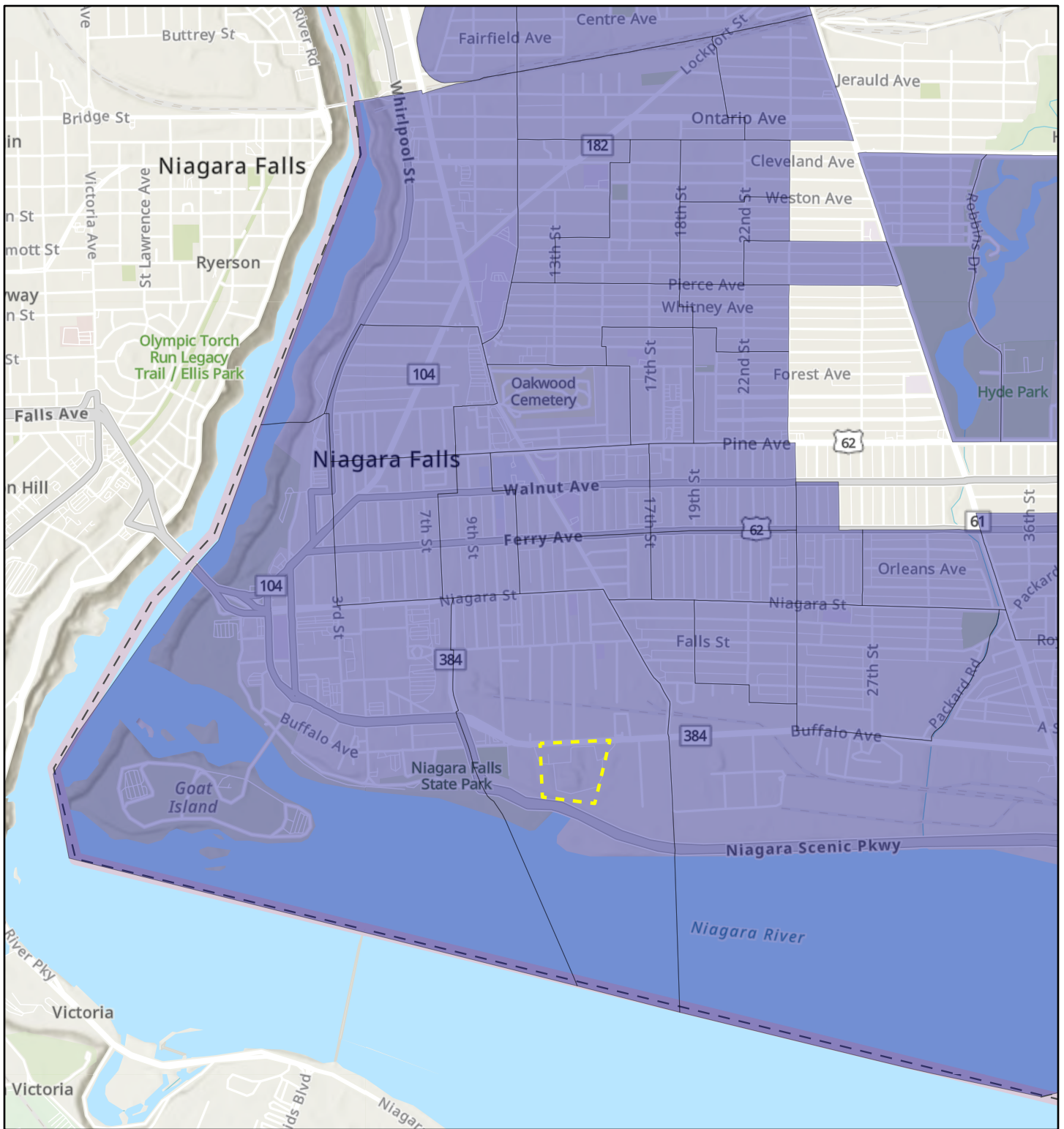
6 Carbon Filter Mud Valve Replacements



**Appendix H**

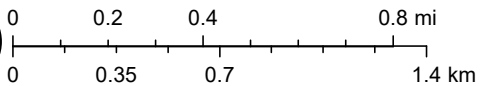
**POTENTIAL ENVIRONMENTAL JUSTICE AREA MAP**

# Niagara Falls WWTP Potential Environmental Justice Areas



8/11/2025

- Potential Environmental Justice Area (PEJA) Communities
- Project Location



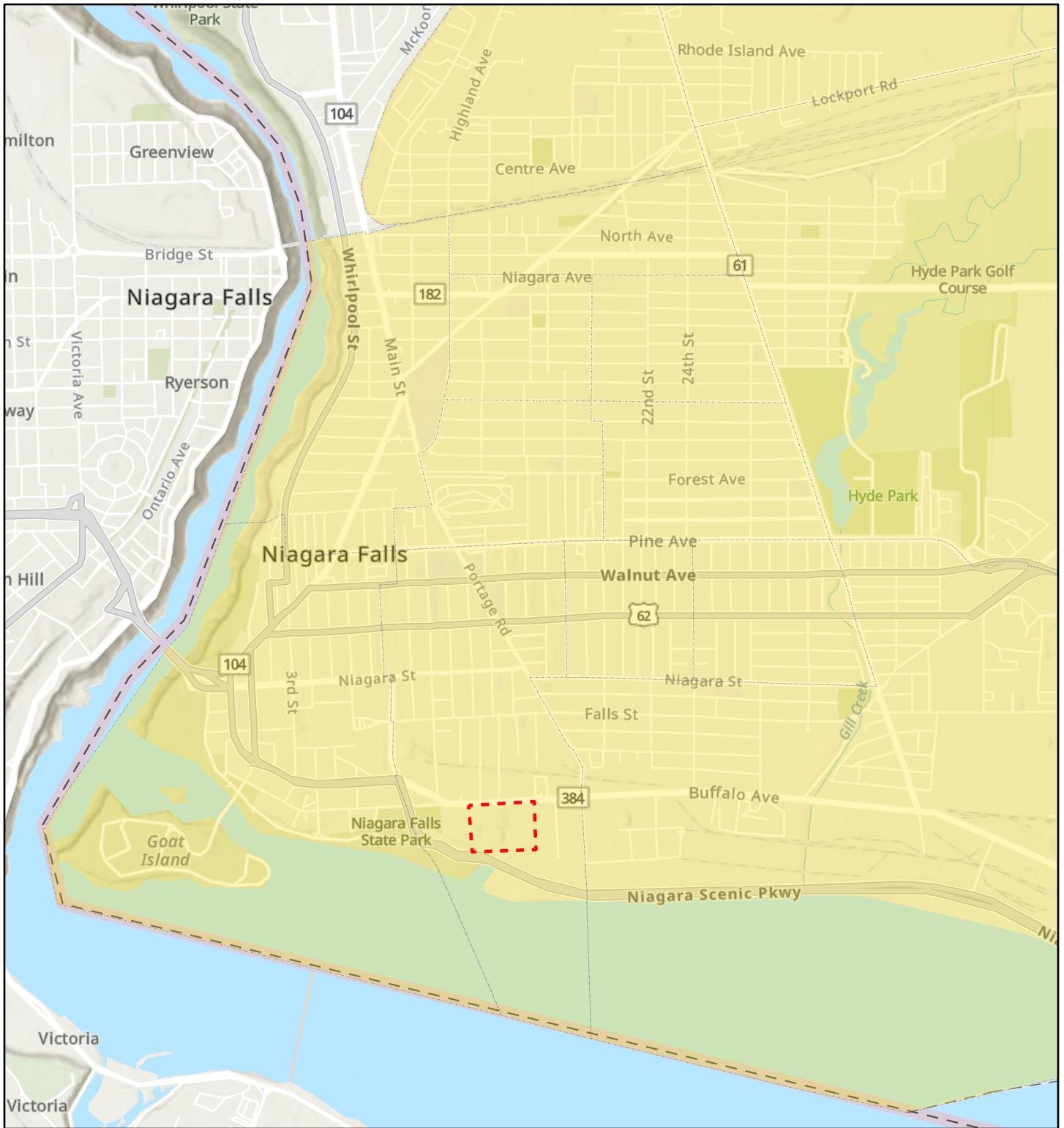
1:35,000

Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

**Appendix I**

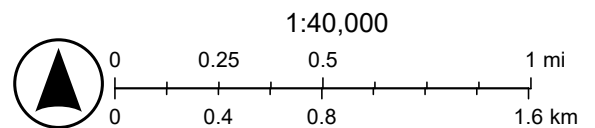
**DISADVANTAGED COMMUNITIES MAP**

# Niagara Falls WWTP Project Area Disadvantaged Communities



8/11/2025

- NYS Disadvantaged Communities (DAC)
- Project Location



Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

**Appendix J**

**FEMA MAP**

# National Flood Hazard Layer FIRMette



79°3'2"W 43°5'7"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	
	Without Base Flood Elevation (BFE) Zone A, V, A99
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD	
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee. See Notes. Zone X
	Area with Flood Risk due to Levee Zone D

OTHER AREAS	
	NO SCREEN Area of Minimal Flood Hazard Zone X
	Effective LOMRs
	Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES	
	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall

OTHER FEATURES	
	20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
	17.5 Coastal Transect
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature

MAP PANELS	
	Digital Data Available
	No Digital Data Available
	Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **8/11/2025 at 7:16 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

## **Appendix K**

### **SPDES PERMIT NY0026336**

Omitted from agenda packet to reduce packet size, please contact Sean W. Costello at [scostello@nfwb.org](mailto:scostello@nfwb.org) for copy if desired.

**Appendix L**

**PLANT WATER PIPING PRESSURE STUDY 2023**

NFWB BELT FILTER PRESS WATER PRESSURE TESTING APRIL 13, 2023

Test Condition	Back Flow Preventer in Filter Gallery		BIG BOOSTER PUMP IN CORNER OF BFP ROOM						BELT FILTER PRESS #1						BELT FILTER PRESS #2						BELT FILTER PRESS #3						Comment
			ON/OFF	PFP Pump Suction Valve Position	BFP Pump Discharge Valve Position	Flowing ?	Big Booster Pump Pressure		ON/OFF	PFP Pump Suction Valve Position	BFP Pump Discharge Valve Position	Flowing ?	BFP #1 Booster Pump Pressure		ON/OFF	PFP Pump Suction Valve Position	BFP Pump Discharge Valve Position	Flowing ?	BFP #2 Booster Pump Pressure		ON/OFF	PFP Pump Suction Valve Position	BFP Pump Discharge Valve Position	Flowing ?	BFP #3 Booster Pump Pressure		
	Pin, psi	Pout, psi					Pin, psi	Pout, psi					Pin, psi	Pout, psi					Pin, psi	Pout, psi					Pin, psi	Pout, psi	
Static Pressure - Nothing on, nothing flowing	55	47	OFF	OPEN	OPEN	No	36	36	OFF	OPEN	CLOSED	No	-	32	OFF	OPEN	CLOSED	No	38	40	OFF	OPEN	CLOSED	No	38	38	
Running Dead Headed - Big Pump OFF			OFF	OPEN	OPEN	No	36	36	ON	OPEN	CLOSED	No	-	81	ON	OPEN	CLOSED	No	38	80	ON	OPEN	CLOSED	No	36	85	Tested one BFP Pump at a time
BFP #1 Alone - Big Pump OFF - BFP#1 Pump OFF			OFF	OPEN	OPEN	Yes	32	30	OFF	OPEN	OPEN	Yes	24	12	OFF	CLOSED	CLOSED	No	-	-	OFF	CLOSED	CLOSED	No	-	-	
BFP #1 Alone - Big Pump OFF - BFP#1 Pump ON			OFF	OPEN	OPEN	Yes	30	24	ON	OPEN	OPEN	Yes	4	42	OFF	CLOSED	CLOSED	No	-	-	OFF	CLOSED	CLOSED	No	-	-	
BFP #1 Alone - Big Pump ON - BFP#1 Pump ON			ON	OPEN	OPEN	Yes	28	74	ON	OPEN	OPEN	Yes	45	73	OFF	CLOSED	CLOSED	No	-	-	OFF	CLOSED	CLOSED	No	-	-	
BFP #1 Alone - Big Pump ON - BFP#1 Pump OFF			ON	OPEN	OPEN	Yes	28	74	ON	OPEN	OPEN	Yes	45	73	OFF	CLOSED	CLOSED	No	-	-	OFF	CLOSED	CLOSED	No	-	-	Did not test
BFP #2 Alone - Big Pump OFF - BFP#2 Pump OFF			OFF	OPEN	OPEN	Yes	32	30	OFF	CLOSED	CLOSED	No	-	-	OFF	OPEN	OPEN	Yes	26	22	OFF	CLOSED	CLOSED	No	-	-	
BFP #2 Alone - Big Pump OFF - BFP#2 Pump ON			OFF	OPEN	OPEN	Yes	29	24	OFF	CLOSED	CLOSED	No	-	-	ON	OPEN	OPEN	Yes	14	51	OFF	CLOSED	CLOSED	No	-	-	
BFP #2 Alone - Big Pump ON - BFP#2 Pump ON			ON	OPEN	OPEN	Yes	28	73	OFF	CLOSED	CLOSED	No	-	-	ON	OPEN	OPEN	Yes	56	87	OFF	CLOSED	CLOSED	No	-	-	
BFP #2 Alone - Big Pump ON - BFP#2 Pump OFF			ON	OPEN	OPEN	Yes	28	76	OFF	CLOSED	CLOSED	No	-	-	OFF	OPEN	OPEN	Yes	64	58	OFF	CLOSED	CLOSED	No	-	-	
BFP #3 Alone - Big Pump OFF - BFP#3 Pump OFF			OFF	OPEN	OPEN	Yes	34	30	OFF	CLOSED	CLOSED	No	-	-	OFF	CLOSED	CLOSED	No	-	-	OFF	OPEN	OPEN	Yes	24	19	
BFP #3 Alone - Big Pump OFF - BFP#3 Pump ON			OFF	OPEN	OPEN	Yes	29	24	OFF	CLOSED	CLOSED	No	-	-	OFF	CLOSED	CLOSED	No	-	-	ON	OPEN	OPEN	Yes	10	50	
BFP #3 Alone - Big Pump ON - BFP#3 Pump ON			ON	OPEN	OPEN	Yes	28	72	OFF	CLOSED	CLOSED	No	-	-	OFF	CLOSED	CLOSED	No	-	-	ON	OPEN	OPEN	Yes	52	84	
BFP #3 Alone - Big Pump ON - BFP#3 Pump OFF			ON	OPEN	OPEN	Yes	32	76	OFF	CLOSED	CLOSED	No	-	-	OFF	CLOSED	CLOSED	No	-	-	ON	OPEN	OPEN	Yes	58	90	Repeat of prior test, 2 hours later
BFP #3 Alone - Big Pump ON - BFP#3 Pump OFF			ON	OPEN	OPEN	Yes	32	76	OFF	CLOSED	CLOSED	No	-	-	OFF	CLOSED	CLOSED	No	-	-	ON	OPEN	OPEN	Yes	58	90	Did not test
BFP#2 and BFP #3 Running, No Pumps ON.			OFF	OPEN	OPEN	Yes	29	24	-	-	-	-	-	-	OFF	OPEN	OPEN	Yes	20	18	OFF	OPEN	OPEN	Yes	19	16	BFP #1 OFF & no flow.
BFP#2 and BFP #3 Running, BFP Pumps ON only.			OFF	OPEN	OPEN	Yes	23	12	-	-	-	-	-	-	ON	OPEN	OPEN	Yes	NEG	41	ON	OPEN	OPEN	Yes	NEG	40	BFP #1 OFF & no flow.
BFP#2 and BFP #3 Running, All Pumps ON.			ON	OPEN	OPEN	Yes	13	49	-	-	-	-	-	-	ON	OPEN	OPEN	Yes	33	67	ON	OPEN	OPEN	Yes	30	65	BFP #1 OFF & no flow.
BFP#1, BFP#2 and BFP #3 Running, No Pumps ON.			OFF	OPEN	OPEN	Yes	28	20	OFF	OPEN	OPEN	Yes	8	7	OFF	OPEN	OPEN	Yes	18	16	OFF	OPEN	OPEN	Yes	16	12	All BFPs
BFP#1, BFP#2 and BFP #3 Running, BFP Pumps ON only.			OFF	OPEN	OPEN	Yes	16	0	ON	OPEN	OPEN	Yes	7	13	ON	OPEN	OPEN	Yes	NEG	32	ON	OPEN	OPEN	Yes	NEG	32	All BFPs
BFP#1, BFP#2 and BFP #3 Running, All Pumps ON.	48	35	ON	OPEN	OPEN	Yes	14	36	ON	OPEN	OPEN	Yes	12	46	ON	OPEN	OPEN	Yes	20	57	ON	OPEN	OPEN	Yes	17	55	All BFPs