Table of Contents - NFWB Mar. 18, 2024 Work Session

AGENDA

Working Session of the
Niagara Falls Water Board
March 18, 2024 at 5:00 p.m.

Water Treatment Plant Conference Room
5815 Buffalo Avenue, Niagara Falls New York 14304

Meeting may be attended in person
or via videoconference – visit NFWB.org for details.

1. **Preliminary Matters**

    a. **Attendance:**

Asklar (Board Member/Chairman of Finance/Member Exec. Staff Review Cmte.) ____

Forster (Chairman) ____

Kimble (Board Member) ____

Larkin (Board Member/Vice Chairwoman/Governance Chairwoman/ Chairwoman Exec. Staff Review Cmte.) ____

Leffler (Board Member/Member Exec. Staff Review Cmte.) ____

    b. **Comments from Chairman Forster**

        i. **2024 Budgeted Expenses - Expenditures of User Rates, Fees, and Charges Less Debt Service**

    c. **Presentations**

        i. **EFPR Group, CPAs – Independent Auditors' Report**

d. **Letters and Communications**

    i. **2024-03-14 - Correspondence with City of Niagara Falls Regarding Eclipse**
    ii. **2024-03-14 – COVID Wastewater Surveillance Update Memorandum**

e. **Prior Meeting Minutes**

    i. **Draft March 4, 2024 Meeting Minutes**

2. **Acting Executive Director – Michael Eagler**

    a. **WWTP Project Budget Tracker (CPL)**
    b. **WWTP Construction Schedule Tracker (CPL)**
    c. **Financial Award Summary (CPL)**

3. **Operations Executive – David Conti**

4. **Outside Infrastructure Updates – Cortez Bradberry**

5. **Engineering – Douglas Williamson**

6. **Personnel Items – David San Lorenzo**

    a. **March 25, 2024 Personnel Actions**
    b. **Union Time Paid by Water Board**

7. **Information Technology (IT) –Jonathan Joyce**

8. **Finance – Brian Majchrowicz**

    a. **Revenue Budget Performance Report through 2/29/2024**
    b. **Sewer Fund Expense Budget Performance Report through 2/29/2024**
    c. **Water Fund Expense Budget Performance Report through 2/29/2024**
    d. **Board Fund Expense Budget Performance Report through 2/29/2024**
    e. **Key Bank and Bank on Buffalo Balance Report**
    f. **Wilmington Trust Balance Report**
    g. **Treasury Account Balance Report**
    h. **Capital Payments**
    i. **Budget Amendments Report**

9. **Questions Regarding February 2024 Operations and Maintenance Report**

10. **Safety – John Accardo**

11. **General Counsel and Secretary – Sean Costello**

12. **From the Chairman**

13. **Resolutions**

2024-03-006 – ACCEPTING LABELLA PROPOSAL FOR WATER MAIN REPLACEMENT ENGINEERING SERVICES

    a. **2024-02-19 - LaBella Associates Capital Projects Proposal**

2024-03-007 – ACCEPTING NUSSBAUMER & CLARKE PROPOSAL FOR WATER TREATMENT PLANT SCADA CONTROL SYSTEM UPGRADE ENGINEERING SERVICES

    a. **2024-02-19 - Nussbaumer & Clarke Proposal for WTP SCADA Survey and Conceptual Design Engineering Services**

2024-03-008 – ACCEPTING AECOM PROPOSAL FOR ENGINEERING SERVICES - WWTP CAPITAL PROJECTS

    a. **2024-02-19 - AECOM Proposal for Capital Improvement Projects**

2024-03-009 – ACCEPTING AECOM PROPOSAL FOR CALUMET AVENUE SEWER REHABILITATION PROJECT ENGINEERING SERVICES

    a. **2024-02-19 - AECOM Proposal for Capital Improvement Projects (Included in agenda packet following Resolution 2024-03-009)**

2024-03-010 – PROCUREMENT OF VAC CON COMBINATION SEWER CLEANING TRUCK AND DISPOSAL THROUGH TRADE IN OF 2017 AQUATECH COMBINATION TRUCK

a. 2024-02-26 – VacCon Quotation

Anticipated Additional Resolutions for March 25 Meeting:

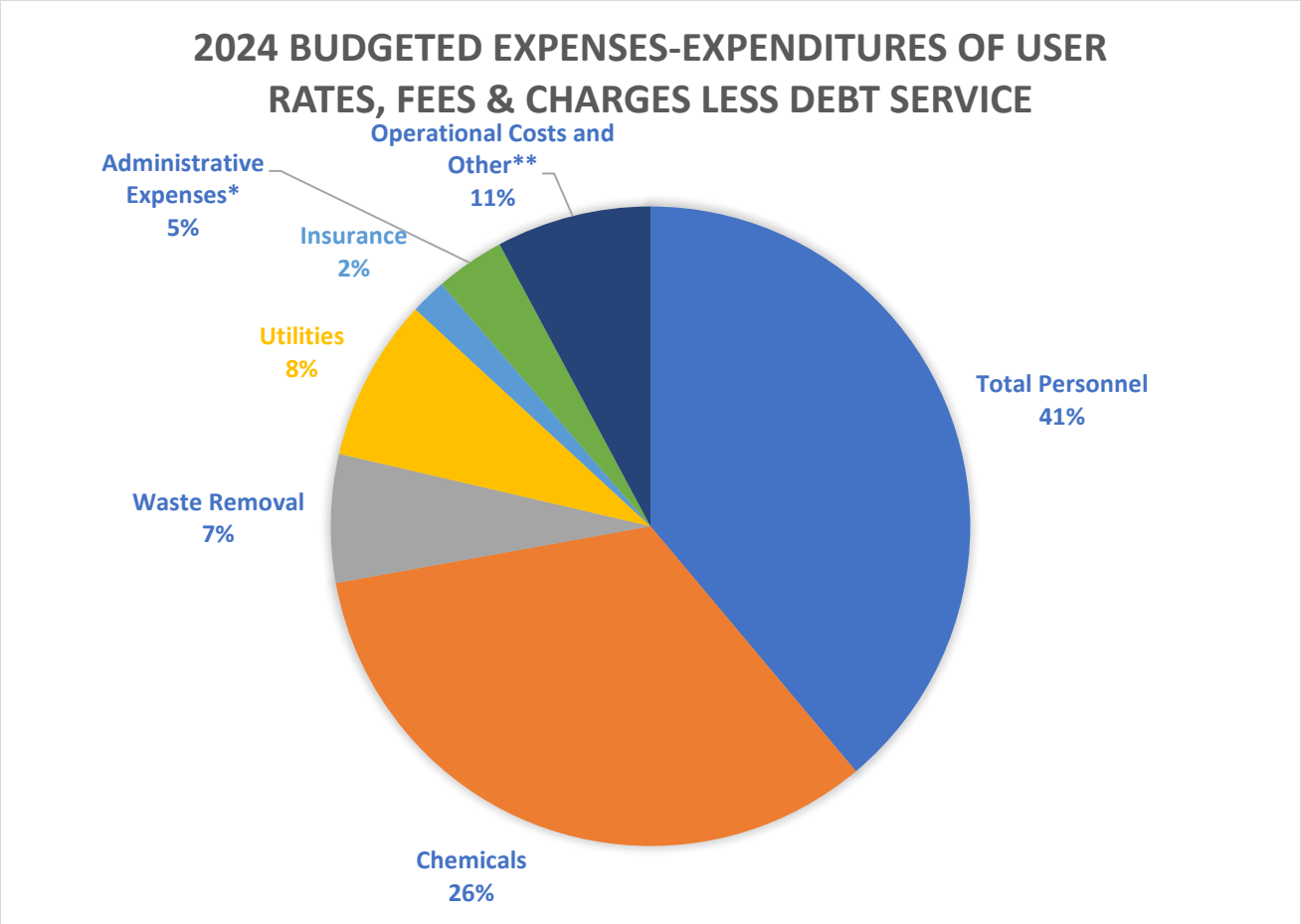
i. Approve and Accept 2023 Audit and Investment Reports
ii. Nussbaumer & Clarke Proposal for Project 3 Engineering Services

14. Unfinished/Old Business

15. New Business & Additional Items for Discussion

16. Executive Session (if needed)

17. Adjournment of Meeting



	2024	Percentage of Total
Total Personnel	$ 13,546,292	41%
Chemicals	$ 8,390,000	26%
Waste Removal	$ 2,200,500	7%
Utilities	$ 2,651,000	8%
Insurance	$ 630,000	2%
Administrative Expenses*	$ 1,549,650	5%
Operational Costs and Other**	$ 3,646,107	11%
Total	$ 32,613,549	100%

* Includes Office Supplies, Training, Computer Services & Software, and Professional Services

** Includes Rentals, Auto Expenses, Leases, Tools & Small Equipment, Machinery, Materials, and Undesignated Services

From: Robert Restaino <robert.restaino@niagarafallsny.gov>
Sent: Thursday, March 14, 2024 4:32 PM
To: Sean Costello; Anthony Restaino
Cc: forsternick@yahoo.com; Nicholas Forster; Michael Eagler ED
Subject: RE: NFWB - Correspondence Regarding Eclipse

Thank you Sean and thank the Board and all at NFWB

Robert M. Restaino
Mayor-City of Niagara Falls

From: Sean Costello <scostello@NFWB.org>
Sent: Thursday, March 14, 2024 4:27 PM
To: Robert Restaino <robert.restaino@niagarafallsny.gov>; Anthony Restaino <anthony.restaino@niagarafallsny.gov>
Cc: forsternick@yahoo.com; Nicholas Forster <NForster@NFWB.org>; Michael Eagler ED <MEaglerED@nfwb.org>
Subject: NFWB - Correspondence Regarding Eclipse

Dear Mayor Restaino and City Administrator Restaino:

Attached please find correspondence from Niagara Falls Water Board Chairman Nicholas Forster regarding the assistance the NFWB may be able to offer in connection with the April 8 eclipse. A hard copy will follow via inter-office mail.

Thank you,

Sean

Sean W. Costello
General Counsel and Secretary
NIAGARA FALLS WATER BOARD
Niagara Falls Water Board | 5815 Buffalo Avenue | Niagara Falls, NY 14304 | (716) 283-9770 x 7788

March 14, 2024

Hon. Robert M. Restaino
Mayor, City of Niagara Falls
645 Main Street
P.O. Box 69
Niagara Falls, NY 14302-0069

Anthony J. Restaino
City Administrator
645 Main Street
P.O. Box 69
Niagara Falls, NY 14302-0069

Dear Mayor and City Administrator:

Re: April 8, 2024 Eclipse Preparations

At the Niagara Falls Water Board we are aware that the City of Niagara Falls is preparing to welcome multitudes for the once-in-a-lifetime opportunity to view the April 8, 2024 total solar eclipse in one of the most picturesque places in the world. It is the expectation of the public that governmental agencies will cooperate to provide effective and responsive services, particularly when confronted with an unprecedented event such as the total solar eclipse. Consistent with this principle and the existing Operation Agreement to which the City and Water Board are parties, the purpose of this letter is to advise the City of the types of assistance the Water Board can provide if you believe it would assist in your planning efforts.

First, we would like to offer our facilities to the extent they could be of use for logistical purposes during the eclipse. Equipment can be staged, a command post could be established, or another appropriate use could be made of the gated grounds and parking lots at either the Water Treatment Plant or Wastewater Treatment Plant.

Second, we have available the following equipment that could be used for vehicle and pedestrian traffic control or other public purposes:

1. 27 traffic-control barrels;
2. Six folding construction barricades;
3. One trailer-mounted diesel generator, rated at 105 kilowatts;
4. Two portable 30-foot light towers, each with four 1,050-watt metal halide lights and a rotational mast. These light towers are diesel fueled, have 60-hour run times, and each has four convenience outlets providing 120v/20-amp power;
5. Six pickup trucks (for possible deployment as barriers in connection with street closures); and
6. Two tandem dump trucks (to block vehicles from areas).

Last, we plan to ask our staff if any of them would be willing to assist with setting up and taking down our barriers and cones on April 8.

If the City would like to request any of the assistance described in this letter, or if there are other specific needs with which we may be able to assist, please contact us at your earliest convenience. We welcome the opportunity to demonstrate effective government cooperation and look forward to the solar eclipse as a time to display all the wonderful things about Niagara Falls.

Sincerely,

Nicholas Forster
Chairman

cc: Michael S. Eagler, Sr., Acting Executive Director

Wastewater Surveillance Update

DATE: March 14, 2024

TO: Niagara County Health Department, Wastewater Facilities, & Stakeholders [1]

FROM: Joe Moran, MSc [2]

RE: Niagara County Weekly Wastewater Surveillance Data Report

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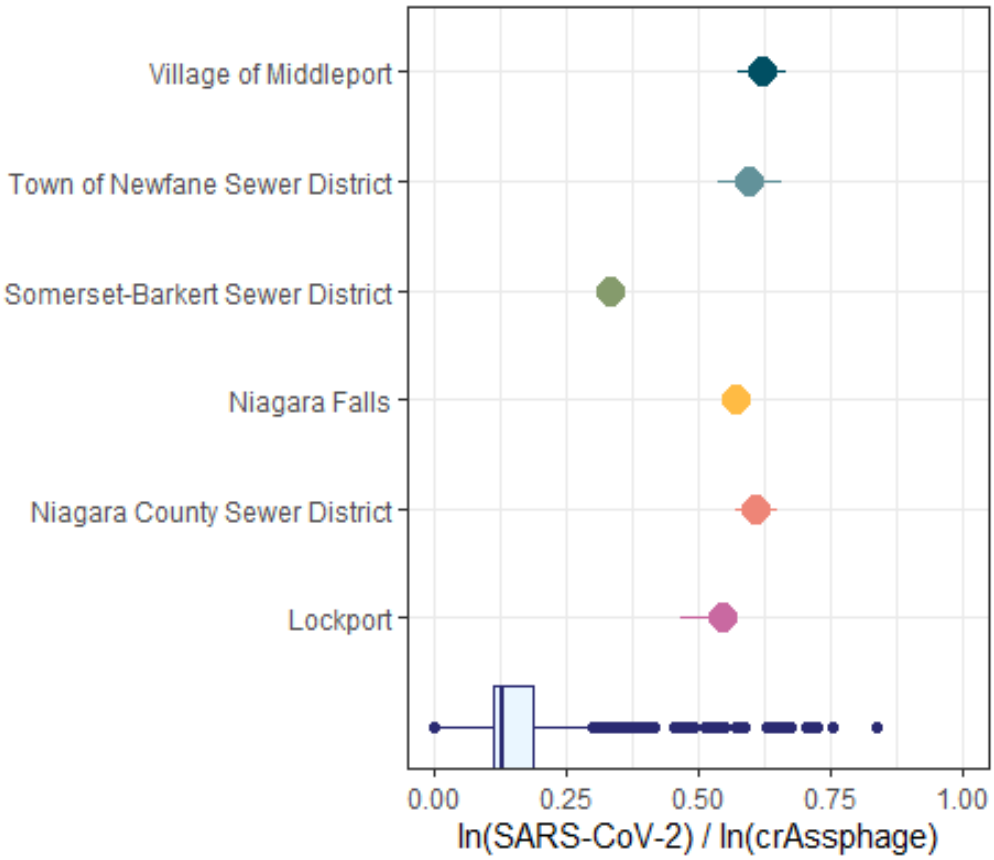
Dashboard | **Website**

All Samples from Niagara County From 2024-02-24 to 2024-03-06			
Collection Date	**Compared to NYS**	**Detection Level**	**Two-Week Trend**
Somerset-Barkert Sewer District			
March 6, 2024	lower	Quantifiable	NA
Town of Newfane Sewer District			
March 5, 2024	lower	Quantifiable	increasing
February 27, 2024	higher	Quantifiable	increasing
Lockport			
March 5, 2024	lower	Quantifiable	stable
March 4, 2024	higher	Quantifiable	stable
February 27, 2024	lower	Quantifiable	stable
Niagara County Sewer District			
March 4, 2024	comparable	Quantifiable	stable
February 24, 2024	higher	Quantifiable	stable
Village of Middleport			
March 4, 2024	higher	Quantifiable	decreasing
February 26, 2024	higher	Quantifiable	decreasing
Niagara Falls			
February 26, 2024	comparable	Quantifiable	increasing

[1] Thank you for your continued participation in the New York State Wastewater Surveillance Network. We appreciate the time and service you give every week. Because of people like you, we can use wastewater data to provide an early warning to communities, forecast hospitalizations, and look at trends of SARS-CoV-2 in the sewershed population, county, region, and state.

[2] Contact me if you have any questions or concerns (845-866-7543 or joemoran@cdcfoundation.org)



Points represent the SARS-CoV-2 intensity of samples taken at the influent over the last two weeks. The box plot represents all SARS-CoV-2 values from the previous two weeks as observed from wastewater treatment facilities across New York. The box plot shows the median (solid line), first and third quartiles (box edges), minimum (lower whiskers), maximum (upper whisker), and outliers (black dots) for all NY WWTP's. The concentration of SARS-CoV-2 is normalized by population, ln(SARS-CoV-2)/ln(crAssphage), to give overall intensity.

The most recent sample from **Lockport** on March 05, 2024 is **lower** when compared to New York State values.

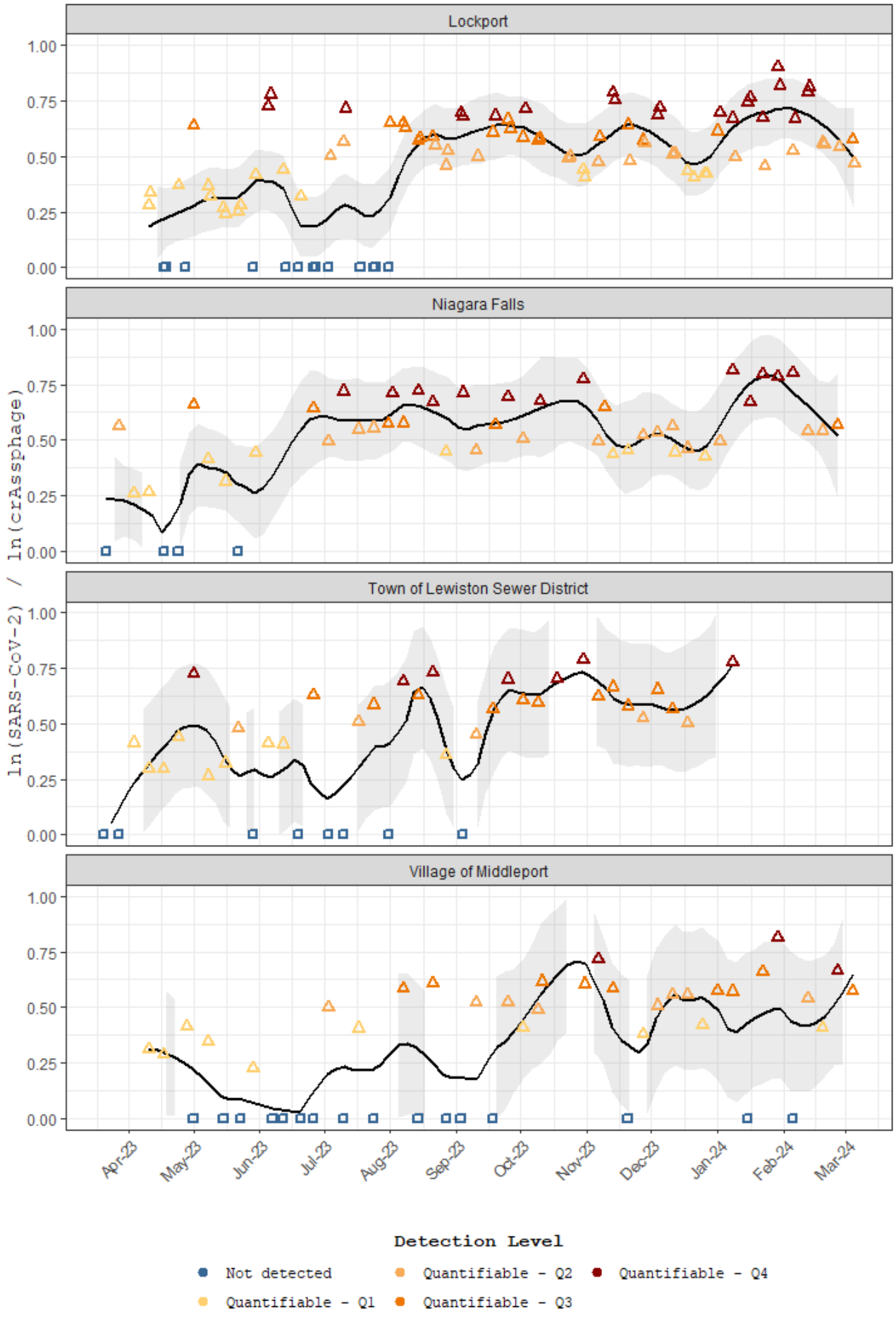
The most recent sample from **Niagara County Sewer District** on March 04, 2024 is **comparable** when compared to New York State values.

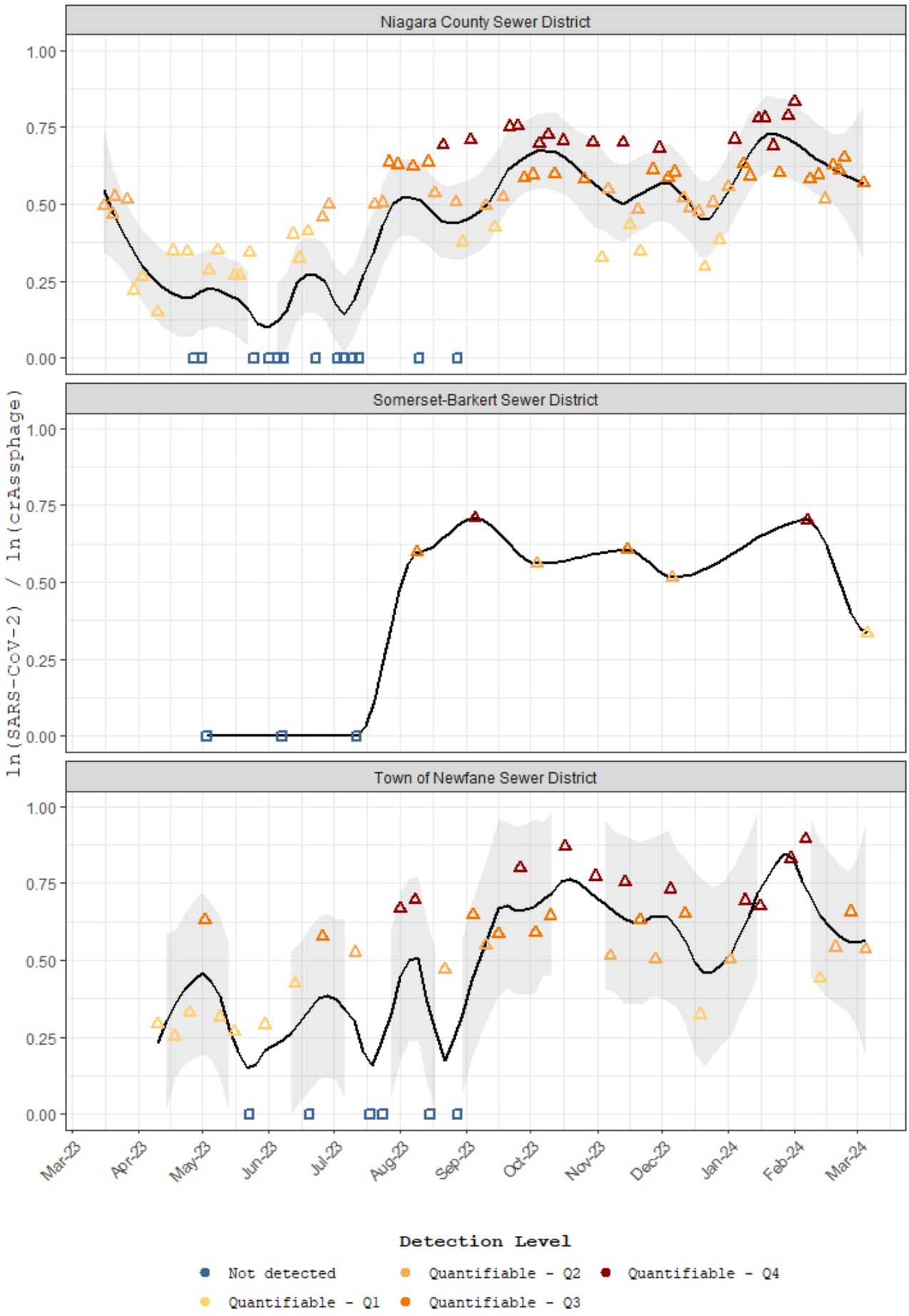
The most recent sample from **Niagara Falls** on February 26, 2024 is **comparable** when compared to New York State values.

The most recent sample from **Somerset-Barkert Sewer District** on March 06, 2024 is **lower** when compared to New York State values.

The most recent sample from **Town of Newfane Sewer District** on March 05, 2024 is **lower** when compared to New York State values.

The most recent sample from **Village of Middleport** on March 04, 2024 is **higher** when compared to New York State values.


Lockport
Niagara Falls
Town of Lewiston Sewer District
Village of Middleport
ln(SARS-CoV-2) / ln(crAssphage)
1.00
0.75
0.50
0.25
0.00
Apr-23
May-23
Jun-23
Jul-23
Aug-23
Sep-23
Oct-23
Nov-23
Dec-23
Jan-24
Feb-24
Mar-24
Detection Level
Not detected
Quantifiable - Q1
Quantifiable - Q2
Quantifiable - Q3
Quantifiable - Q4


Niagara County Sewer District
Somerset-Barkert Sewer District
Town of Newfane Sewer District
ln(SARS-CoV-2) / ln(crAssphage)
1.00
0.75
0.50
0.25
0.00
Mar-23
Apr-23
May-23
Jun-23
Jul-23
Aug-23
Sep-23
Oct-23
Nov-23
Dec-23
Jan-24
Feb-24
Mar-24
Detection Level
Not detected
Quantifiable - Q1
Quantifiable - Q2
Quantifiable - Q3
Quantifiable - Q4

A smoothed trend line (black), uncertainty (gray), and wastewater samples (shapes) are shown. Wastewater sample points are color coded to specify the level of SARS-CoV-2 detected. The concentration of SARS-CoV-2 is normalized by population, ln(SARS-CoV-2)/ln(crAssphage), to give overall intensity. Quantifiable detentions are given quantiles to show how current values compare to historical data.

The level of SARS-CoV-2 RNA can tell us roughly how many cases can be expected in a population.

- Not detected: <10 cases per 100,000
- Detected, <LOQ: 10-50 cases per 100,000
- Quantifiable detection: >50 cases per 100,000

The most recent sample from **Lockport** on March 05, 2024, had a detection level of "**Quantifiable**" suggesting daily case incidence of more than 50 cases per 100,000 people.

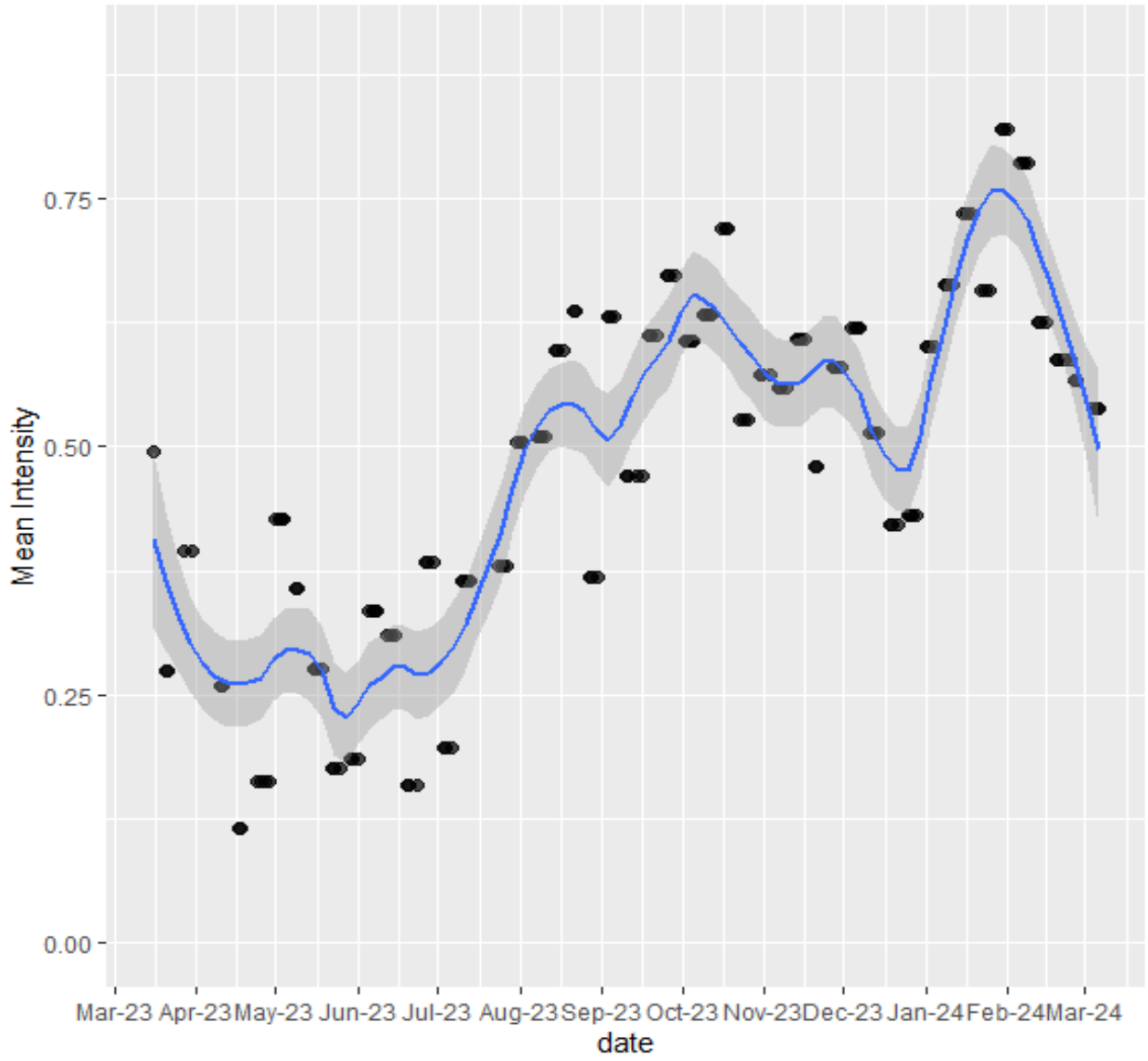
The most recent sample from **Niagara County Sewer District** on March 04, 2024, had a detection level of "**Quantifiable**" suggesting daily case incidence of more than 50 cases per 100,000 people.

The most recent sample from **Niagara Falls** on February 26, 2024, had a detection level of "**Quantifiable**" suggesting daily case incidence of more than 50 cases per 100,000 people.

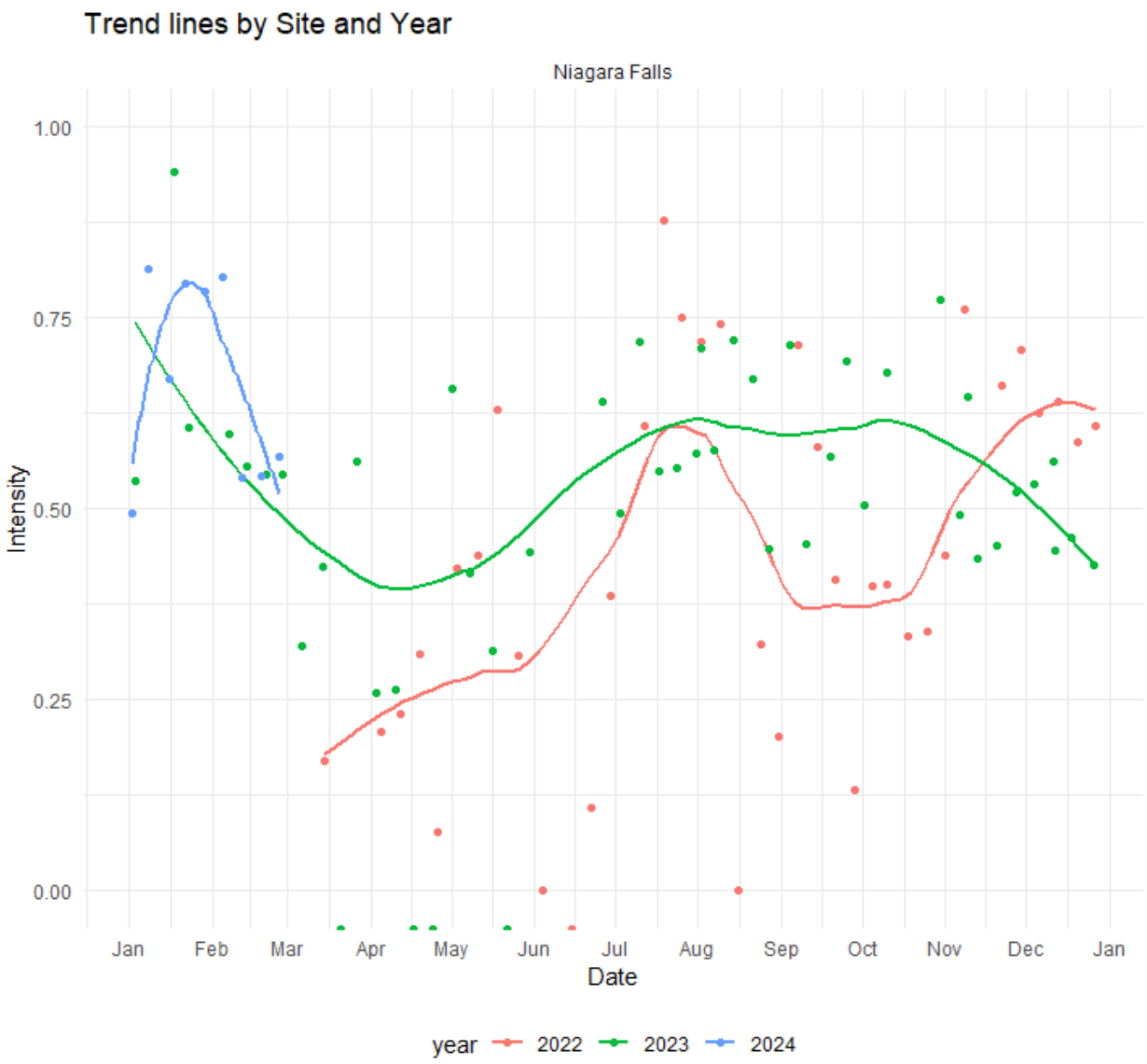
The most recent sample from **Somerset-Barkert Sewer District** on March 06, 2024, had a detection level of "**Quantifiable**" suggesting daily case incidence of more than 50 cases per 100,000 people.

The most recent sample from **Town of Newfane Sewer District** on March 05, 2024, had a detection level of "**Quantifiable**" suggesting daily case incidence of more than 50 cases per 100,000 people.

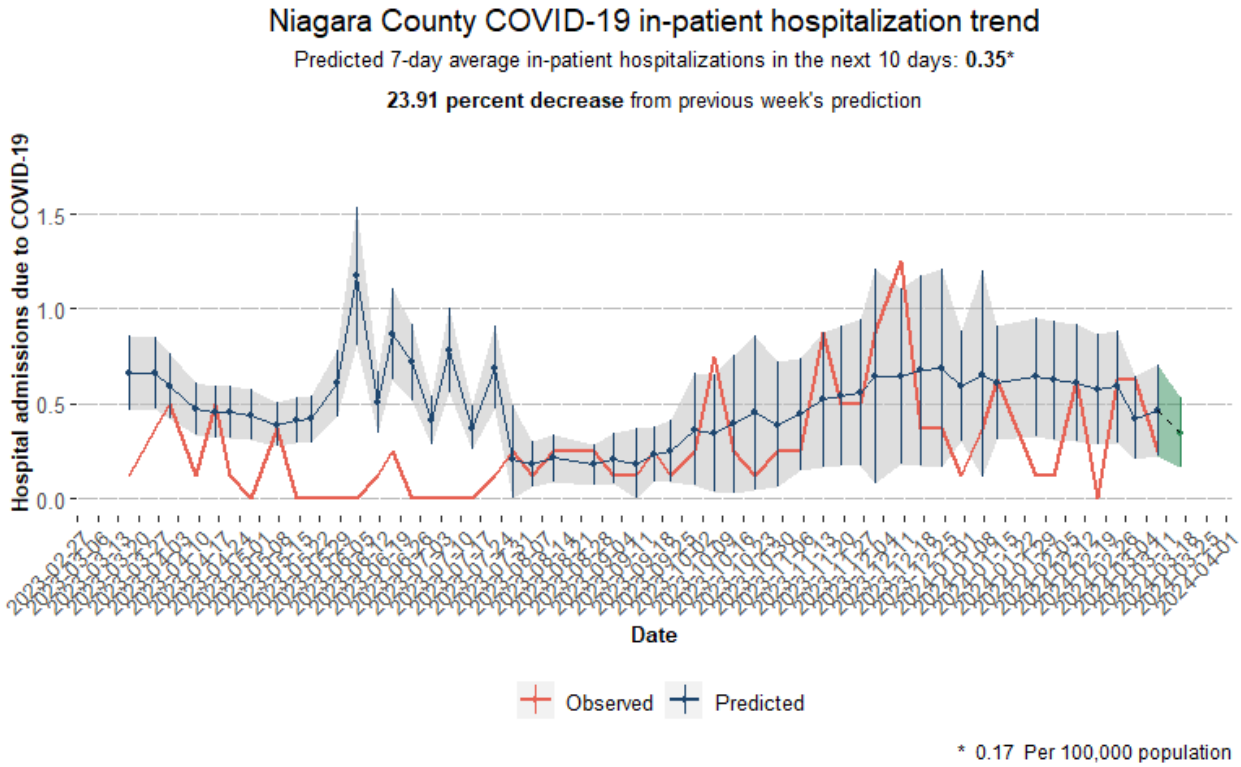
The most recent sample from **Village of Middleport** on March 04, 2024, had a detection level of "**Quantifiable**" suggesting daily case incidence of more than 50 cases per 100,000 people.



Average intensity (population weighted) for all Niagara WWTP's over the last 12 months.



This figure shows an annual comparison of SARS-CoV-2 intensity. Smoothed trend lines, uncertainty (gray bands), and wastewater samples (dots) are shown.



This figure shows predicted new in-patient hospital admissions due to COVID-19 for your county. Predictions are calculated from a generalized linear mixed model that fits wastewater data with a ten-day lag, log transformed active case numbers, along with several covariates including population over 50 years old, estimated asthma and cardiovascular disease rate for the county, and county social vulnerability from the CDC social vulnerability index.

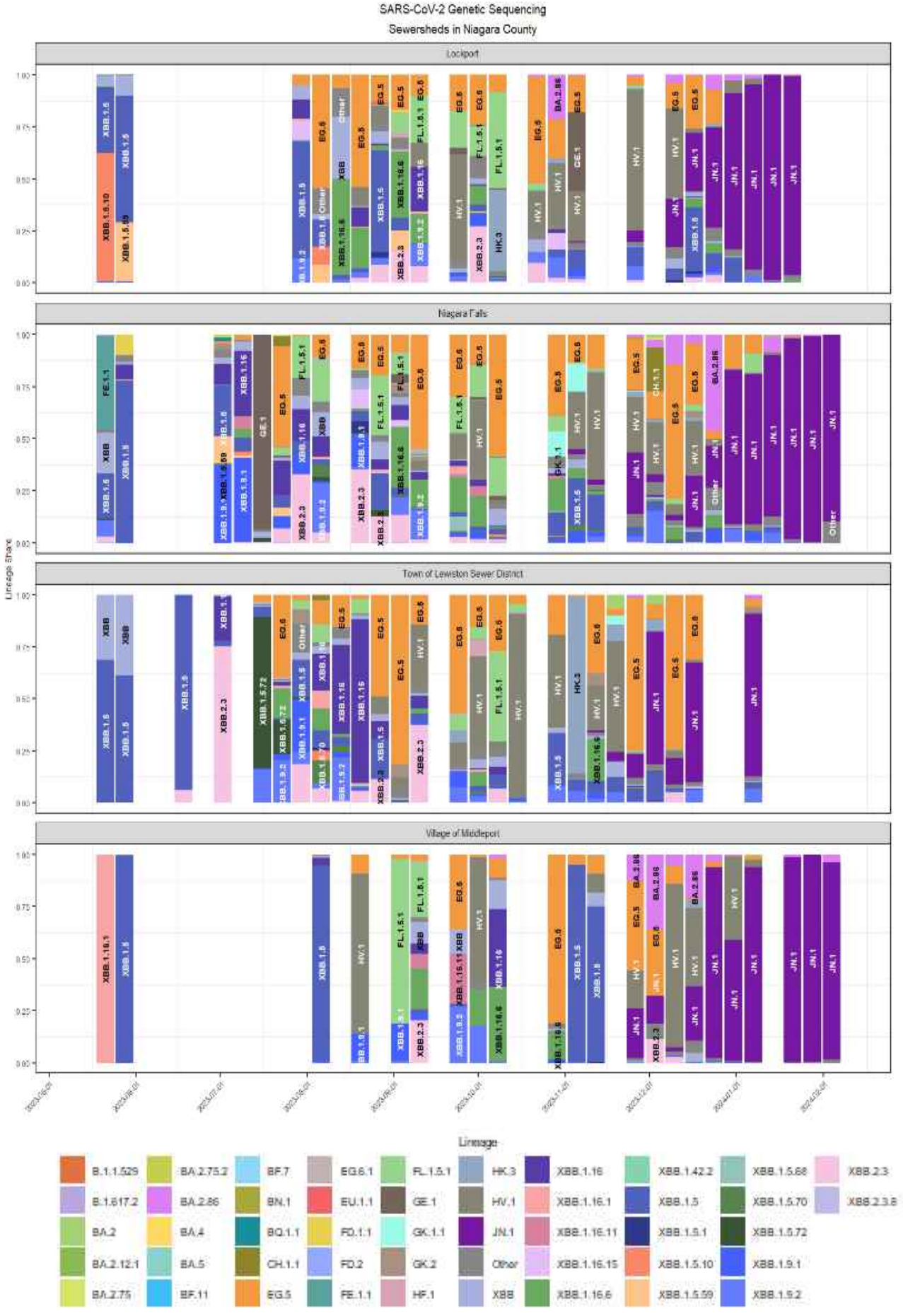
UPDATE AUGUST 4, 2023: With the end of the emergency declaration on May 11, 2023, several hospitals changed how they report case data including no longer reporting negative PCR test results. This resulted in an artificial increase in test positivity in those counties and negatively impacted our forecasting. Due to this change, we have removed test positivity and replaced it with the 7-day average of active cases. While not as reliable as test positivity was, this change has helped move the predictions closer to what we are observing. The new model also includes a regional average for SARS-CoV-2 intensity detection for the past 90 days indicative of the overall state of transmission for a region.

This model makes predictions with new data for future hospital admissions and provides uncertainty around the prediction in the form of the 95% confidence interval (the light grey and green band around the predictions). Past predictions are in blue with the current prediction in light green. The red line is actual hospital admissions from the Department of Health HERDS or Health Electronic Response System data These data are up-to-date for most counties. We will update these data and the models as new data are provided. Estimated new COVID-19 hospitalizations are predictions only and come with several uncertainties including whether new variants have arisen, what the current immunization state of the county is (including booster and bivalent shots or immunity from previous infection), and other factors not captured in the model such as intervention behaviors such as masking. Week to week predictions will vary in their accuracy and the width of the confidence interval around the prediction due to changes in the data.

Last 4 Weeks Niagara County Sewersheds: Variants found from weeks beginning Sun, Jan 28, 24 to Sun, Feb 04, 24		
Label	**Sewershed**	**Variants Found**
Variant of concern	Niagara County Sewer District	BA.2.86; JN.1
Variant of interest	Niagara County Sewer District	JF.1; XBB.1.16.6
Variant of concern	Niagara Falls	BA.2.86
Variant under monitoring	Niagara Falls	JN.1
Variant of concern	Village of Middleport	JN.1
Variants found throughout state from 2024-01-28 to 2024-02-25: BA.2, BA.2.86, EG.5, EG.5.1.8, FL.1.5.1, HK.3, HV.1, JD.1.1, JF.1, JG.3, JN.1, XBB.1.16.6, XBB.1.5.72, XBB.1.9.2, XBB.2.3		

County level variants under monitoring table in the last four and six weeks: This table shows variants being monitored by various public health organizations. Variant name, source of information, monitoring status of variant, and presence within the county and state within the last four and six weeks are shown. Each variant is shown at four and six week intervals shown in the footnotes.

- Not detected within state or county: variant not detected at the state or county-level
- Detected at state-level: detected somewhere else in the state, but not in the county listed
- Detected within county: detected within the county showed


SARS-CoV-2 Genetic Sequencing
Sewersheds in Niagara County
Lockport
Niagara Falls
Town of Lewiston Sewer District
Village of Middleport
Lineage Share
Lineage
B.1.1.529
B.1.617.2
BA.2
BA.2.12.1
BA.2.75
BA.2.75.2
BA.2.86
BA.4
BA.5
BF.11
BF.7
BN.1
BQ.1.1
CH.1.1
EG.5
EG.6.1
EU.1.1
FD.1.1
FD.2
FE.1.1
FL.1.5.1
GE.1
GK.1.1
GK.2
HF.1
HK.3
HV.1
JN.1
Other
XBB
XBB.1.16
XBB.1.16.1
XBB.1.16.11
XBB.1.16.15
XBB.1.16.6
XBB.1.42.2
XBB.1.5
XBB.1.5.1
XBB.1.5.10
XBB.1.5.59
XBB.1.5.68
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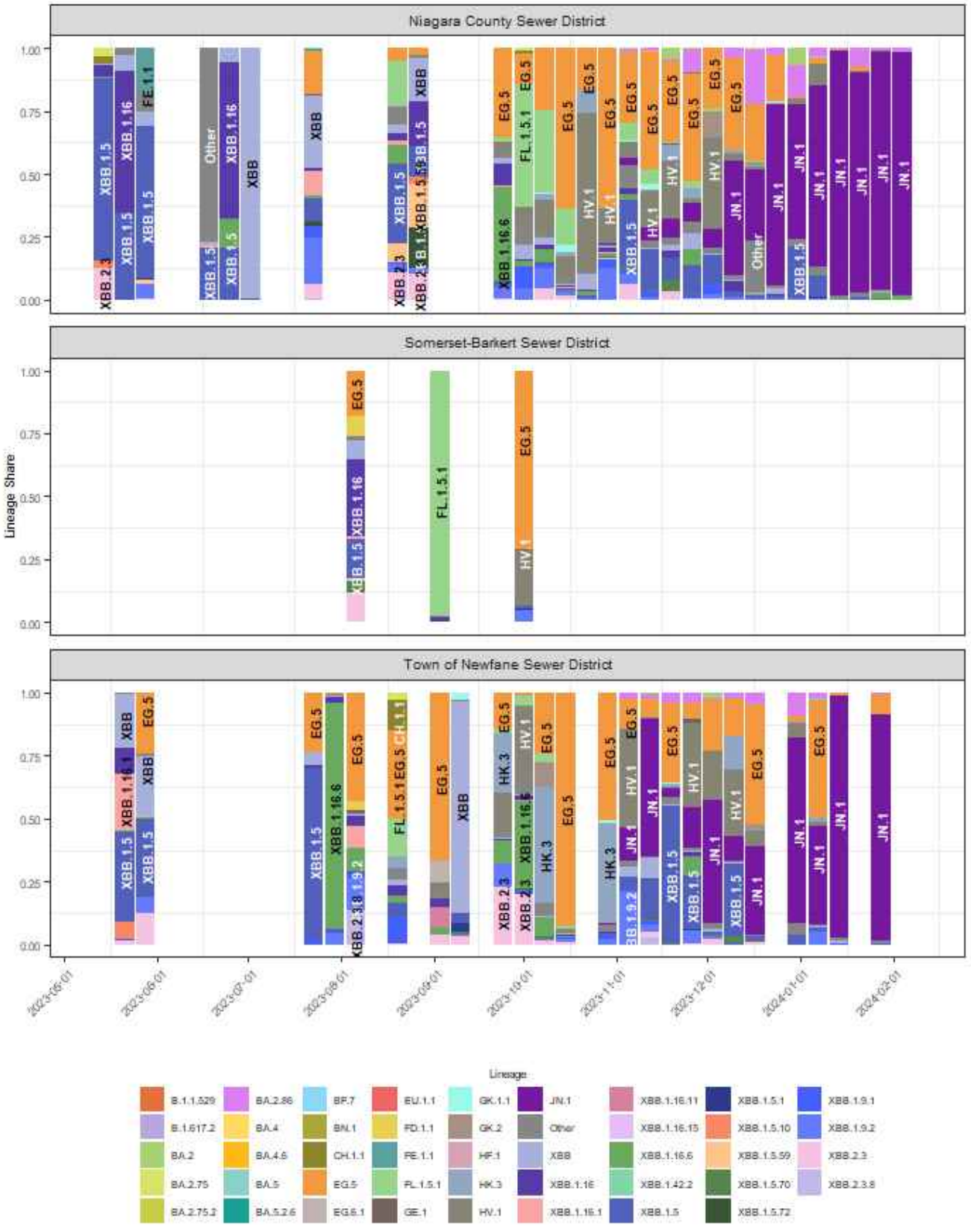
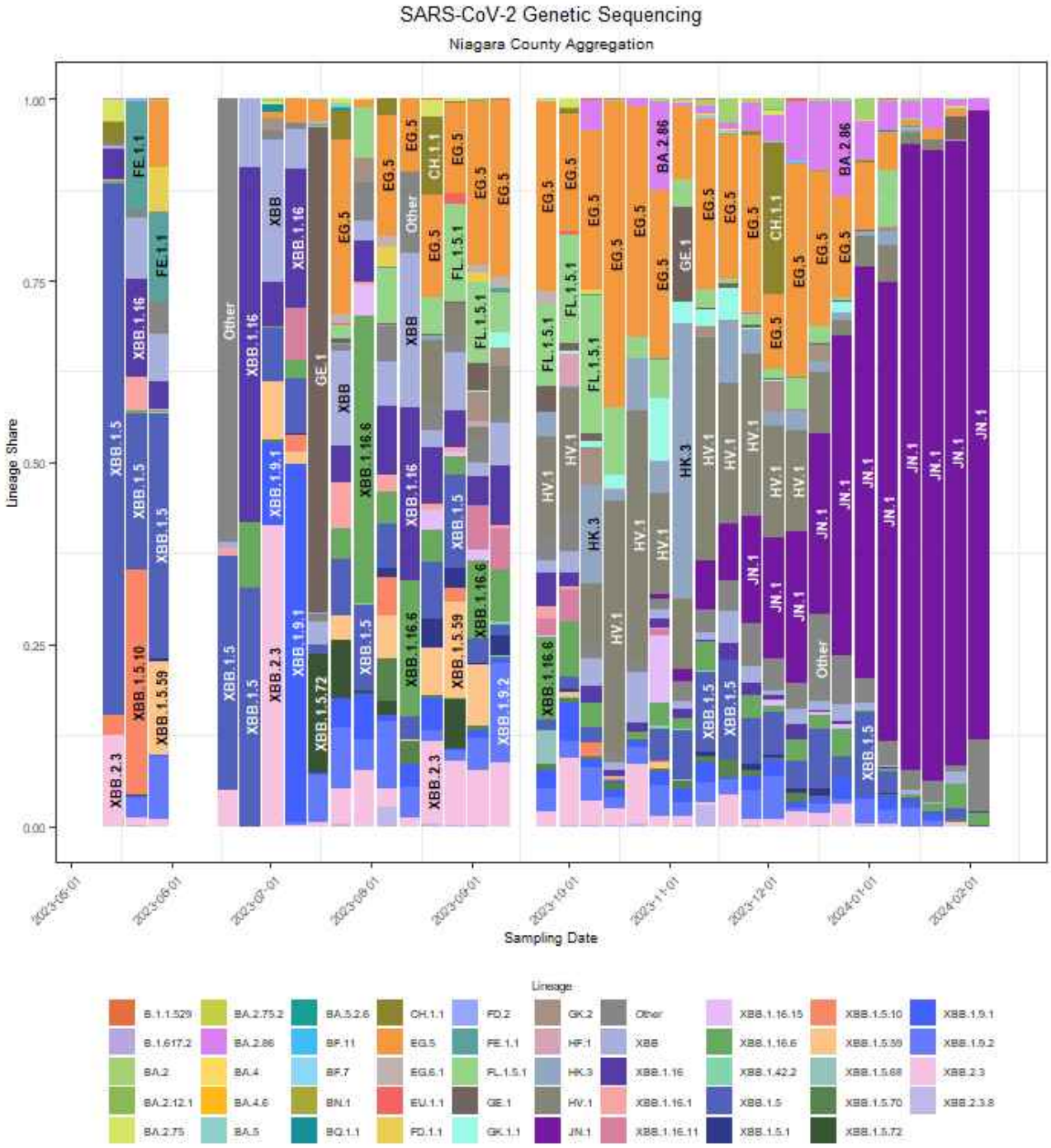
XBB.2.3
XBB.2.3.8



Sewershed level of SARS-CoV-2 genetic sequencing throughout time

Each bar shows the relative abundance of SARS-CoV-2 lineages during a sample collection date. Lineages with an abundance of at least 20% are labeled on the bar sections with the lineage name. The color of the bar corresponds to lineage. See the legend for more information regarding lineages.



County aggregation of SARS-CoV-2 genetic sequencing throughout time

Each bar shows the relative abundance of SARS-CoV-2 lineages per sample collection date. Lineages with an abundance of at least 20% are labeled on the bar sections with the lineage name. The color of the bar corresponds to lineage. See the legend for more information regarding lineages.

MINUTES

Business Meeting of the Niagara Falls Water Board March 4, 2024 at 5:00 p.m.

Water Treatment Plant Conference Room
5815 Buffalo Avenue, Niagara Falls New York 14304

Meeting could be attended in person or via videoconference.

1. **Preliminary Matters**

Chairman Forster called the meeting to order at 5:00 p.m.

a. **Attendance:**

Asklar (Board Member/Chairman of Finance/Member Exec. Staff Review Cmte.) ***Present***

Forster (Chairman) ***Present***

Kimble (Board Member) ***Present via Videoconference***

Larkin (Board Member/Vice Chairwoman/Governance Chairwoman/ Chairwoman Exec. Staff Review Cmte.) ***Present***

Leffler (Board Member/Member Exec. Staff Review Cmte.) ***Present via Videoconference***

b. **Public Comments (All speakers must register with the meeting clerk prior to roll call and are limited to three minutes per person – total time for all speakers may not exceed one hour).**

c. **Comments from Chairman Forster**

i. **2024 Budgeted Expenses - Expenditures of User Rates, Fees, and Charges Less Debt Service**

d. **Presentations (none scheduled)**

e. **Letters and Communications**

i. **2024-02-16 - COVID Wastewater Surveillance Update Memorandum**
ii. **WWTP Order on Consent Q4 2023 Quarterly Progress Report**

f. **Prior Meeting Minutes**

i. **Draft January 22, 2024 Meeting Minutes**

Motion by Board Member Larkin and seconded by Board Member Asklar to approve the January 22, 2024 meeting minutes.

Asklar __Y__Forster __Y__Kimble__Y__Larkin__Y__Leffler__Y __

Motion carried, 5-0.

2. **Acting Executive Director – Michael Eagler**

a. **WWTP Project Budget Tracker (CPL)**
b. **WWTP Construction Schedule Tracker (CPL)**
c. **Financial Award Summary (CPL)**

Mr. Eagler noted that review of the Emergency Action Plan ("EAP") has been completed. Several minor revisions have been identified and will be addressed before a revised version of the EAP is finalized and distributed.

3. **Operations Executive – David Conti**

a. **Confined Space Inventory / Procurement of Fall Arrest Equipment**

Mr. Conti noted that updated fall arrest equipment is on order.

In connection with the Lead Service Line inventory, crews will be hydro-excavating and we have developed an application to enter service line material data into the system.

For the hydrant replacement program, the 2024 goal is 100 hydrants, 25 are completed.

4. **Outside Infrastructure Updates – Cortez Bradberry**

5. **Engineering – Douglas Williamson**

    a. **Update on Capital Projects RFP**

Mr. Williamson informed the Board that seven proposals were received. Staff is reviewing the proposals and expects to recommend award of several projects to one consultant. This may be more efficient and reduce inspection-related costs.

6. **Personnel Items – David San Lorenzo**

    a. **March 4, 2024 Personnel Actions**
    b. **Union Time Paid by Water Board**

Mr. San Lorenzo stated that Union Time utilization compares similarly to last year at this time.

Motion by Board Member Larkin and seconded by Board Member Asklar to approve Sections A and B on the Personnel Actions report.

Asklar __Y__Forster __Y__Kimble__Y__Larkin__Y__Leffler__A__ (internet disconnection)

Motion carried, 4-0.

7. **Information Technology (IT) – Jonathan Joyce**

Mr. Joyce reported that IT has deployed Darktrace monitoring software and implemented a change to prevent bad actors from spoofing the NFWB.org email domain. CISA has been scanning our systems, no critical or high vulnerability issues have been identified. IT has deployed some Windows 11 computers, beginning to prepare for the end of Windows 10 support next year.

8. **Finance – Brian Majchrowicz**

    a. **Audit Status Update**
    b. **Key Bank and Bank on Buffalo Balance Report**
    c. **Wilmington Trust Balance Report**
    d. **Treasury Account Balance Report**
    e. **January 2024 Capital Payments**
    f. **Revenue Budget Performance Report through 12/31/2023**
    g. **Sewer Fund Expense Budget Performance Report through 12/31/2023**
    h. **Water Fund Expense Budget Performance Report through 12/31/2023**
    i. **Board Fund Expense Budget Performance Report through 12/31/2023**
    j. **Budget Amendments Report**

Mr. Majchrowicz reported that the audit is progressing well and is anticipated to be completed on time for approval at the March 25 Board meeting.

9. **Questions Regarding January 2024 Operations and Maintenance Report**

10. **Safety – John Accardo**

Mr. Accardo noted that a process safety analysis for the Water Treatment Plant disinfection process is underway.

11. **General Counsel and Secretary – Sean Costello**

12. **From the Chairman**

13. **Resolutions**

2024-03-001 – PROCUREMENT FROM NYS OFFICE OF GENERAL SERVICES INFORMATION TECHNOLOGY UMBRELLA CONTRACT

a. **2024-01-19 - Insight Quotation for Verkada, No. 0227038940**

Motion by Board Member Kimble and seconded by Board Member Larkin to approve.

Asklar __Y__Forster __Y__Kimble__Y__Larkin__Y__Leffler__Y__

Motion carried, 5-0.

2024-03-002 – AWARD BID FOR WTP EMERGENCY CHLORINE SCRUBBER

a. **WTP Chlorine Scrubber Bid Award Recommendation Letter and Bid Tabulation**

Motion by Board Member Leffler and seconded by Board Member Larkin to approve.

Asklar __Y__Forster __Y__Kimble__Y__Larkin__Y__Leffler__Y__

Motion carried, 5-0.

2024-03-003 – AUTHORIZING SETTLEMENT OF PERSONAL-INJURY LITIGATION WITH WILLIAM LOBIANCO

Motion by Board Member Larkin and seconded by Board Member Asklar to approve.

Asklar __Y__Forster __Y__Kimble__Y__Larkin__Y__Leffler__Y__

Motion carried, 5-0.

2024-03-004 – AUTHORIZING CPL SERVICES FOR REPLACEMENT OF ADDITIONAL SECTION OF 77TH STREET WATER MAIN

a. **2024-01-19 - CPL Proposal for Engineering Services to Add to 77th Street Water Main Replacement Project**
b. **77th Street Water Main Replacement Location Map**

Motion by Board Member Larkin and seconded by Board Member Leffler to approve.

Asklar __Y__Forster __Y__Kimble__Y__Larkin__Y__Leffler__Y__

Motion carried, 5-0.

2024-03-005 – PROJECT 1 CHANGE ORDER FOR WWTP SEDIMENTATION BASIN NO 2 CATWALK CONCRETE REPAIRS *

Note: This is Resolution No. 2024-01-004, renumbered but otherwise the same as resolution tabled at January 22, 2024 meeting.

a. **2024-01-09 - Hohl Proposal for Sedimentation Basin No 2 Catwalk Concrete Repairs**

Chairman Forster stated the Board still has no way to know if this price is good, or high. He wants three bids.

Mr. Eagler noted that JM Davidson engineering has been asked to review whether full replacement is needed, or if less extensive repairs are possible.

Motion by Board Member Forster and seconded by Board Member Kimble to table this Resolution.

Asklar __Y__Forster __Y__Kimble__Y__Larkin__Y__Leffler__Y__

Motion to table carried, 5-0.

14. Unfinished/Old Business

15. New Business & Additional Items for Discussion

16. Executive Session (if needed)

17. Adjournment of Meeting

Motion by Board Member Larkin and seconded by Board Members Leffler and Kimble to adjourn the meeting at 5:26 p.m.

Asklar __Y__Forster __Y__Kimble__Y__Larkin__Y__Leffler__Y__

Motion carried, 5-0.

Niagara Falls Water Board (NFWB) Overall Project Budget Summary (Phase 1 Overall Budget = $27M)

Last Updated: 3/11/2024

Key	
Not approved	
Preliminary Estimate	

Project	Scope	Budget	Scope/Vendor	Estimated/ Final	% Billed	Recent Work Update
1	Sedimentation Basin Upgrades	$10,390,000	Design and Bidding **(AECOM - Approved)**	$409,000	100%	Hohl remobilized early March for work again on basin #2.
			CA & CI **(CPL - Approved)**	$470,000	94%	
			GEN Construction **(Hohl - Per Bid - Approved)**	$9,410,228	75%	
			ELEC Construction **(CIR - Per Bid - Approved)**	$922,769	81%	
			Project Total	**$11,211,997**	**77%**	
			Remaining Budget	**($821,997)**		
3	Screens and Grit Transportation Equipment Improvements	$1,920,000	Design and Bidding **(Arcadis - Approved)**	$166,785	100%	Nussbaumer & Clarke to investigate and finish the project. Meeting to be held with N&C, contractor and NFWB.
			CA & CI **(Arcadis - Approved)**	$217,750	95%	
			GEN Construction **(Hohl - Per Bid - Approved)**	$1,549,833	82%	
			ELEC Construction **(CIR - Per Bid - Approved)**	$205,122	93%	
			Project Total	**$2,139,490**	**86%**	
			Remaining Budget	**($219,490)**		
5	Electrical System Improvements	$2,610,000	Design/E.I. Team - **Approved**	$102,120	100%	Transformer 4A &4B installed. Transformer 5 installation estimated April/May.
			Phase 2 Design - **Approved**	$198,941	100%	
			Task 1 Construction - Ferguson - **Approved**	$253,307	71%	
			Task 2 Construction - Ferguson - **Approved**	$1,491,000	0%	
			Project Total	**$2,045,368**	**23%**	
			Remaining Budget	**$564,632**		
10	SCADA Improvements	$498,650	Phase 1 Design/ Construction/Kaman - **Approved**	$352,450	78%	Kaman continues SCADA integration work with Capital Project contractors.
			Phase 2 Design/ Construction - **Approved (For Project #6)**	$146,200		
			Running Total	**$498,650**	**78%**	
			Remaining Budget	**$0**		
Phase 1 Budget Total =		**$27,000,000**	**Anticipated Total Cost (Percentage of Total Budget)**	**$26,104,799**	**Remaining Ph. Budget**	**$895,201**

Niagara Falls Water Board (NFWB) Overall Capital Project Budget Summary (Phase 2 Overall Budget = $13M)

Key	
Not approved	
Preliminary Estimate	

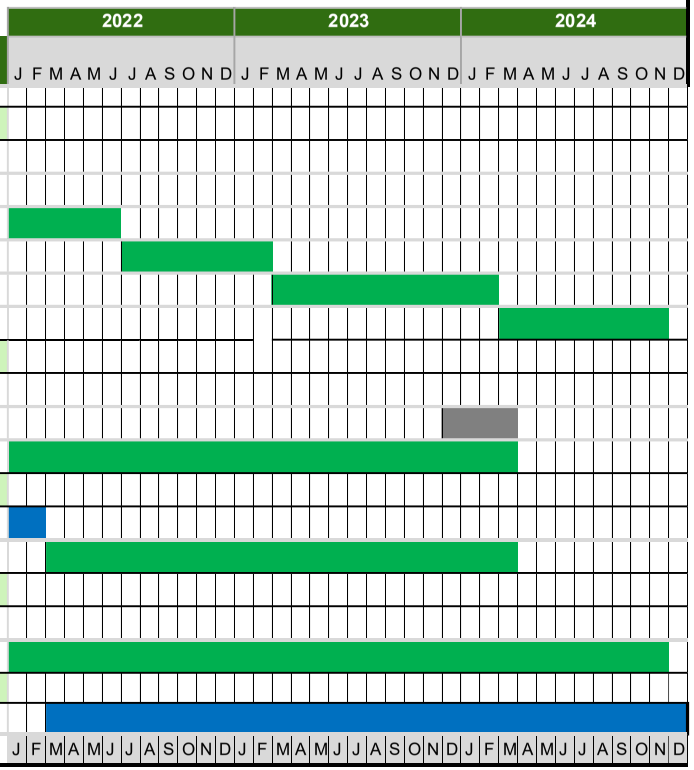
Project	Scope of Work	Budget	Scope/Vendor	Estimated Task	% Billed	Recent Work Update
2B	Outfall	$1,700,000	Design, Bidding, and CA/CI **(GHD - Approved)**	$37,400	100%	(See Project #2 Update)
			GEN Construction (**STC - Per Bid - Approved)**	$562,000	95%	
			Running Total	**$599,400**	**95%**	
			Remaining Budget	**$1,100,600**		
12	Intermediate Pumps Upgrades	$3,075,000	Intermediate Pump Assessment **(GHD - Approved)**	$21,716	Final	RFP is prepared to be send out.
			Running Total	**$21,716**	**Final**	
			Remaining Budget	**$3,053,284**		
Ph. 2 Budget = $13,000,000			**Phase 2 Running Total**	**$4,499,123**		
*Updated to reflect full available Phase 2 Budget, grant not yet approved			**Phase 2 Remaining Budget**	**$8,500,877**		

ESTIMATED CONSTRUCTION SCHEDULE

NFWB CAPITAL IMPROVEMENT PROJECTS

Updated: 3/11/24

TASK DESCRIPTION	PLAN START	PLAN END
Project #1: Sed. Basin Upgrades (CPL) - CA/CI Approved (10-26-20)		
Design and Bidding	5/22/2019	10/1/2020
Mobilization	11/1/2020	2/1/2021
Construction (Phase 1)	3/1/2021	6/30/2022
Construction (Phase 2)	7/1/2022	2/3/2023
Construction (Phase 3)	3/1/2023	2/3/2024
Construction (Phase 4)	3/1/2024	11/30/2024
Project #3 Polymer and Grit (Arcadis) - CA/CI Approved (10-26-20)		
Design and Bidding	5/30/2019	10/1/2020
Updated Design	12/1/2023	3/31/2024
Construction	11/1/2020	3/31/2024
Project #5 Electrical System Improvements (EI Team)		
Design and Bidding	4/25/2019	2/1/2022
Construction	3/1/2022	3/31/2024
Project #10 SCADA Improvements (Kaman) - CA Services Not Required		
Design and Bidding	6/1/2019	12/1/2019
Construction	1/1/2020	11/30/2024
Project #12 Int. Pump Improvements (GHD)		
Design	3/23/2022	8/23/2022 (RFP Pending)



NFWB Financial Award Summary

Last Updated: 3/11/24

Note: Changes from last summary are in red text

Description	Amount	Source	Status
AWARDED			
Various Watermain Improvements 2018 GRANT Portion	$5,495,000 total $3,000,000 grant $2,495,000 loan 2/11/21 Agreement Date **2/11/26 use funds by**	NYS EFC DWSRF 18588	City Engineer and Urban Engineers started design on two streets. CPL is involved with;18th Street completed, Whitney Ave project canceled, 77th Street under final design.
Various Watermain Improvements 2018 LOAN Portion	$5,495,000 total $3,000,000 grant $2,495,000 loan	NYS EFC DWSRF 18588	City Engineer and Urban Engineers started design on two streets. CPL is involved with;18th Street completed, Whitney Ave project canceled, 77th Street under final design.
Sewer Plant Phase 1 Improvements	$13,500,000 grant	NYS DASNY ID #15688	Awarded. Reimbursements received that total $8.9 million. CPL sent reimbursement request of $663,000.
Sewer Plant Phase 1 Improvements	$13,500,000 loan long term $27,000,000 loan short term	NYS EFC #C9-6603-12-00	Financial agreement has been processed April 2021. Disbursement request #1 for $1.6 million has been received by NFWB. EFC approved 2nd request paperwork in amount of $8.8 million, payment remitted. CPL submitting reimbursement #3 for request for $4.3 million. CPL to provided EFC with document collection items.
Sewer Plant Phase 2 Improvements	$13,000,000 total $6,500,000 grant	NYS DASNY	Projects 2B, 11A, 11B and 12 are allowed to access this funding. Email sent to DEC 5/4/23 requesting projects to use remaining funds for. NFWB desires scope changed to include new belt press. NFWB & CPL to review extra work list, then get DEC approval.
LaSalle Sewer Area Phase 2 system report update & flow monitoring	$250,000 total $100,000 grant $150,000 NFWB Match	NYSDEC Engineering Planning Grant	Application submitted 7/30/21. Grant awarded December 2021. May 2022 conference call with NFWB, DEC and EFC. NYS okay with revised schedule. EFC approved Arcadis agreement 3/13/23.
LaSalle Sewer Area Phase 2 Construction	$1,000,000 total $800,000 grant $200,000 NFWB match	NYSDEC WQIP C01522GG #111619	Application submitted 7/30/21. Grant awarded December 2021. May 2022 conference call with NFWB, DEC and EFC. NYS okay with revised schedule. Possible improvements can be done in 2022 or 2023. NFWB staff working with DEC for agreement paperwork.

NFWB Financial Award Summary

Last Updated: 3/11/24

Note: Changes from last summary are in red text

Description	Amount	Source	Status
LaSalle Sewer Area Phase 2 Construction	$1,018,400 total $509,200 BIL grant $509,200 loan	NYS EFC CWSRF C9-6603-13-00	Application made to Intended Use Plan and listed. Funding can be for short & long terms to help assists with above WQIP grant. Bond resolution sent to EFC 12/23/22. EFC sent missing items letter 2/9/23. 4/25/23 conf call with NFWB, EFC and DEC to discuss missing items. **NFWB to provide requested information.** EFC awarded 50% BIL grant & NFWB accepted Jan 2024. NFWB to reconnect with DEC and figure out possible construction projects.

NFWB Financial Award Summary

Last Updated: 3/11/24

Note: Changes from last summary are in red text

Description	Amount	Source	Status
Drinking Water Fluoridation Component 1 (Planning Study for water plant upgrades)	$25,000 grant	NYS Division of Family Health #T37250GG	Application submitted 10/1/21. Planning grant awarded 2/7/22. Requested paperwork provided to DOH 3/7/22. NFWB sent quarterly report to DOH 11/7/22. NFWB obtained proposal and awarded study. **Provide remaining paperwork to NYS once study complete.**
2021 Various Watermain & System Improvements	$10,025,000 total $3,000,000 grant $7,025,000 loan	NYS EFC DWSRF 19056	Board approved resolution 10/25/21. Application to EFC made 11/19/21. Funding awarded April 2022, NFWB accepted 5/13/22. EFC sent missing items letter 3/2/23 and request response by 3/31/23. 4/25/23 conf call with NFWB, EFC and DEC to discuss missing items. EFC approved extension on 9/27/23 to get agreement processed by 9/30/25. **NFWB reviewing proposals from design consultants and consider award. Then provide contract information to EFC.**
2021 Various Sewer & System Improvements	$4,500,000 total $2,250,000 BIL grant $2,250,000 loan	NYS EFC CWSRF C9-6603-14-00	Board approved resolution 10/25/21. Application to EFC made 11/19/21. Funding awarded April 2022, NFWB accepted 5/13/22. EFC to send draft agreement for review. EFC requesting information on backup generator. CPL working with suppliers and staff. EFC sent missing items letter 2/3/23 and request response by 2/28/23. 4/25/23 conf call with NFWB, EFC and DEC to discuss missing items. NYS EFC sent letter 1/8/24 noting that BIL grant money is available. This is 50% grant match rather than typical 25% under WIIA program. NFWB responded by 1/19/24. **NFWB reviewing proposals from design consultants and consider award. Then provide contract information to EFC.**
2022 Various Sewer & System Improvements	$5,400,000 total $2,700,000 BIL grant $2,700,000 loan	NYS EFC CWSRF C9-6603-16-00	NFWB staff & CPL met 3/7/22 to discuss. EFC submission deadline 9/9/22. Application submitted 9/8/22. EFC announced award 11/4/22. NFWB accepted award 11/16/22. EFC sent missing items letter 2/10/23 and request response by 3/10/23. 4/25/23 conf call with NFWB, EFC and DEC to discuss missing items. NYS EFC sent letter 1/8/24 noting that BIL grant money is available. This is 50% grant match rather than typical 25% under WIIA program. NFWB responded by 1/19/24. **NFWB reviewing proposals from design consultants and consider award. Then provide contract information to EFC.**

NFWB Financial Award Summary

Last Updated: 3/11/24

Note: Changes from last summary are in red text

Description	Amount	Source	Status
2022 Lead Service Line Removal Bipartisan Infrastructure Law (BIL)	$472,780 grant	NYS EFC DWSRF	Program offers funds to replace lead service lines from main to house. NFWB staff elected to submit 8/18/22. Application and report submitted 8/31/22. NFWB is listed on Intended Use Plan. DOH sent award letter 6/30/23. NFWB needs to submit required items so agreement can be processed. For this, request for engineering proposals to assist in preparing inventory is required. **Inventory due to DOH by 10/16/24.**
2023 Various Watermain & System Improvements	$15,240,000 total $5,000,000 grant possible $10,240,000 loan	NYS EFC DWSRF 18587	Submission made 8/11/23. Grant award letter sent from EFC 12/12/23. NFWB accepted. **EFC sent missing items request letter 2/14/24. NFWB to respond by 3/11/24.**
2023 Various Sewer & System Improvements	$650,000 total $162,000 grant possible $487,500 loan	NYS EFC CWSRF C9-6603-17-00	Submission made 8/11/23. Grant award letter sent from EFC 12/12/23. NFWB accepted.

NFWB Financial Award Summary

Last Updated: 3/11/24

Note: Changes from last summary are in red text

Description	Amount	Source	Status
Large Funding Request Sewer Plant Biological Conversion	$250,000,000 Total To be 3 parts $20 mill loan (design) $10,000,000 BIL grant $10,000,000 loan $100 mill (construction part 1) $9,540,800 BIL grant $130 mill (construction part 1)	NYS & Federal	Effort underway with officials for request. Several meetings with officials and WNY funding delegation. CPL submitted financial application to EFC IUP list 1/11/21. Funding request submitted to Senator Schumer 4/9/22. EFC Intended Use Plan listing updated 6/7/22. Meeting between NFWB, EFC and DEC 4/26/23 to discuss conversion. $20 million loan request made to EFC IP on 6/16/23. $100 million EFC WIIA & BIL application made on 8/11/23 for $25 million WIIA and $25 million BIL grants. $10 million grant application submitted to CFA WQIP program on 8/11/23. Anticipate awards late 2023. For $20 million EFC loan to assist with design, EFC sent NFWB letter 11/8/23 requesting missing items or response by 11/30/23. NFWB to submit response. EFC sent 1/8/24 noting BIL grant funding available for following. NFWB responded by 1/19/24. - $10,000,000 grant for initial $20 million design listing - $9,540,800 grant for first $100 million construction listing CPL to assist NFWB in submitting again congressional spending requests to Schumer and Gillibrand.

NFWB Financial Award Summary

Last Updated: 3/11/24

Note: Changes from last summary are in red text

Description	Amount	Source	Status
FUTURE			
Local Government Records Management Improvement	Grant, varies. Up to $150,000 if submit with City	NYS Archives	Recommend NFWB partner with City to maximize grant award. If City not interested, NFWB should make application by themselves. Application period anticipated to be early 2021. NFWB met with City Feb 2021 to discuss. CPL awaiting direction.
Local Government Efficiency Program	Grant, varies. Up to $150,000 if submit with City	NYS DOS	For projects that will achieve improvements between NFWB and other entities such as County, City, Public Safety, etc. NFWB met with City Feb 2021 to discuss. CPL awaiting direction.
Large Funding Request Lead Removal	$70,000,000	NYS & Federal	Prior meetings with officials and WNY funding delegation. Recommend revisiting once lead service line inventory is finished. NYS will has program to replace lead services.
Drinking Water Fluoridation Component 2 (construction funds for water plant upgrades)	up to $1,000,000 grant	NYS Division of Family Health	To be submitted for once study prepared and approved by NYS. NYS has open submissions through 2028.
Water System Pipe Condition Assessment & Real Time Analysis			NFWB staff & CPL discussed 3/7/22 desire to perform assessments within water system. NFWB previously received proposals, however they were cost prohibitive. CPL to see if any funding programs available.
Additional Lead Removal Funding Programs			NFWB staff met with Senator Gillibrand staff 8/22 and obtained information on several funding programs. CPL to investigate and provide response for possible opportunities.

Niagara Falls Water Board

Personnel Actions and Report

Monday, March 25, 2024

Personnel Actions Sheet & Requested of the Board.
All appointments are subject to the appointee meeting the minimum qualifications and all applicable civil service conditions.

A. PERSONNEL ACTIONS RECOMMEND TO HIRE

Line Item Number	Position	Department/Location	Pay Rate or Grade	ADDITIONAL INFORMATION

B. RECOMMENDED PROMOTION / MOVE / APPOINTMENT

Line Item Number	Name and Position	Type of labor move	Change in pay rate or grade	ADDITIONAL INFORMATION
1	Matthew LaGamba Senior Industrial Waste Inspector	Appointment	From $27.91/hr to $29.36/hr	Succession planning. Appointee is currently an Industrial Waste Inspector.

C. PREVIOUSLY TABLED PERSONNEL ACTIONS

Line Item Number	Action and Position	Department/Location	Pay Rate or Grade	ADDITIONAL INFORMATION

D. OTHER PERSONNEL ACTIVITY FOR BOARD NOTIFICATION

Name	Position	Department/Location	Pay Rate	ADDITIONAL INFORMATION

E. PERSONNEL ON LONG TERM LEAVE OF ABSENCE

Name	Last Day Worked	Dept.	Return Status	Comments
CMM	12/1/2023	Inside Maint	Unknown	Workers Comp.

2024 Year to Date - NFWB Paid Time Off for Union Business

Employee	Hours of NFWB Paid Union Time	Wages	Benefits	Total Including Benefits
USW Employee 1	54.00	$1,401.63	$540.00	$1,941.63
USW Employee 2	24.00	$633.80	$240.00	$873.80
USW Employee 3	6.00	$143.70	$60.00	$203.70
USW Employee 4	6.00	$150.36	$60.00	$210.36
USW Employee 5	7.00	$166.18	$70.00	$236.18
USW Employee 6	6.00	$175.36	$162.00	$337.36
USW Employee 7	6.00	$187.90	$162.00	$349.90
USW Employee 8	48.75	$1,658.41	$487.50	$2,145.91
USW Employee 9	36.00	$730.39	$360.00	$1,090.39
IBEW Employee	30.00	$956.10	$510.00	$1,466.10
	223.75	**$6,203.83**	**$2,651.50**	**$8,855.33**
Time Period: January 1, 2024 through March 3, 2024				

Revenue Budget Performance Report

Fiscal Year to Date 02/29/24
Exclude Rollup Account

Account	Account Description	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **FA - Water Board - Water**										
	REVENUE									
Departmental Income										
2122.001	Visual Inspections	45,000.00	.00	45,000.00	2,520.00	.00	7,442.50	37,557.50	17	5,100.00
2140.001	District 1	2,101,006.00	.00	2,101,006.00	1,249.92	.00	485,409.92	1,615,596.08	23	(154,835.71)
2140.002	District 2	2,546,082.00	.00	2,546,082.00	585,063.53	.00	586,255.21	1,959,826.79	23	176.00
2140.003	District 3	1,909,562.00	.00	1,909,562.00	819.84	.00	1,603.84	1,907,958.16	0	(297,604.90)
2140.004	Non-Resident	42,000.00	.00	42,000.00	12,245.39	.00	12,245.39	29,754.61	29	12,137.90
2140.005	Industrial	3,591,522.00	.00	3,591,522.00	283.24	.00	690,392.82	2,901,129.18	19	(218,115.07)
2140.006	Industrial SIU	3,189,405.00	.00	3,189,405.00	.00	.00	611,202.96	2,578,202.04	19	.00
2140.008	Hydrant Usage	6,000.00	.00	6,000.00	.00	.00	58.24	5,941.76	1	336.17
2140.599	Miscellaneous Departmental Incom	5,000.00	.00	5,000.00	.00	.00	250.00	4,750.00	5	1,000.00
2141.000	Allowance for Unpaid Trfd	(200,000.00)	.00	(200,000.00)	.00	.00	34,818.42	(234,818.42)	-17	18,392.27
2144.003	Fire Service	91,000.00	.00	91,000.00	.00	.00	.00	91,000.00	0	.00
2144.005	Service Charge	455,000.00	.00	455,000.00	32,467.90	.00	86,635.30	368,364.70	19	87,940.21
2144.006	Lab Analysis	35,000.00	.00	35,000.00	633.00	.00	1,241.00	33,759.00	4	2,477.07
2144.008	Missing Meter Charge	20,000.00	.00	20,000.00	1,360.00	.00	6,384.50	13,615.50	32	4,658.50
2144.009	Mtr Install/Reinstall/Reactivate	5,000.00	.00	5,000.00	275.00	.00	450.00	4,550.00	9	800.00
2144.010	Final Meter Read/Inspect	18,000.00	.00	18,000.00	1,175.00	.00	2,350.00	15,650.00	13	2,225.00
2144.012	Backflow Certification	7,500.00	.00	7,500.00	900.00	.00	2,210.00	5,290.00	29	1,730.00
2148.001	District 1	92,942.00	.00	92,942.00	13,383.24	.00	13,383.24	79,558.76	14	14,326.02
2148.002	District 2	65,340.00	.00	65,340.00	9,219.83	.00	9,219.83	56,120.17	14	9,190.75
2148.003	District 3	65,561.00	.00	65,561.00	.00	.00	14,263.63	51,297.37	22	14,260.35
2148.004	Non-Resident	1,000.00	.00	1,000.00	586.41	.00	586.41	413.59	59	157.01
2148.005	Industrial	25,000.00	.00	25,000.00	3,243.78	.00	3,243.78	21,756.22	13	4,373.33
2148.006	Industrial SIU	7,638.00	.00	7,638.00	37.98	.00	37.98	7,600.02	0	.00
2148.599	Penalty - Miscellaneous	1,500.00	.00	1,500.00	.03	.00	(22.74)	1,522.74	-2	.06
	Departmental Income Totals	$14,126,058.00	$0.00	$14,126,058.00	$665,464.09	$0.00	$2,569,662.23	$11,556,395.77	18%	($491,275.04)
Intergovernmental Charges										
2230.A	City of Niag Falls-Generl	230,102.00	.00	230,102.00	.00	.00	.00	230,102.00	0	.00
	Intergovernmental Charges Totals	$230,102.00	$0.00	$230,102.00	$0.00	$0.00	$0.00	$230,102.00	0%	$0.00
Use Of Money & Property										
2401.000	Interest Earnings	200,000.00	.00	200,000.00	.00	.00	.00	200,000.00	0	22,869.99
	Use Of Money & Property Totals	$200,000.00	$0.00	$200,000.00	$0.00	$0.00	$0.00	$200,000.00	0%	$22,869.99
Licenses And Permits										
2550.006	Cellular Towers	210,000.00	.00	210,000.00	13,236.53	.00	26,399.93	183,600.07	13	32,024.23
2590.004	Hydrant Permits & Rentals	9,000.00	.00	9,000.00	.00	.00	98.50	8,901.50	1	1,725.64
	Licenses And Permits Totals	$219,000.00	$0.00	$219,000.00	$13,236.53	$0.00	$26,498.43	$192,501.57	12%	$33,749.87
Sale Of Prop/Cmp For Loss										
2650.000	Sale Of Scrap	5,000.00	.00	5,000.00	.00	.00	.00	5,000.00	0	530.61
2665.000	Sale-Equipment	2,723.00	.00	2,723.00	.00	.00	.00	2,723.00	0	.00

Revenue Budget Performance Report

Fiscal Year to Date 02/29/24
Exclude Rollup Account

Account	Account Description	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **FA - Water Board - Water**										
	REVENUE									
	Sale Of Prop/Cmp For Loss Totals	$7,723.00	$0.00	$7,723.00	$0.00	$0.00	$0.00	$7,723.00	0%	$530.61
Misc Local Sources										
2701.000	Refund Appro Exp Prior Yr	.00	.00	.00	(61.94)	.00	(61.94)	61.94	+++	15.50
2770.001	NSF Check Charge	8,000.00	.00	8,000.00	1,400.00	.00	1,925.00	6,075.00	24	1,365.00
2770.599	Undesignated	8,000.00	.00	8,000.00	.00	.00	.00	8,000.00	0	.00
	Misc Local Sources Totals	$16,000.00	$0.00	$16,000.00	$1,338.06	$0.00	$1,863.06	$14,136.94	12%	$1,380.50
Interfund Revenues										
2801.GA	Interfd Rev WtrBd-Sewr	.00	.00	.00	.00	.00	35,635.10	(35,635.10)	+++	.00
	Interfund Revenues Totals	$0.00	$0.00	$0.00	$0.00	$0.00	$35,635.10	($35,635.10)	+++	$0.00
	REVENUE TOTALS	$14,798,883.00	$0.00	$14,798,883.00	$680,038.68	$0.00	$2,633,658.82	$12,165,224.18	18%	($432,744.07)
	Fund **FA - Water Board - Water** Totals	$14,798,883.00	$0.00	$14,798,883.00	$680,038.68	$0.00	$2,633,658.82	$12,165,224.18		($432,744.07)

Revenue Budget Performance Report

Fiscal Year to Date 02/29/24
Exclude Rollup Account

Account	Account Description	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **GA - Water Board - Sewer**										
	REVENUE									
Departmental Income										
2120.001	District 1	2,840,321.00	.00	2,840,321.00	1,654.47	.00	644,199.62	2,196,121.38	23	(204,688.96)
2120.002	District 2	3,329,002.00	.00	3,329,002.00	777,755.08	.00	779,332.46	2,549,669.54	23	165.72
2120.003	District 3	2,605,234.00	.00	2,605,234.00	1,085.19	.00	2,122.94	2,603,111.06	0	(397,716.02)
2120.005	Industrial CSIRU	4,629,652.00	.00	4,629,652.00	77.09	.00	942,148.34	3,687,503.66	20	(346,410.84)
2120.006	Industrial SIU	12,000,000.00	.00	12,000,000.00	989,658.25	.00	749,801.42	11,250,198.58	6	(1,033,952.88)
2120.008	Hydrant Usage	10,000.00	.00	10,000.00	.00	.00	77.09	9,922.91	1	445.03
2120.102	Town Of Niagara	688,434.00	.00	688,434.00	.00	.00	272,716.76	415,717.24	40	159,410.79
2122.002	Dye Tests	50,000.00	.00	50,000.00	2,520.00	.00	7,442.50	42,557.50	15	5,100.00
2128.001	District 1	124,420.00	.00	124,420.00	17,740.23	.00	17,716.52	106,703.48	14	19,097.69
2128.002	District 2	70,017.00	.00	70,017.00	12,206.88	.00	12,206.88	57,810.12	17	11,982.64
2128.003	District 3	86,948.00	.00	86,948.00	.00	.00	19,148.19	67,799.81	22	18,844.68
2128.005	Industrial	25,000.00	.00	25,000.00	5,081.73	.00	5,081.73	19,918.27	20	6,033.45
2128.006	Industrial SIU	20,368.00	.00	20,368.00	2,948.25	.00	2,948.25	17,419.75	14	119.67
2141.000	Allowance for Unpaid Trfd	(200,000.00)	.00	(200,000.00)	.00	.00	45,301.81	(245,301.81)	-23	23,103.89
	Departmental Income Totals	$26,279,396.00	$0.00	$26,279,396.00	$1,810,727.17	$0.00	$3,500,244.51	$22,779,151.49	13%	($1,738,465.14)
Use Of Money & Property										
2401.000	Interest Earnings	200,000.00	.00	200,000.00	.00	.00	.00	200,000.00	0	22,869.98
	Use Of Money & Property Totals	$200,000.00	$0.00	$200,000.00	$0.00	$0.00	$0.00	$200,000.00	0%	$22,869.98
Licenses And Permits										
2590.006	SIU 5-Yr Permits	4,600.00	.00	4,600.00	.00	.00	.00	4,600.00	0	.00
	Licenses And Permits Totals	$4,600.00	$0.00	$4,600.00	$0.00	$0.00	$0.00	$4,600.00	0%	$0.00
Fines And Forfeits										
2620.000	Forfeitures Of Deposits	500.00	.00	500.00	.00	.00	.00	500.00	0	.00
	Fines And Forfeits Totals	$500.00	$0.00	$500.00	$0.00	$0.00	$0.00	$500.00	0%	$0.00
Sale Of Prop/Cmp For Loss										
2650.000	Sale Of Scrap	5,000.00	.00	5,000.00	.00	.00	.00	5,000.00	0	.00
	Sale Of Prop/Cmp For Loss Totals	$5,000.00	$0.00	$5,000.00	$0.00	$0.00	$0.00	$5,000.00	0%	$0.00
Misc Local Sources										
2701.000	Refund Appro Exp Prior Yr	.00	.00	.00	(77.09)	.00	(77.09)	77.09	+++	463.40
2770.599	Undesignated	25,000.00	.00	25,000.00	.00	.00	.00	25,000.00	0	21,557.34
	Misc Local Sources Totals	$25,000.00	$0.00	$25,000.00	($77.09)	$0.00	($77.09)	$25,077.09	0%	$22,020.74
Interfund Revenues										
2801.F	Interfd Rev Fr Water	.00	.00	.00	.00	.00	95,076.63	(95,076.63)	+++	.00
	Interfund Revenues Totals	$0.00	$0.00	$0.00	$0.00	$0.00	$95,076.63	($95,076.63)	+++	$0.00
	REVENUE TOTALS	$26,514,496.00	$0.00	$26,514,496.00	$1,810,650.08	$0.00	$3,595,244.05	$22,919,251.95	14%	($1,693,574.42)
	Fund **GA - Water Board - Sewer** Totals	$26,514,496.00	$0.00	$26,514,496.00	$1,810,650.08	$0.00	$3,595,244.05	$22,919,251.95		($1,693,574.42)

Revenue Budget Performance Report

Fiscal Year to Date 02/29/24
Exclude Rollup Account

Account	Account Description	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **VFG - Plant Fund**										
	REVENUE									
	Use Of Money & Property									
2401.000	Interest Earnings	700,000.00	.00	700,000.00	.00	.00	.00	700,000.00	0	156,002.57
	Use Of Money & Property Totals	$700,000.00	$0.00	$700,000.00	$0.00	$0.00	$0.00	$700,000.00	0%	$156,002.57
	REVENUE TOTALS	$700,000.00	$0.00	$700,000.00	$0.00	$0.00	$0.00	$700,000.00	0%	$156,002.57
	Fund **VFG - Plant Fund** Totals	$700,000.00	$0.00	$700,000.00	$0.00	$0.00	$0.00	$700,000.00		$156,002.57
	Grand Totals	$42,013,379.00	$0.00	$42,013,379.00	$2,490,688.76	$0.00	$6,228,902.87	$35,784,476.13		($1,970,315.92)

Expense Budget Performance Report

Fiscal Year to Date 02/29/24
Exclude Rollup Account

Account	Account Description	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund	**GA - Water Board - Sewer**									
	EXPENSE									
	Personnel Services									
0100.000	Employee Adjustment	.00	.00	.00	.00	.00	904.00	(904.00)	+++	.00
0121.000	Weekly Comp Differential	.00	.00	.00	14.95	.00	42.10	(42.10)	+++	20.42
0125.000	Insurance OPT Out	123,466.00	.00	123,466.00	7,078.16	.00	14,156.32	109,309.68	11	13,103.79
0130.000	Temporary Payroll	313,182.00	.00	313,182.00	32,220.71	.00	52,680.76	260,501.24	17	76,965.97
0140.000	Overtime	223,000.00	.00	223,000.00	8,998.34	.00	23,382.92	199,617.08	10	29,643.41
0150.000	Acting Next-In-Rank Pay	12,480.00	.00	12,480.00	12,259.29	.00	23,755.94	(11,275.94)	190	.00
0151.A	Sunday Contractual Pay	51,000.00	.00	51,000.00	.00	.00	.00	51,000.00	0	.00
0151.000	Sunday Premium Pay	.00	.00	.00	3,716.11	.00	7,471.11	(7,471.11)	+++	6,382.92
0155.A	Holiday Contractual Pay	33,500.00	.00	33,500.00	.00	.00	11,210.94	22,289.06	33	7,624.83
0155.000	Holiday Pay	.00	.00	.00	1,283.10	.00	21,913.71	(21,913.71)	+++	19,711.08
0165.000	Military Leave	.00	.00	.00	.00	.00	.00	.00	+++	1,317.31
0170.000	Overtime Meals	8,200.00	.00	8,200.00	232.00	.00	573.50	7,626.50	7	783.75
0180.000	Comp. Time Earned	.00	.00	.00	1,002.00	.00	3,013.23	(3,013.23)	+++	1,062.16
0181.000	Vacation Pay	.00	.00	.00	426.00	.00	16,206.99	(16,206.99)	+++	549.66
0182.000	Personal Time	.00	.00	.00	87.68	.00	1,460.96	(1,460.96)	+++	288.20
0183.000	Compensatory Time Off	.00	.00	.00	6,254.15	.00	16,924.38	(16,924.38)	+++	16,872.49
0184.000	Funeral Leave	.00	.00	.00	1,154.82	.00	1,154.82	(1,154.82)	+++	107.83
0186.000	Call-In Time	25,000.00	.00	25,000.00	1,490.25	.00	2,792.47	22,207.53	11	3,056.97
0189.000	Sick Leave	.00	.00	.00	2,917.93	.00	10,342.06	(10,342.06)	+++	6,060.81
	Personnel Services Totals	$789,828.00	$0.00	$789,828.00	$79,135.49	$0.00	$207,986.21	$581,841.79	26%	$183,551.60
	Personnel - Position Control									
0110.000	Biweekly Payroll	3,216,385.00	.00	3,216,385.00	182,191.69	.00	337,155.00	2,879,230.00	10	309,222.60
	Personnel - Position Control Totals	$3,216,385.00	$0.00	$3,216,385.00	$182,191.69	$0.00	$337,155.00	$2,879,230.00	10%	$309,222.60
	Capital Outlays									
0210.000	Furniture & Furnishings	3,000.00	.00	3,000.00	.00	.00	.00	3,000.00	0	.00
0250.500	Safety Equipment	10,000.00	.00	10,000.00	.00	.00	.00	10,000.00	0	2,171.99
	Capital Outlays Totals	$13,000.00	$0.00	$13,000.00	$0.00	$0.00	$0.00	$13,000.00	0%	$2,171.99
	Contractual Expenses									
0411.000	Office Supplies	3,050.00	.00	3,050.00	.00	.00	.00	3,050.00	0	550.47
0412.000	Uniforms	2,940.00	.00	2,940.00	239.56	.00	239.56	2,700.44	8	.00
0413.000	Safety Shoes	11,000.00	.00	11,000.00	400.00	.00	1,000.00	10,000.00	9	324.37
0414.000	Automotive-Gas,Oil,Grease	50,000.00	.00	50,000.00	3,666.24	.00	3,666.24	46,333.76	7	615.91
0416.000	Consumable Printed Forms	1,200.00	.00	1,200.00	.00	.00	.00	1,200.00	0	34.00
0417.000	Tool Allowance	300.00	.00	300.00	150.00	.00	300.00	.00	100	.00
0419.001	Automotive Parts	30,000.00	.00	30,000.00	4,621.26	.00	12,776.64	17,223.36	43	2,807.07
0419.003	Cleaning/Sanitary	10,000.00	.00	10,000.00	408.87	.00	408.87	9,591.13	4	960.48
0419.004	Agricultural/Botanical	50,000.00	.00	50,000.00	.00	.00	.00	50,000.00	0	.00
0419.005	Tools & Machine Parts	187,000.00	.00	187,000.00	13,904.77	12,693.99	17,035.51	157,270.50	16	11,184.87

Expense Budget Performance Report

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Exclude Rollup Account

Account	Account Description	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund	**GA - Water Board - Sewer**									
	EXPENSE									
	Contractual Expenses									
0419.006	Construction/Repair	130,000.00	.00	130,000.00	.00	1,729.45	411.96	127,858.59	2	4,869.73
0419.008	Signals/Communication	5,000.00	.00	5,000.00	.00	.00	.00	5,000.00	0	.00
0419.009	Misc Chemicals	25,000.00	.00	25,000.00	613.98	1,360.66	613.98	23,025.36	8	523.22
0419.010	Laboratory	30,000.00	.00	30,000.00	3,446.38	2,359.07	6,979.78	20,661.15	31	952.51
0419.012	Carbon	600,000.00	.00	600,000.00	145,575.54	.00	145,575.54	454,424.46	24	.00
0419.014	Ferric Chloride	700,000.00	.00	700,000.00	47,408.92	107,308.64	103,599.60	489,091.76	30	109,780.48
0419.016	Primary Polymer	100,000.00	.00	100,000.00	.00	50,000.00	.00	50,000.00	50	.00
0419.017	Sludge Polymer	90,000.00	.00	90,000.00	.00	45,000.00	.00	45,000.00	50	.00
0419.018	Pebble Lime	220,000.00	.00	220,000.00	18,168.27	81,831.73	18,168.27	120,000.00	45	12,887.28
0419.024	Hypochlorite Solution	6,500,000.00	.00	6,500,000.00	263,290.06	1,514,454.74	485,545.26	4,500,000.00	31	641,135.92
0419.599	Undesignated Supplies	64,200.00	.00	64,200.00	8,380.06	8,088.48	8,883.21	47,228.31	26	9,628.45
0421.001	Phone Extension Chgs	34,000.00	.00	34,000.00	1,997.40	.00	4,247.85	29,752.15	12	4,537.67
0421.002	Wireless Services	11,000.00	.00	11,000.00	929.49	.00	929.49	10,070.51	8	.00
0422.000	Light & Power	695,000.00	.00	695,000.00	68,752.20	.00	68,752.20	626,247.80	10	18,421.59
0423.000	Water/Sewer	595,000.00	.00	595,000.00	.00	.00	95,076.63	499,923.37	16	.00
0424.000	Gas	25,000.00	.00	25,000.00	2,311.75	.00	2,311.75	22,688.25	9	.00
0432.000	Property Insurance	245,000.00	.00	245,000.00	.00	.00	.00	245,000.00	0	.00
0433.000	Liability Insurance	120,000.00	.00	120,000.00	150,810.41	.00	150,810.41	(30,810.41)	126	103,860.80
0440.003	Motor Vehicle Equipment	70,000.00	.00	70,000.00	847.93	.00	1,679.10	68,320.90	2	10,037.32
0440.599	Undesignated Leases	1,500.00	.00	1,500.00	94.14	.00	160.03	1,339.97	11	69.20
0441.000	Rental Of Real Property	75.00	.00	75.00	.00	.00	.00	75.00	0	.00
0442.000	Rental Of Equipment	19,500.00	.00	19,500.00	10.00	.00	20.00	19,480.00	0	4,719.80
0442.003	Motor Vehicle Equip Rentl	10,000.00	.00	10,000.00	.00	.00	.00	10,000.00	0	.00
0442.599	Undesignated Rentals	5,000.00	.00	5,000.00	924.77	1,075.23	924.77	3,000.00	40	.00
0443.000	Repair Of Real Property	40,500.00	.00	40,500.00	173.50	326.50	173.50	40,000.00	1	2,383.56
0444.000	Repair Of Equipment	245,000.00	.00	245,000.00	10,246.39	.00	10,304.67	234,695.33	4	12,277.72
0446.000	Computer Services	4,500.00	.00	4,500.00	365.80	.00	726.10	3,773.90	16	360.37
0446.007	Software	50,000.00	.00	50,000.00	.00	.00	.00	50,000.00	0	.00
0449.000	Billing & Collection	55,000.00	.00	55,000.00	4,431.79	.00	8,863.58	46,136.42	16	8,786.02
0449.002	Sludge Disposal	2,000,000.00	.00	2,000,000.00	160,780.11	839,219.89	160,780.11	1,000,000.00	50	206,312.96
0449.008	Hazardous Waste Displ.	500.00	.00	500.00	.00	.00	.00	500.00	0	.00
0449.500	Safety-Contractual	10,000.00	.00	10,000.00	.00	.00	.00	10,000.00	0	203.00
0449.599	Undesignated Services	445,340.00	.00	445,340.00	16,216.84	44,363.00	20,764.34	380,212.66	15	27,159.75
0451.000	Consultants	100,000.00	.00	100,000.00	8,604.93	13,295.00	8,604.93	78,100.07	22	.00
0454.000	Attorney Services	40,000.00	.00	40,000.00	.00	.00	.00	40,000.00	0	.00
0461.000	Postage	35,000.00	.00	35,000.00	1,403.19	.00	16,653.19	18,346.81	48	504.51
0463.000	Travel & Training Expense	22,000.00	.00	22,000.00	5,075.00	450.00	5,165.00	16,385.00	26	.00
0463.500	Safety Training	1,000.00	.00	1,000.00	.00	.00	.00	1,000.00	0	.00

Expense Budget Performance Report

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Account	Account Description	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **GA - Water Board - Sewer**										
	EXPENSE									
Contractual Expenses										
0465.000	Laundry & Cleaning	9,500.00	.00	9,500.00	708.16	6,081.12	1,418.88	2,000.00	79	1,178.10
0466.000	Books,Mags. & Memberships	7,500.00	.00	7,500.00	.00	.00	1,800.00	5,700.00	24	1,800.00
0467.000	Advertising	500.00	.00	500.00	53.46	.00	76.07	423.93	15	38.61
0471.000	Recruitment Expenditures	800.00	.00	800.00	.00	.00	.00	800.00	0	179.00
	Contractual Expenses Totals	$13,707,905.00	$0.00	$13,707,905.00	$945,011.17	$2,729,637.50	$1,365,447.02	$9,612,820.48	30%	$1,199,084.74
Employee Benefits										
0801.000	NYS E.R.S. Retirement	524,681.00	.00	524,681.00	.00	.00	105,459.00	419,222.00	20	89,074.67
0803.000	Building Trades Benefits	150,000.00	.00	150,000.00	20,448.74	.00	32,525.82	117,474.18	22	12,345.61
0820.000	Worker's Compensation	240,000.00	.00	240,000.00	782.74	.00	782.74	239,217.26	0	.00
0830.000	Life Insurance	13,732.00	.00	13,732.00	.00	.00	.00	13,732.00	0	2,424.62
0840.000	Unemployment Ins. NYS	10,000.00	.00	10,000.00	.00	.00	.00	10,000.00	0	.00
0860.000	Medical Insurance	2,732,850.00	.00	2,732,850.00	.00	.00	81,750.00	2,651,100.00	3	443,246.39
0861.000	Dental Insurance	85,500.00	.00	85,500.00	.00	.00	.00	85,500.00	0	.00
0863.000	Vision Care Insurance	6,254.00	.00	6,254.00	.00	.00	.00	6,254.00	0	905.90
0865.000	Chiropractic Insurance	1,400.00	.00	1,400.00	140.00	.00	140.00	1,260.00	10	50.00
	Employee Benefits Totals	$3,764,417.00	$0.00	$3,764,417.00	$21,371.48	$0.00	$220,657.56	$3,543,759.44	6%	$548,047.19
Employee Benefit - FICA										
0810.000	Social Security	306,093.00	.00	306,093.00	19,454.74	.00	40,630.42	265,462.58	13	36,438.61
	Employee Benefit - FICA Totals	$306,093.00	$0.00	$306,093.00	$19,454.74	$0.00	$40,630.42	$265,462.58	13%	$36,438.61
	EXPENSE TOTALS	$21,797,628.00	$0.00	$21,797,628.00	$1,247,164.57	$2,729,637.50	$2,171,876.21	$16,896,114.29	22%	$2,278,516.73
	Fund **GA - Water Board - Sewer** Totals	$21,797,628.00	$0.00	$21,797,628.00	$1,247,164.57	$2,729,637.50	$2,171,876.21	$16,896,114.29		$2,278,516.73
	Grand Totals	$21,797,628.00	$0.00	$21,797,628.00	$1,247,164.57	$2,729,637.50	$2,171,876.21	$16,896,114.29		$2,278,516.73

Expense Budget Performance Report

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Account	Account Description	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund	**FA - Water Board - Water**									
	EXPENSE									
	Personnel Services									
0100.000	Employee Adjustment	.00	.00	.00	.00	.00	332.92	(332.92)	+++	.00
0121.000	Weekly Comp Differential	.00	.00	.00	23.63	.00	60.26	(60.26)	+++	37.25
0125.000	Insurance OPT Out	79,345.00	.00	79,345.00	7,699.68	.00	15,075.44	64,269.56	19	12,850.56
0130.000	Temporary Payroll	116,000.00	.00	116,000.00	9,630.40	.00	21,519.83	94,480.17	19	11,509.99
0140.000	Overtime	116,150.00	.00	116,150.00	6,323.16	.00	15,682.75	100,467.25	14	15,816.71
0150.000	Acting Next-In-Rank Pay	.00	.00	.00	791.69	.00	1,494.65	(1,494.65)	+++	.00
0151.A	Sunday Contractual Pay	16,000.00	.00	16,000.00	.00	.00	.00	16,000.00	0	.00
0151.000	Sunday Premium Pay	.00	.00	.00	1,916.88	.00	3,818.61	(3,818.61)	+++	2,296.45
0152.000	Shift Premium Pay	.00	.00	.00	1,000.00	.00	1,000.00	(1,000.00)	+++	.00
0155.A	Holiday Contractual Pay	8,500.00	.00	8,500.00	.00	.00	3,373.06	5,126.94	40	1,932.84
0155.000	Holiday Pay	.00	.00	.00	1,357.25	.00	30,209.03	(30,209.03)	+++	22,864.54
0170.000	Overtime Meals	3,015.00	.00	3,015.00	155.00	.00	391.00	2,624.00	13	331.75
0180.000	Comp. Time Earned	.00	.00	.00	1,184.31	.00	1,713.75	(1,713.75)	+++	794.54
0181.000	Vacation Pay	.00	.00	.00	1,365.83	.00	16,534.70	(16,534.70)	+++	13,229.48
0182.000	Personal Time	.00	.00	.00	.00	.00	1,803.38	(1,803.38)	+++	336.76
0183.000	Compensatory Time Off	.00	.00	.00	4,929.34	.00	21,566.62	(21,566.62)	+++	31,133.72
0184.000	Funeral Leave	.00	.00	.00	613.74	.00	1,559.69	(1,559.69)	+++	1,019.76
0186.000	Call-In Time	12,350.00	.00	12,350.00	788.40	.00	1,704.35	10,645.65	14	1,095.34
0189.000	Sick Leave	.00	.00	.00	3,786.70	.00	9,008.70	(9,008.70)	+++	13,244.92
0190.000	Vacation Cash Conversion	5,765.00	.00	5,765.00	.00	.00	.00	5,765.00	0	.00
	Personnel Services Totals	$357,125.00	$0.00	$357,125.00	$41,566.01	$0.00	$146,848.74	$210,276.26	41%	$128,494.61
	Personnel - Position Control									
0110.000	Biweekly Payroll	2,565,429.00	.00	2,565,429.00	189,952.58	.00	341,841.03	2,223,587.97	13	317,499.59
0153.000	Stipend	.00	.00	.00	.00	.00	.00	.00	+++	807.48
	Personnel - Position Control Totals	$2,565,429.00	$0.00	$2,565,429.00	$189,952.58	$0.00	$341,841.03	$2,223,587.97	13%	$318,307.07
	Capital Outlays									
0210.000	Furniture & Furnishings	5,000.00	.00	5,000.00	.00	.00	.00	5,000.00	0	40.97
0220.000	Office Equipment	3,000.00	.00	3,000.00	.00	.00	.00	3,000.00	0	.00
0230.000	Motor Vehicle Equipment	5,000.00	.00	5,000.00	.00	.00	.00	5,000.00	0	.00
0250.000	Other Equipment	30,000.00	.00	30,000.00	578.00	.00	578.00	29,422.00	2	.00
0250.007	Computer Equipment	100,000.00	.00	100,000.00	2,401.34	411.64	2,401.34	97,187.02	3	2,646.97
0250.500	Safety Equipment	7,500.00	.00	7,500.00	360.80	.00	360.80	7,139.20	5	.00
	Capital Outlays Totals	$150,500.00	$0.00	$150,500.00	$3,340.14	$411.64	$3,340.14	$146,748.22	2%	$2,687.94
	Capital Construction									
0300.000	Capital Construction	.00	.00	.00	9,538.47	.00	9,538.47	(9,538.47)	+++	.00
	Capital Construction Totals	$0.00	$0.00	$0.00	$9,538.47	$0.00	$9,538.47	($9,538.47)	+++	$0.00
	Contractual Expenses									
0411.000	Office Supplies	10,200.00	.00	10,200.00	762.53	6,399.79	1,600.21	2,200.00	78	2,041.88

Expense Budget Performance Report

Fiscal Year to Date 02/29/24
Exclude Rollup Account

Account	Account Description	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund	**FA - Water Board - Water**									
	EXPENSE									
	Contractual Expenses									
0412.000	Uniforms	1,800.00	.00	1,800.00	(308.44)	403.22	(259.20)	1,655.98	8	.00
0413.000	Safety Shoes	7,800.00	.00	7,800.00	344.99	.00	544.99	7,255.01	7	351.19
0414.000	Automotive-Gas,Oil,Grease	60,000.00	.00	60,000.00	3,660.33	411.00	3,660.33	55,928.67	7	566.84
0415.000	Fuel Oil	15,000.00	.00	15,000.00	.00	.00	.00	15,000.00	0	.00
0416.000	Consumable Printed Forms	1,200.00	.00	1,200.00	.00	.00	.00	1,200.00	0	906.35
0417.000	Tool Allowance	300.00	.00	300.00	.00	.00	150.00	150.00	50	.00
0419.001	Automotive Parts	25,000.00	.00	25,000.00	4,621.26	.00	12,776.64	12,223.36	51	5,927.68
0419.003	Cleaning/Sanitary	6,000.00	.00	6,000.00	1,583.82	416.18	1,583.82	4,000.00	33	147.84
0419.005	Tools & Machine Parts	112,000.00	.00	112,000.00	1,753.13	5,250.58	2,814.18	103,935.24	7	15,590.83
0419.006	Construction/Repair	160,000.00	.00	160,000.00	24,097.97	7,177.86	25,308.07	127,514.07	20	8,894.05
0419.009	Misc Chemicals	785,000.00	.00	785,000.00	70,700.77	119,437.17	73,923.59	591,639.24	25	93,458.58
0419.010	Laboratory	40,000.00	.00	40,000.00	1,792.49	2,747.04	5,571.40	31,681.56	21	1,552.16
0419.599	Undesignated Supplies	7,700.00	.00	7,700.00	90.09	500.00	90.09	7,109.91	8	51.74
0421.001	Phone Extension Chgs	15,000.00	.00	15,000.00	119.31	.00	239.67	14,760.33	2	.00
0421.002	Wireless Services	16,000.00	.00	16,000.00	1,325.62	.00	1,722.09	14,277.91	11	2,242.44
0422.000	Light & Power	600,000.00	.00	600,000.00	56,685.71	.00	56,685.71	543,314.29	9	13,023.80
0423.000	Water/Sewer	625,000.00	.00	625,000.00	.00	.00	35,635.10	589,364.90	6	.00
0424.000	Gas	35,000.00	.00	35,000.00	4,516.45	.00	4,516.45	30,483.55	13	.00
0432.000	Property Insurance	180,000.00	.00	180,000.00	.00	.00	.00	180,000.00	0	.00
0433.000	Liability Insurance	85,000.00	.00	85,000.00	101,627.60	.00	100,348.23	(15,348.23)	118	70,276.20
0440.003	Motor Vehicle Equipment	70,000.00	.00	70,000.00	847.93	.00	1,679.10	68,320.90	2	10,037.34
0440.599	Undesignated Leases	1,500.00	.00	1,500.00	235.78	.00	337.28	1,162.72	22	101.17
0442.000	Rental Of Equipment	4,500.00	.00	4,500.00	10.00	.00	20.00	4,480.00	0	.00
0442.003	Motor Vehicle Equip Rentl	.00	.00	.00	.00	.00	.00	.00	+++	458.50
0442.599	Undesignated Rentals	4,000.00	.00	4,000.00	60.00	1,441.64	278.36	2,280.00	43	257.90
0444.000	Repair Of Equipment	27,500.00	.00	27,500.00	33,733.03	3,717.78	34,343.28	(10,561.06)	138	.00
0446.000	Computer Services	4,500.00	.00	4,500.00	365.79	.00	726.17	3,773.83	16	360.38
0446.008	Software Maint/Licenses	335,000.00	.00	335,000.00	8,284.95	140.39	34,618.11	300,241.50	10	30,029.61
0449.000	Billing & Collection	55,000.00	.00	55,000.00	4,431.79	.00	8,863.58	46,136.42	16	8,786.04
0449.001	Sludge Removal	200,000.00	.00	200,000.00	.00	.00	.00	200,000.00	0	.00
0449.003	Waste Disposal	.00	.00	.00	.00	.00	.00	.00	+++	624.32
0449.008	Hazardous Waste Displ.	.00	.00	.00	.00	.00	.00	.00	+++	408.63
0449.500	Safety-Contractual	10,000.00	.00	10,000.00	.00	.00	.00	10,000.00	0	.00
0449.599	Undesignated Services	1,036,581.00	.00	1,036,581.00	3,207.82	1,488.43	704,141.82	330,950.75	68	699,729.28
0451.000	Consultants	80,000.00	.00	80,000.00	11,395.74	490.80	12,653.74	66,855.46	16	250.00
0454.000	Attorney Services	60,000.00	.00	60,000.00	.00	.00	.00	60,000.00	0	.00
0461.000	Postage	35,000.00	.00	35,000.00	1,403.19	.00	16,653.19	18,346.81	48	699.33
0463.000	Travel & Training Expense	42,500.00	.00	42,500.00	3,760.00	225.00	4,195.00	38,080.00	10	3,706.16

Expense Budget Performance Report

Fiscal Year to Date 02/29/24
Exclude Rollup Account

Account	Account Description	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **FA - Water Board - Water**										
	EXPENSE									
Contractual Expenses										
0465.000	Laundry & Cleaning	1,500.00	.00	1,500.00	.00	.00	373.06	1,126.94	25	.00
0466.000	Books,Mags. & Memberships	500.00	.00	500.00	.00	.00	.00	500.00	0	.00
0467.000	Advertising	500.00	.00	500.00	53.47	.00	76.08	423.92	15	38.62
0471.000	Recruitment Expenditures	800.00	.00	800.00	130.00	.00	130.00	670.00	16	.00
	Contractual Expenses Totals	$4,757,381.00	$0.00	$4,757,381.00	$341,293.12	$150,246.88	$1,146,000.14	$3,461,133.98	27%	$970,518.86
Employee Benefits										
0801.000	NYS E.R.S. Retirement	262,341.00	.00	262,341.00	.00	.00	52,730.00	209,611.00	20	44,537.33
0820.000	Worker's Compensation	225,000.00	.00	225,000.00	521.82	.00	521.82	224,478.18	0	.00
0830.000	Life Insurance	10,765.00	.00	10,765.00	.00	.00	.00	10,765.00	0	1,862.50
0840.000	Unemployment Ins. NYS	10,000.00	.00	10,000.00	.00	.00	.00	10,000.00	0	.00
0860.000	Medical Insurance	1,753,435.00	.00	1,753,435.00	.00	.00	59,480.32	1,693,954.68	3	281,968.47
0861.000	Dental Insurance	54,450.00	.00	54,450.00	.00	.00	.00	54,450.00	0	.00
0863.000	Vision Care Insurance	4,450.00	.00	4,450.00	.00	.00	.00	4,450.00	0	627.10
0865.000	Chiropractic Insurance	3,000.00	.00	3,000.00	355.00	.00	515.00	2,485.00	17	115.00
	Employee Benefits Totals	$2,323,441.00	$0.00	$2,323,441.00	$876.82	$0.00	$113,247.14	$2,210,193.86	5%	$329,110.40
Employee Benefit - FICA										
0810.000	Social Security	223,574.00	.00	223,574.00	17,233.48	.00	36,581.90	186,992.10	16	33,449.22
	Employee Benefit - FICA Totals	$223,574.00	$0.00	$223,574.00	$17,233.48	$0.00	$36,581.90	$186,992.10	16%	$33,449.22
	EXPENSE TOTALS	$10,377,450.00	$0.00	$10,377,450.00	$603,800.62	$150,658.52	$1,797,397.56	$8,429,393.92	19%	$1,782,568.10
	Fund **FA - Water Board - Water** Totals	$10,377,450.00	$0.00	$10,377,450.00	$603,800.62	$150,658.52	$1,797,397.56	$8,429,393.92		$1,782,568.10
	Grand Totals	$10,377,450.00	$0.00	$10,377,450.00	$603,800.62	$150,658.52	$1,797,397.56	$8,429,393.92		$1,782,568.10

Expense Budget Performance Report

Fiscal Year to Date 02/29/24
Exclude Rollup Account

Account	Account Description	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **FGB - Water Board**										
	EXPENSE									
Contractual Expenses										
0419.599	Undesignated Supplies	6,750.00	.00	6,750.00	402.25	.00	639.91	6,110.09	9	236.50
0451.000	Consultants	160,000.00	.00	160,000.00	2,273.75	.00	2,273.75	157,726.25	1	.00
0454.000	Attorney Services	100,000.00	.00	100,000.00	46.64	.00	618.78	99,381.22	1	128.00
0459.000	Auditors	24,000.00	.00	24,000.00	.00	.00	.00	24,000.00	0	.00
0461.000	Postage	250.00	.00	250.00	.00	.00	.00	250.00	0	.00
0463.000	Travel & Training Expense	40,000.00	.00	40,000.00	.00	.00	.00	40,000.00	0	.00
0466.000	Books,Mags. & Memberships	7,000.00	.00	7,000.00	.00	.00	.00	7,000.00	0	.00
	Contractual Expenses Totals	$338,000.00	$0.00	$338,000.00	$2,722.64	$0.00	$3,532.44	$334,467.56	1%	$364.50
	EXPENSE TOTALS	$338,000.00	$0.00	$338,000.00	$2,722.64	$0.00	$3,532.44	$334,467.56	1%	$364.50
	Fund **FGB - Water Board** Totals	$338,000.00	$0.00	$338,000.00	$2,722.64	$0.00	$3,532.44	$334,467.56		$364.50
	Grand Totals	$338,000.00	$0.00	$338,000.00	$2,722.64	$0.00	$3,532.44	$334,467.56		$364.50

BANK ON BUFFALO & KEYBANK

BANK BALANCES-FY 2024

MONTH	ACCT #	Account Name	STARTING VALUE	DEPOSITS	WITHDRAWALS	TRANSFERS	NET CHANGE IN VALUE	MONTH ENDING VALUE	PY MONTH ENDING VALUE
JANUARY	X4873	Board Expense Account	91,624.83	-	-	-	-	91,624.83	91,624.82
	X4881	O&M Reserve	5,625,181.00	-	-	-	-	5,625,181.00	5,198,449.50
	X4899	Depository-BOB	8,527,182.54	5,064,358.58	-	(3,299,615.28)	1,764,743.30	10,291,925.84	5,136,292.84
	X9220	Depository-Keybank	1,631,275.99	202,864.23	-	-	202,864.23	1,834,140.22	725,095.67
	X4906	Payroll	128,838.64	-	(736,888.47)	722,709.89	(14,178.58)	114,660.06	154,636.74
	X4914	Benefits	23,697.75	-	(9,242.00)	7,569.00	(1,673.00)	22,024.75	12,594.00
	X0643	Operating	621,322.96	-	(2,647,189.51)	2,569,336.39	(77,853.12)	543,469.84	850,849.45
	X4445	Grants	33,554.82	-	-	-	-	33,554.82	9,968.74
		Totals	**16,682,678.53**	**5,267,222.81**	**(3,393,319.98)**	**0.00**	**1,873,902.83**	**18,556,581.36**	**12,179,511.76**

MONTH	ACCT #	Account Name	STARTING VALUE	DEPOSITS	WITHDRAWALS	TRANSFERS	NET CHANGE IN VALUE	MONTH ENDING VALUE	PY MONTH ENDING VALUE
FEBRUARY	X4873	Board Expense Account	91,624.83	-	-	-	-	91,624.83	91,624.82
	X4881	O&M Reserve	5,625,181.00	-	-	-	-	5,625,181.00	5,198,449.50
	X4899	Depository	10,291,925.84	2,583,563.96	-	(2,589,739.87)	(6,175.91)	10,285,749.93	5,125,247.44
	X9220	Depository-Keybank	1,834,140.22	153,881.56	-	-	153,881.56	1,988,021.78	847,375.58
	X4906	Payroll	114,660.06	-	(535,745.32)	529,533.99	(6,211.33)	108,448.73	157,195.06
	X4914	Benefits	22,024.75	-	(7,648.00)	7,937.00	289.00	22,313.75	13,771.75
	X0643	Operating	543,469.84	-	(2,010,709.14)	2,052,268.88	41,559.74	585,029.58	652,222.09
	X4445	Grants	33,554.82	-	-	-	-	33,554.82	9,968.74
		Totals	**18,556,581.36**	**2,737,445.52**	**(2,554,102.46)**	**0.00**	**183,343.06**	**18,739,924.42**	**12,095,854.98**

Wilmington Trust

BANK BALANCES-FY 2024

MONTH	ACCT #	Account Name	STARTING VALUE	DEPOSITS	Payments	Change in Market Value	NET CHANGE IN VALUE	MONTH ENDING VALUE
JANUARY	X3250	Debt Service	6,079,649.06	-	(525,097.05)	23,559.89	(501,537.16)	5,578,111.90
	X3251	Construction	918.19	-	-	3.75	3.75	921.94
	X3252	Debt Service Reserve	7,452,473.55	-	-	28,865.98	28,865.98	7,481,339.53
	X9279	Expense Account	16,079.32	-	-	-	-	16,079.32
	X4118-0	2022A DSF	710,038.35	138,713.63	(548,755.63)	2,270.83	(407,771.17)	302,267.18
	X4118-1	2022A Issuance	9,619.92	-	-	-	-	9,619.92
	X2722	Capital Fund Construction	3,735,866.20	-	(1,002,459.06)	12,472.66	(989,986.40)	2,745,879.80
		Totals	**18,004,644.59**	**138,713.63**	**(2,076,311.74)**	**67,173.11**	**(1,870,425.00)**	**16,134,219.59**

MONTH	ACCT #	Account Name	STARTING VALUE	DEPOSITS	Payments	Change in Market Value	NET CHANGE IN VALUE	MONTH ENDING VALUE
FEBRUARY	X3250	Debt Service	5,578,111.90	-	-	21,153.55	21,153.55	5,599,265.45
	X3251	Construction	921.94	-	-	3.50	3.50	925.44
	X3252	Debt Service Reserve	7,481,339.53	-	-	27,348.16	27,348.16	7,508,687.69
	X9279	Expense Account	16,079.32	-	-	-	-	16,079.32
	X4118-0	2022A DSF	302,267.18	138,713.63	-	1,675.02	140,388.65	442,655.83
	X4118-1	2022A Issuance	9,619.92	-	-	-	-	9,619.92
	X2722	Capital Fund Construction	2,745,879.80	-	(333,756.73)	9,205.96	(324,550.77)	2,421,329.03
		Totals	16,134,219.59	138,713.63	(333,756.73)	59,386.19	(135,656.91)	15,998,562.68

WEALTH ADVISORS- 2643

Treasury Reconciliation FY 2024

MONTH	STARTING VALUE	DEPOSITS/WITHDRAWALS	TRANSFERS	CHANGE IN VALUE	MONTH ENDING VALUE	PY MONTH ENDING VALUE
JAN	15,479,628.77	(52,890.97)	-	71,474.40	15,498,212.20	15,254,934.45
FEB	15,498,212.20	(52,509.36)	-	42,397.43	15,488,100.27	15,220,949.48
MAR	15,488,100.27	-	-	-	15,488,100.27	15,304,054.61
APR	15,488,100.27	-	-	-	15,488,100.27	15,271,078.78
MAY	15,488,100.27	-	-	-	15,488,100.27	15,276,545.33
JUN	15,488,100.27	-	-	-	15,488,100.27	15,276,603.36
JUL	15,488,100.27	-	-	-	15,488,100.27	15,287,688.65
AUG	15,488,100.27	-	-	-	15,488,100.27	15,285,805.42
SEP	15,488,100.27	-	-	-	15,488,100.27	15,323,648.49
OCT	15,488,100.27	-	-	-	15,488,100.27	15,367,266.52
NOV	15,488,100.27	-	-	-	15,488,100.27	15,419,482.84
DEC	15,488,100.27	-	-	-	15,488,100.27	15,479,628.77
FY TOTAL		(105,400.33)	-	113,871.83		

BANK PAID DATE	Req #	Invoice Date	PP # of #	VENDOR	Project Name	DESCRIPTION	INVOICE	AMOUNT	CIP FUNDING ACCOUNT
2/2/2024	2024-007	12/29/2023	40	CPL	Combined Projects-Misceleneous	Professional Services-Capital Work Management-December 2023	96859	$ 16,118.99	C-5
2/2/2024	2024-008	12/29/2023	14	CPL	Basin Upgrades	Construction Administration	96858	$ 2,535.00	WWTP-1
2/2/2024	2024-009	12/29/2023	8	CPL	Whitney & 77th Ave Water Main	Proffessional Services-December 2023	96856	$ 1,947.30	W-27
2/2/2024	2024-010	12/29/2023	6	CPL	West Rivershore Watermain	Professional Services	96855	$ 3,574.14	W-24
2/2/2024	2024-011	12/21/2023	N/A	DeZurik	WTP Infrastructure Project	20" Slanted Disc Check Valve	INV066441	$ 31,850.00	WTP-7
2/2/2024	2024-012	12/8/2023	N/A	Ferguson Electric	Generator Upgrades	Switchgear control construction	64539	$ 28,332.00	WTP-6.2
2/2/2024	2024-013	12/15/2023	N/A	Hach Company	Turbidity Units	Turbidity Units	13853479/13843122	$ 18,735.69	WTP-4
2/2/2024	2024-014	12/7/2023	N/A	Hach Company	Freeze Thaw Bypass Project	Auto Sampler	13843018/13857931	$ 7,537.56	WTP-4
2/2/2024	2024-015	12/18/2023	N/A	General Insulation Company	Pipe Insulation	Pipe Insulation	S6632497.001	$ 300.00	WTP-7
2/2/2024	2024-016	12/12/2023	N/A	Advanced Network Services of WNY, Inc.	Fiber Repair/installlation for WTP Gate	Fiber Repair/installlation for WTP Gate	215118	$ 8,304.00	WTP-2
2/2/2024	2024-017	1/15/2024	1	General Carbon Corporation	WWTP Carbon Scrubber	polypropylene fan	66501	$ 5,991.98	WWTP-17
2/2/2024	2024-018	1/15/2024	2	General Carbon Corporation	WWTP Carbon Scrubber	Replacment Motor Drive cover	66591	$ 485.73	WWTP-17
2/2/2024	2024-019	11/21/2023	N/A	Safespan Scaffolding	Modular Scaffold Tower	Scaffold Tower	0028105-IN	$ 9,304.00	WTP-7
2/2/2024	2024-020	12/5/2023	N/A	Neenah Foundry Company	Manhole Covers	Manhole Covers	137158	$ 13,758.00	S-8
2/2/2024	2024-021	12/8/2023	N/A	Kistner Concrete	Catch Basins	Catch Basins	178537	$ 16,920.28	S-8
2/2/2024	2024-022	12/31/2023	26	Hohl Industrial	Basin Modifications	Construction	179324-26	$ 126,662.84	WWTP-1
2/2/2024	2024-023	12/7/2023	N/A	John W. Danforth	1st floor hallway @ WTP	Heat Pumps	JC001648.1	$ 8,950.00	WTP-6
2/2/2024	2024-024	12/7/2023	N/A	John W. Danforth	Hallway Closet @ WTP	Heat Pumps	JC132439	$ 8,450.00	WTP-6
2/2/2024	2024-025	12/28/2023	1	Johnson Controls	Fire Alarm Pull Station Upgrades	Wiring for fire alarms	41695260	$ 8,399.73	WTP-7
2/2/2024	2024-026	1/22/2024	2	Johnson Controls	Fire Alarm Pull Station Upgrades	Fire alarm upgrades	41699738	$ 15,599.49	WTP-7
								$ 333,756.73	

Budget Amendments Report

From Date: 1/1/2024 - To Date: 2/28/2024

Account	G/L Date	Journal	Description	Increases	Decreases	Amended Balance
Grand Totals:						

No budget amendements this year to date

Monthly O&M Report
For the Month of February 2024

1. Treatment & Plant Maintenance

1.1. Water – Robert Rowe, updated 03/12/2024.

OPERATIONS AND MAINTENANCE

Total water production for the month of February was 574 million gallons. The average daily water production was 19.8 million gallons. The plant data summary table is included below for your reference.

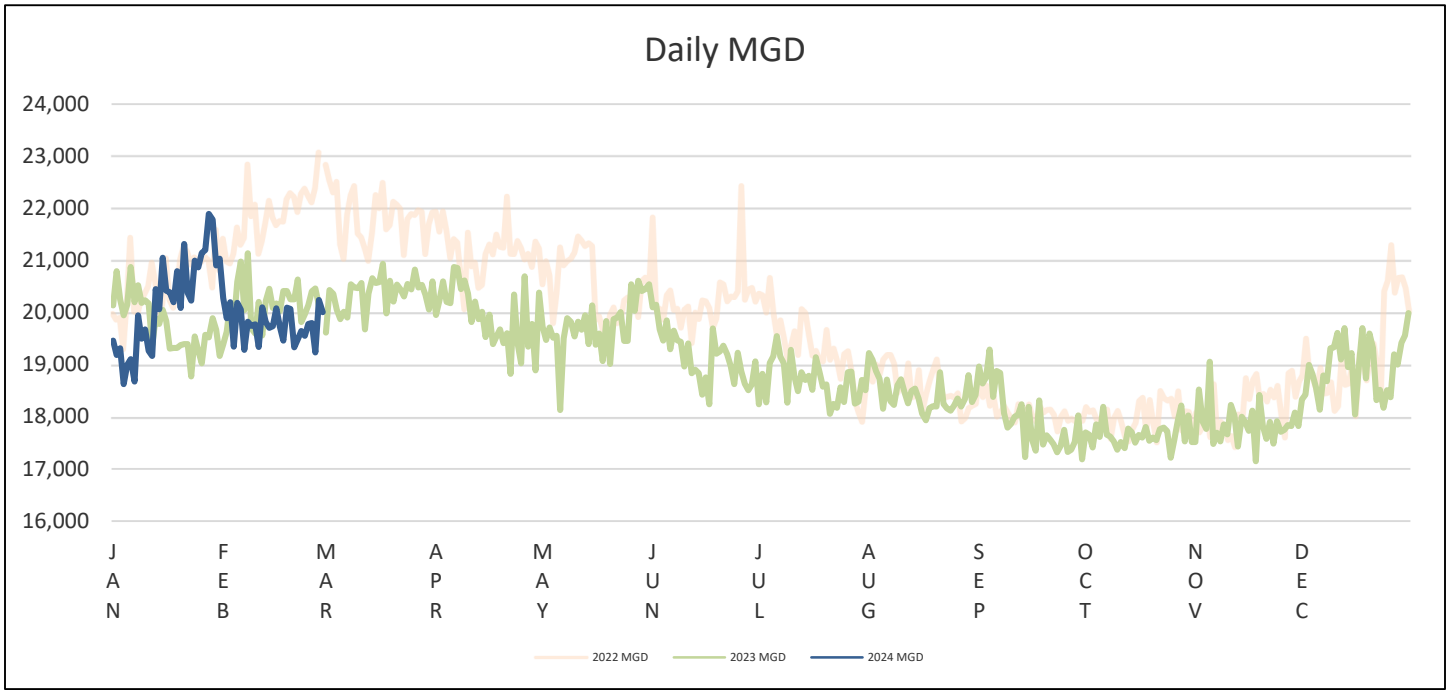
2024 TOTALS AND AVERAGES

	R/W PUMPAGE	PRE CL2 LBS	PACL LBS	H2SiF6 LBS	PO4 LBS	POST CL2 LBS	F/W 1000 GAL/ DAY
JAN	626086	6773	137700	15135	3359	3962	20196
FEB	573789	5766	112600	13737	3084	3528	19786
MAR	0	0	0	0	0	0	0
APR	0	0	0	0	0	0	0
MAY	0	0	0	0	0	0	0
JUN	0	0	0	0	0	0	0
JUL	0	0	0	0	0	0	0
AUG	0	0	0	0	0	0	0
SEP	0	0	0	0	0	0	0
OCT	0	0	0	0	0	0	0
NOV	0	0	0	0	0	0	0
DEC	0	0	0	0	0	0	0
TOTAL	1199875	12539	250300	28872	6443	7490	39982

FOR COMPARISON: 2023 TOTALS AND AVERAGES

	R/W PUMPAGE	PRE CL2 LBS	PACL LBS	H2SiF6 LBS	PO4 LBS	POST CL2 LBS	F/W 1000 GAL/ DAY
JAN	612909	7237	154400	15124	1634	3720	19771
FEB	564652	6502	120100	14151	1547	3353	20166
MAR	630959	6898	138000	15821	1742	3980	20354
APR	598023	7137	122000	14989	1624	3782	19934
MAY	611999	7730	105200	15865	1940	4054	19742
JUN	574667	7087	80500	15130	2765	3941	19156
JUL	578946	7976	89800	15325	3128	3945	18676
AUG	571295	8286	94000	14598	3078	3613	18429
SEP	538480	7632	105000	12732	2874	3402	17949
OCT	547506	7040	89400	12819	2937	3378	17661
NOV	535,706	5857	78900	12717	2896	3401	17857
DEC	587386	6100	99400	14298	3101	3716	18948
TOTAL	6952528	85482	1276700	173569	29266	44285	228643

Chart Comparing Daily Finished Water Flows, 2023 Versus Past Years



2024 ANALYTICAL RESULTS

	RAW TURB NTU	RAW pH	PRE Cl2 RES.mg/l	POST Cl2 RES.mg/l	EFF TURB NTU	EFF pH	F. RES mg/l
JAN	9.0	8.0	0.55	1.25	0.034	7.6	0.69
FEB	8.3	8.1	0.55	1.23	0.031	7.6	0.68
MAR							
APR							
MAY							
JUN							
JUL							
AUG							
SEP							
OCT							
NOV							
DEC							
AVG	8.7	8.1	0.55	1.24	0.033	7.6	0.69

Operations and Maintenance Highlights

Freeze Thaw Bed #3 awaiting piling and drying of solids for removal. Meanwhile, the project to bypass the Freeze Thaw and send our waste stream to WWTP is moving along very well. The flow meter and refrigerated sampler unit have been installed.

The Emergency Backup Generator project is underway, with upgrades to engine, switchgear, and transfer switch controls to give us greatly improved control and functionality of the system. Milton CAT is onsite (3/12/24), and we expect a test of the system on 3/15.

The chlorine booster pump piping project is nearing completion, with a system test expected to be scheduled for the week of Marcj 18th.

Backwash pump #1 check valve is in house, new gaskets are being ordered to move forward with installation.

Water Treatment Plant Maintenance Planning

This list summarizes larger projects/needs and is subject to change based on evolving plant conditions.

Priority Levels: High Medium Low

1. PACL System Upgrades Medium
   Pumps, controller, and piping installed. Last step to complete project is SCADA programming so all four pumps have SCADA control.
   - C. Hotchkiss worked on SCADA control 12/2023, not yet complete.
2. Bulk Chemical Storage Tank Liners Medium
   PACL liner replacement completed, and new liner for fluoride tank is in house. Contractor requested safety analysis prior to completing fluoride liner replacement.
   - Professional to address safety needs to be identified. Sun Environmental has been provided tank plans and other details to determine if they can perform the work.
3. Waste Treatment Facilities High
   Maintenance concern because of difficulty keeping freeze-thaw beds clean of solids. Waste now is being directed to WWTP, impacts are being assessed as a permanent solution and monitoring station and other requirements of the WTP now being classified as an SIU

discharger are being completed. In the meantime, the existing freeze-thaw beds have material which needs to be removed and landfilled (anticipated summer 2024). Freeze-thaw bed liners are showing age-related degradation and should be assessed for repair.

- Priority will be downgraded after a few months of demonstrated success for sending waste to WWTP, at that point liner repairs will remain necessary but a lower priority.
- SPDES sampling point needs attention – need plan for sampling flow from supernatant pump to river.

4. Interior lighting Medium

   In recent years lighting in many areas has been improved. Still need to address exterior lighting, lighting in high-lift building basement areas.
   - Emergency lighting has been mapped and non-functional lights are being repaired.
5. Emergency Backup Generators High

   Multiple issues with transfer gear and controls. Louvres in disrepair.
   - Milton CAT and Ferguson contracted to make required repairs to transfer gear and generator controls. Milton CAT on site 3/11, work continuing.
   - Some motors for louvres used when generator is operating repaired or replaced with unused louvre motors from another location. Several louvres in generator room still need repair.

6. Backflow Preventers High

   Need to be tested and repaired/replaced yearly and as necessary.
   - Danforth inspected in 2023, some backflow devices could not be tested without losing chlorine capabilities. Further work awaits completion of chlorine injection system upgrade (No. 9, below).
7. Restoring Polymer and Carbon Capabilities: Low

   Could be reinstated to improve plant capability, flexibility to address extraordinary conditions. Carbon Silo was painted 2022. Scope of work required for restoration of these capabilities would require engineering assessment.
8. Painting of Sedimentation Plates, Filter Walls: Medium

   These items are large projects because of need to work in filter area. A separate list of additional lower-priority items in need of painting is maintained by WTP Operations.
9. Chlorine System – Booster Pump, Piping/Component, and Scrubber: High
   a. Adding a booster pump to the raw water chlorine feed will help prevent loss of chlorine feed during a low pressure scenario and also will provide backup to chlorine dosage during backflow testing/repairs.
      - DOH has approved plans for booster pump project.
      - Pump skid received 12/7.
      - Piping work underway completed 3/11/24. Scheduling a system test for week of 3/18.

b. Many original PVC lines, regulators, chlorinators, etc. potentially vulnerable due to age and environmental conditions.
   - Two out of six regulators replaced, R. Rowe to obtain quote for four remaining.
   - Operations and maintenance will continue to visually inspect piping and asses need for any replacements.

c. Chlorine Scrubber near end of service life and requires replacement.
   - CPL is preparing RFP for replacement with dry media scrubber.

10. Settling Plate and/or Filter Upgrades: Low
    Would increase efficiency during higher rates of flow to allow us to better keep up with demanding winter months and large main breaks. This could reduce water used for filter washing (and therefore discharge flow to WWTP or freeze-thaw beds).
    - Plastic portions of settling plates have been flaking off, and a large sheet of material detached from a plate in 8/2023. Conversation regarding plan to address has been commenced with Dir. Tech. & Reg. Svcs. and Executive Director.
11. Roofing Repair/Replacement: High
    Replacement project is underway with contractor Weaver Metals and Roofing, anticipated completion Spring 2024.
12. Master Key for Building: Medium
    Need to verify proper keys are in KNOX box. Some doors have been repaired or installed which do not match the master key, creating issues for access in the event of emergency. Key control is a security concern.
    - Fire Department visited 2/15/24, electronic door keys added to KNOX box.
13. Louvres in Basin, High Lift, and Filter Areas: Low
    Some louvres in the generator room have been repaired, but multiple louvres in these areas still are not operating properly.
14. Barbed Wire Repair – Front Fence: Medium
    Back fence replaced, front barbed wire still in need of repair.
15. PLC Processing Errors: High
    Meetings were held 11/30 & 12/6/2023 to determine needs and potential RFP for engineering services to determine scope.
16. Parking Lot: Medium
    Patching, crack filling, sealing needed. Surface of west lot is in poor condition
17. Filter # 1 Broken Wash Water Trough: High
19. Automatic Switchover Valve for Chlorine Feed System: High
    Currently functioning, but due for replacement. Ties in with item #9.
20. Backwash Pump #1 Check Valve: High
    Sticking open, causing potential backflow issues and slamming of the valve.
    - New valve has been ordered, PO created, 04/27/2023, expected delivery was 10/2023.
    - Valve has been received and we are planning installation. This is a very large and heavy piece of equipment.
    - Currently awaiting new gaskets to move forward with installation.

21. Lucity Issues: Low
    Operators having difficulty creating work orders. Much progress has been made to resolve these issues, training needed for operators, IT is working on this.
22. Low Lift #2 Check Valve Flange: Medium
    Leaking.
23. Low Lift #3 and #5 Intermittent Loss of SCADA Control for Actuator: Medium
    #5 actuator received, awaiting installation and setup. 3/12/24
24. Security Camera Issues: Medium
    Camera feed in Operations Control Room malfunctions frequently since feed was split to supply monitor in HR office. Multiple cameras currently are non-functional. Newly installed cameras are internet or cloud based with limited access in Control Room. Operations relies on IT to ensure security of this technology from malicious actors.
    Most recently, the main gate camera is not functioning, limiting Operations ability to keep watch and monitor traffic.
25. Weed Control: Low
    Substantial work was done in 2023, but there remain some overgrown areas around freeze-thaw beds and additional efforts around site to maintain trees and cut back brush will be needed in 2024.
26. WTP Doorbell: Low
    Connected to PA system issue, doorbell no longer alerts through plant/operators who are making rounds. IT is working on issue.
    This is now intermittently working, preventing Operators from hearing the gate/doorbell when visitors arrive unless they are at the desk in the control room.

Wastewater – Dennis Kirkland, Acting Chief Operator- updated 3/11/24

February 2024 Pg # 5

Sampling Notes: None

Project #1 (Sedimentation Basins and Screening) Sed Basin #2 is under construction by HOHL. Construction is at a stand still due to the season/weather. The Scum building HVAC system has some minor things with SCADA and the automatic system and needs to be ran/tested to be fully functional. The scum system level sensor needs to be incorporated into the program/auto system. There is some concrete work in the basins and possibly at the old mixer locations which are at the moment covered by plates/manholes.

Project #2 (GPS) This project is complete. We have all the hard copy O&M manuals and Digital O&M manuals as well. Training in all aspects of the Project has been received by the proper departments.

Project #3 (Poly, Grit Conveyor, BFP (Belt Filter Press) The BFP portion was held up on materials and approvals of change orders, but we are now meeting and are beginning to move forward on this portion of the project. Hohl went through and finished all punch list items in the upper polymer room. NFWB personnel piped in overflow and drain lines in December along with camlock fittings for flushing which has been tested and is functioning. We are over the half way point of Project #3 and is close to completion besides some minor items, and with moving forward with the belt filter press portion there should be some added time to the project. Grit conveyor panel was went through by CIR per our request to check out the hand/off/auto (HOA) toggle and its functionality, all wiring is good with panel and wiring.

Project #5 (Electrical) At June '23 Board meeting Ferguson was authorized to replace transformers for two power centers, other portions of Project 5 are being re-evaluated by CPL. We already have the transformers installed and containment fixed/set up in power center #2 and other transformer outside of Maintenance is installed and powered up.

Project #7 (HVAC) Work is complete at the facility. Training has since been completed except one piece of equipment that was installed in this project which is the outside unit, we were not trained and unit was not tested with an Ops employee . O&Ms manuals were sent to NFWB electronically, but we do not have a hard copy.

Project #9 & #11 (Inside/Outside Piping) Project #9 and Project #11 are both completed. The only thing left is this spring NFWB is to reseed the area that was dug up due to project.

Project #10 (Motion AI – Overall Controls) Motion AI is working on some of the controls that will be added to the BFP and incorporating them. Capabilities will be added to the HMI (Human Machine Interfaces) screens at each of the three belt filter presses. Motion AI would be involved in the HOA switch on each Gorge Pump along with other small upgrades to the GPS and NFWB system. Motion AI has hooked up the level sensor in the scum building for project one incorporated it into SCADA there are some more skated incorporations with project one and the set basins that will need to be done as well but with actual construction still under way some of Motion AI will have to do what they can when they can.

In conclusion, everything at the WWTP has been moving forward without issue. Conditions have never been better, and morale has never been higher. Each department has put in time and effort to make sure all the projects and upgrades to the facility are getting done the way we have envisioned and in a timely manner.

WWTP Operations Data:

WASTEWATER TREATMENT PLANT OPERATING DATA														
2024		**FLOWS**		**Chlorine**	**Rainfall**	**SLUDGE**		**Polymer**		**FeCl3**	**LIME**	**H2O2**	**NaOCl**	**Grit**
	EFF	CBE	GPS	**Residual**		NET	LANDFILL	BFP	PRIM					
MONTH	MGD	MGD	MGD	PPM	inches	(Tons)		(Lbs)		(gals.)	(Tons)	(gals.)	(gals.)	(Tons)
January	31.20	46.37	13.97	1.3	2.2	1281.0	425.0	1611.0	2389.0	20570	32.1	0	166690	32.9
February	22.09	34.88	11.47	1.2	0.3	948.0	283.0	1479.0	2096.0	15700	34.5	0	153390	27.7
March												0		
April												0		
May												0		
June												0		
July												0		
August												0		
September												0		
October												0		
November												0		
December												0		
Totals	**26.65**	**40.63**	**12.72**	**1.3**	**2.5**	**2229.0**	**708.0**	**3090.0**	**4485.0**	**36270**	**66.6**	**0**	**320080**	**60.6**

Explanation of data abbreviations:

INF: Influent
EFF: Effluent
CBE Carbon Bed Effluent
GPS: Gorge Pump Station
MGD: Millions of Gallons per Day
PPM: Parts Per Million
BFP: Belt Filter Press
PRIM: Primary
FeC13: Ferric Chloride
H2O2: Peroxide
NaOCl: Sodium Hypochlorite

2023 Data for Comparison Purposes

WASTEWATER TREATMENT PLANT OPERATING DATA														
2023	FLOWS			Chlorine	Rainfall	SLUDGE		Polymer		FeCl3	LIME	H2O2	NaOCl	Grit
	EFF	CBE	GPS	Residual		NET	LANDFILL	BFP	PRIM					
MONTH	MGD	MGD	MGD	PPM	inches	(Tons)		(Lbs)		(gals.)	(Tons)	(gals.)	(gals.)	(Tons)
January	29.84	46.43	14.12	1.7	0.7	1360.0	365.0	1029.0	2389.0	19690	39.7	0	198850	31.9
February	24.78	42.82	13.82	1.6	1.0	1092.0	319.0	575.0	2139.0	16920	23.3	0	175760	26.8
March	33.05	48.46	15.03	1.5	1.6	1487.0	401.0	1408.0	2475.0	22820	46.5	0	242440	34.1
April	28.34	42.67	13.48	1.5	2.7	1378.0	386.0	1317.0	2235.0	21090	51.3	0	139155	17.4
May	20.74	33.68	11.71	1.6	0.5	1476.0	373.0	2098.0	2059.0	18180	47.8	0	126660	4.6
June	19.81	31.45	11.43	1.6	1.5	1351.0	372.0	1664.0	2012.0	18860	49.2	0	103180	19.2
July	23.41	36.91	12.55	1.4	3.4	1313.0	344.0	1943.0	2192.0	19240	54.7	0	153350	16.3
August	22.31	35.92	12.24	1.5	2.0	1383.0	367.0	1378.0	1859.0	17780	36.5	0	159490	14.0
Septembe	19.43	30.39	10.92	1.3	1.4	689.0	203.0	1247.0	2034.0	14460	37.2	0	250120	10.9
October	20.18	30.50	11.03	1.3	1.2	759.0	226.0	1432.0	2143.0	15850	37.4	0	188250	11.6
Novembe	19.98	30.65	10.83	1.6	1.1	1029.0	292.0	1467.0	2201.0	15640	38.1	0	172040	12.0
Decembe	27.08	39.77	12.82	1.5	1.7	996.0	309.0	1476.0	2312.0	18590	38.7	0	156270	13.2
Totals	**24.08**	**37.47**	**12.50**	**1.5**	**18.7**	**14313.0**	**3957.0**	**17034.0**	**26050.0**	**219120**	**500.4**	**0**	**2065565**	**212.0**

2.1. Sewer Collection & Water Distribution Cortez Bradberry, updated 3/15/2024

Sewer Collections System										
2024	**Service** Calls	**Flushing** (Feet)	**UFPO** Responses	**Receivers** Cleaned	**Bypass Pumping** (Hours)	**Catch Basins**	**Manholes**	**Main**	**Connections**	**Lateral**
January	214	23900	371	145	218.8	3	5	1	3	0
February	68	17910	732	114	0	3	6	0	3	0
March										
April										
May										
June										
July										
August										
September										
October										
November										
December										
Totals										

Water Distribution 2 HYDRANTS OUT OF SERVICE DUE TO CONTRACTOR ON MILITARY RD															
2024	Main Break	Svc. Leaks	Curb Box Reset	Valve Repaired	Valve Replaced	Hydrant Replaced	Hydrant Repaired	Hydrant Flow	Hydrant Flush-Winterized	Hydrant Leaks	Hydrants out of Svc.	Misc. Svc. Calls	Concrete	Landscape	UFPO
January	9	6	9	0	0	6	3	0	213	0	2	214	0	0	371
February	6	14	17	0	2	11	3	0	173	0	2	68	4	0	732
March															
April															
May															
June															
July															
August															
September															
October															
November															
December															
Totals															

Distribution Notes:

2 Hydrants are out of service due to the reconstruction of N. Military Rd by a private contractor. NFFD has been advised and given hydrant recommendations should there be a fire in the area.

3. Analytical Services

3.1 Water Laboratory – Jordan Boyd, updated 3/11/2024

1. **New York State Water Sanitary Code Part V Monitoring/Reporting**
   - Monthly collection for the Distribution System was conducted in February. 60 Samples for Free Chlorine, Turbidity, Phosphate, Fluoride, Standard Plate Count & Coliform. Those results were satisfactory and were within reporting limits.
   - Monthly sampling for TOC, DOC & UV254 on both finished and source water were collected in February. All samples were in compliance.

2. In-house/DEC Monitoring

- All in-house monitoring for process water bacteriology and chemistry was within normal limits for February.
- 1 community complaint was sampled in February. No water main breaks were sampled.
- The monthly SPDES sample collected from the freeze thaw beds was within normal limits for February. Chloroform and Dichlorobromomethane were sampled in February according to the new SPDES permit established in 2023.
- Replacement Type 1 water purification system was ordered to replace defective unit. Estimated delivery date of 3/19/24.
- Samples analyzed for 2024: 1595.

3. Laboratory Contract Analysis

- The Chemistry Laboratory analyzed 8 samples for Total Organic Carbon and 9 Wet Chemistry Samples for City of Lockport and Town of Tonawanda, and 3 Wet Chemistry samples from the Village of Lewiston.
- The Microbiology lab analyzed 27 samples from the Aquarium of Niagara's indoor and outdoor pools and 3 samples from the Village of Lewiston. All results were reported to the representative contacts.
- Revenue created for 2023 was $991.00

3.2 Wastewater Laboratory – Jillian O'Connor 3/11/2024

1. The data for Februarys State Pollutant Discharge Elimination System (SPDES) report is currently being compiled.

2. Weekly samples collected and sent out to University at Buffalo for New York State analysis of Covid-19 in the wastewater.

3. Industrial samples were processed and sent to a contract lab (Test America) for Total Organic Carbon and Total Phosphorus testing for billing purposes

4. Customers & Compliance

4.1. Meter Shop – Bob Reid Updated 3/13/24

Shop read 5234 Residential Meters.

MONTH:	WORK ORDERS	STOPPED METERS	Registers Replaced	Properties Tagged	INDUSTRIAL METERS READ	RESIDENTIAL METERS READ
JANUARY	70	0	9	9	0	7174
FEBRUARY	74	0	11	14	0	5234
MARCH						
APRIL						
MAY						
JUNE						
JULY						
AUGUST						
SEPTEMBER						
OCTOBER						`
NOVEMBER						
DECEMBER						
TOTAL	144	0	20	23	0	12408

METER READINGS:

DISTRICT 3	B.REID	M.SCHEBELL		J.PAUL	F.DERUBEIS	TOTAL
2/1/24	1361			1604		2965
2/2/24	1379			864		2243
2/5/24					26	26
TOTAL	2740			2468	26	5234

4.2 Industrial Pretreatment - Monitoring / Enforcement – Joel Paradise updated 03/11/2024

Hauled Waste Program – The Hauled waste moratorium imposed on August 16th, 2017 is still in effect. All indications are that this program will not be reinstated.

Investigations/Enforcement – All inspections have been conducted and Notices of Violation have been issued as required.

SIU Updates:

1. All SIU (Significant Industrial User) whose discharge permits nearing expiration in the next several months have been sent their renewal applications for our review and eventual reissuance of their NFWB wastewater discharge permit. This is an ongoing and continuing process.
2. The Cross Connection Inspectors work of conducting his inspections as a function of building sales, monitoring the annual tests results of all back flow prevention devices, along with updating our database and filing/archiving the hard copies has been progressing on schedule.
3. SIU discharge permits are being continually updated using the most recent data generated by Steve Stewart to verify / adjust discharge limits.
4. The RFP for the Local Limits re-evaluation was awarded to AECOM and work is underway.
5. NFWB and the DEC continues to closely monitor Cascades which has made significant progress getting their ETP back working as designed and appears to have turned the corner with their discharge permit compliance. The weekly reports submitted by Cascades indicate that they have maintained effluent discharges for SOC well below their discharge permit limits consistently now since June 10th, 2022 although there have been several instances where the TSS valued on the discharge to the WWTP were above their discharge permit limits. We continue to monitor the situation through site visits, sampling, and their required weekly progress reports. We are in the process of writing an Order on Consent and assessing violations and associated fines. The consolidation of discharge permits #50 and #73 is complete.
6. A second Cross-Connection Inspector has been discussed. An individual hired for that position earlier in 2023 resigned.
7. All 3rd Quarter 2023 SIU Self-Monitoring Reports were submitted on time and are being evaluated for discharge permit compliance.
8. The NFWB Discharge Permit #61 issued to “Goodyear Tire & Rubber Company as Agent for Forest Glen Site” (Forest Glen) was signed by the Executive Director and is set for renewal at midnight on October 1st, 2023 for a term not to exceed 5 years. It was sent out on September 5th, 2023.

4. Industrial Pretreatment - Monitoring / Enforcement cont. – Joel Paradise updated 03/112024

9. The carbon treatment process addition at SIU #55, Sherwood Forest Properties, LTD, originally planned to go online sometime in December of this year, began treatment on a trial basis on September 20th, 2023. Preliminary results from SIU #55 of testing of the effluent are showing very encouraging results (non-detect for BHCs). This should go A LONG WAY toward eliminating, if not eliminating any further NFWB alpha BHC SPDES violations OR violations of any violations of the other 3 isomers. Compliance testing will continue to verify the processes' ability to maintain compliance with the lower BHC discharge limits proposed by the NFWB and help to determine an appropriate schedule for the changing out of each of the 2- 5000 pound carbon treatment vessels.
10. On Wednesday, October 11th, 2023 we collected samples as per the Mercury collection system monitoring program of the NFWB sewer collection system.
11. On Wednesday, November 1st, 2023 we collected the required quarterly collection system BHC samples fourth quarter. As in prior BHC sampling events, the samples were delivered to the Lab and sent out for analysis.
12. The 2023 Annual IPP Report to the USEPA and NYSDEC was completed and sent via email on February 27th, 2024 and via USPS Certified Mail on Thursday, February 28th.
13. The first quarter 2024 SIU Quarterly reports due February 29th, have been received.
14. On Tuesday, March 5th, 2024, the required quarterly collection system BHC samples for the first quarter were collected. As in prior BHC sampling events, the samples were delivered to the Lab to be sent out for analysis.

5. Safety – John Accardo, Updated 1/09/2024

1. Dec. 13th CPR/AED, proper use of Fire Extinguisher
2. Dec. 18th Reasonable Suspicion training with WNYCOSH.
3. Dec 5th, NYS Mandatory Workplace Violence Training by WNYCOSH.
4. Dec. 6th Active Shooter Training was provided by NC Sheriffs Dept.

6. Technical Services – Doug Williamson, updated 3/8/2024

1. **LaSalle SSO Abatement Program and Consent Order (R9-20080528-32)**:
LaSalle SSES Phase 1 Engineering final report was received from Arcadis on February 1st. Report review follow-up meeting was held on February 29th. We have a second **NYSDEC Engineering Planning grant** of $100,000 in place for new Sanitary Sewer Evaluation Surveys in LaSalle along with the engineering report.

   We also have an **NYSDEC WQIP grant** of $800,000 in place for the construction improvements recommended by this engineering report. A revised work plan that included Phase 1, 2 and 3 LaSalle sewer shed work areas was approved by the NYSDEC on May 24th. We are planning on revising the current LaSalle consent order for years 12 - 18 and eliminate the remaining work items within the schedule that have a negligible impact on I & I.

2. **NYSDEC Consent Order (R9-20170906-129) WWTP Phase I and II Projects:**
In February, we continued to support CPL and the design consultants on the WWTP Phase I and II projects and continually work on the grant reimbursements for construction work completed. EFC Completion Certificates for project nos.2, 4, 9 & 11 were completed on February 5th.

   Project 1 Sedimentation Basins and Scum Collection System Modification –Construction at sedimentation basin no.2 continued.
   Project 3 Screenings and Grit Transport Equipment Improvements – contract status inquiry for Hohl was completed on February 27th.
   Project 5 Electrical System Improvements – Power center 2 work completed. Power center 5 transformer work to start with Ferguson Electric.
   Project 10 SCADA Improvements – work continued as necessary.
   Project 12 WWTP Intermediate Pumps work on pump no.1 is ongoing. The RFP for design, bidding and construction administration services has been under review and put on hold temporarily.

3. **NYSDEC WWTP SPDES Permit NY0026336 and Consent Order (R9-20170906-129) Items**:
In February, we continued to address the WWTP SPDES Permit NY0026336 and Consent Order (R9-20170906-129) items.

   We received a Notice of Intent to Renew and Modify the WWTP SPDES permit from the NYSDEC on August 7th. A Notice was published in the Niagara Gazette on August 10th. We meet with the NYSDEC on November 9th to discuss further.

   We continue meetings and discussions regarding the SIU BHC Implementation Plan and the Local Limits Evaluation.

MS4 Notice of Intent was submitted on February 1st to the NYSDEC.

No Exposure Certification was submitted on February 1st.

Tier II Report for 2023 was submitted on February 14th.

RMP updated and certified on EPA site on February 15th.

WWTP sodium hypochlorite tank 216 was inspected by Ensol on February 21st.

2023 PMP and MMP Annual Reports were submitted to the NYSDEC on March 1st.

The WWTP NetDMR was approved on February 28th for January 2024 along with the Report of Noncompliance Events for fecal coliform and hexachlorobenzene monitoring.

4. **Town of Niagara Sewer Flow Monitoring**
Town of Niagara yearly flow totals were updated on February 13th. We are looking into renegotiating the Agreement in early 2024.

5. **Stormwater Management**
Continued to address ongoing stormwater management concerns. WNYSC meeting was held in February.

6. **Engineering Support**
In February, the engineering department continued to provide engineering and GIS support to NFWB departments, engineering consultants and developers as Needed. Attended monthly **WWTP and WTP O & M meetings** regarding ongoing and planned projects.

Met with JM Davidson on February 16th to look at the proposed sedimentation basin concrete repairs.

Attended meetings regarding the Bloneva Bond Primary watermain work on February 20th and 28th.

7. **Capital Improvement Projects:**
In February, the **5 Year Capital Improvement Plan** project progress, related grants and CPOs written continued to be monitored and tracked. We plan to meet quarterly with EFC and CPL regarding the CWSRF projects, if necessary. We are continuously developing a plan of attack on all the grant funded CIP projects.

NFWB Capital Projects Engineering Services RFP proposals were received pm February 19th. Capital Projects scoring matrix and costs/award summary was completed on February 21st and review meeting was held on March 1st.

Water Projects

The Military Road reconstruction and watermain installation project that began in November continued in February.

Sewer Projects

Met with Occidental Chemical and AECOM on February 9th regarding the **Local Limits Reevalutation** to reevaluate the local limits established on our significant industrial user's sanitary sewer discharges.

WTP Projects

In February, we continued to address the WTP Chlorine Booster Pump Station and WTP Chlorine Scrubber Replacement projects. Revised WTP sludge removal vault drawing on February 5th.

Meetings were attended for new Environmental Lab and layout drawing was completed on February 14th.

WWTP Projects (additional)

WWTP Sodium Hypochlorite Tank Replacement

In February, AECOM continued the design services for the sodium hypochlorite tank and pump replacement project.

2024 OXIDIZER BUDGET

BUDGET =	$9,000,000.00	for year		
COST =	$495,197.64	to date		
% USED =	5.50%	to date		
BUDGET =	$24,657.53	per day avg.	$750,000.00	per month avg.
COST =	$8,253.29	per day avg.	$247,598.82	per month avg.
	26.2	Flow (MGD)	60	total days

WWTP DATA		OXIDIZER USEAGE				SLUDGE REMOVAL			
MONTH	FLOW (MG)	H2O2 (GAL)	NaOCl (GAL)	GAL PER MG FLOW	TOTAL ESTIMATED COST	LANDFILL SLUDGE (TONS)	SOLIDS TONS PER MG	FERRIC CHLORIDE (GAL)	LIME (TONS)
Jan-2024	924.9	0	163,680	177	$258,941.76	360.0	0.39	19,860.0	40.7
Feb-2024	644.8	0	149,340	232	$236,255.88	275.0	0.43	15,880.0	34.1
Mar-2024									
Apr-2024									
May-2024									
Jun-2024									
Jul-2024									
Aug-2024									
Sep-2024									
Oct-2024									
Nov-2024									
Dec-2024									
TOTALS	1,569.7	0	313,020	204	$495,197.64	635.0	0.41	35,740.0	74.8

Low value for year
High value for year

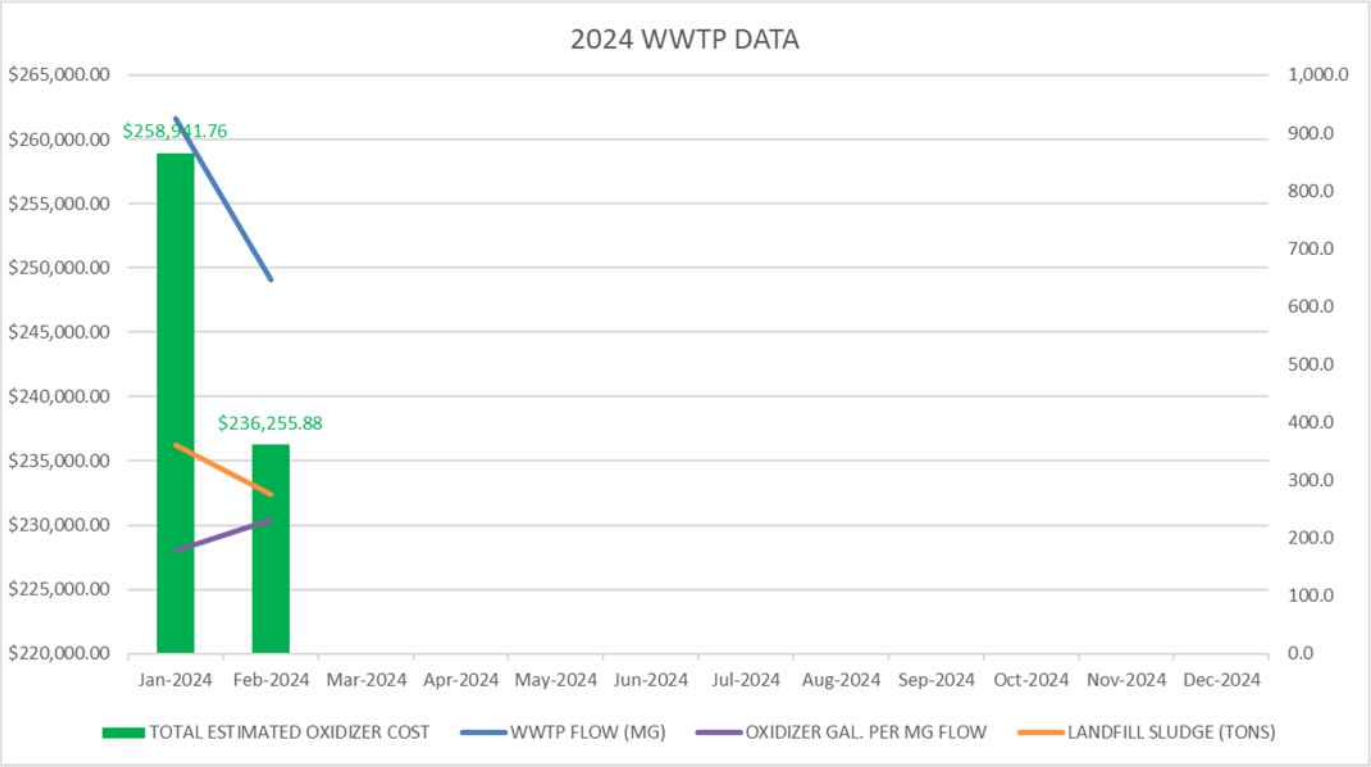
2023 Oxidizer Figures for Comparison:

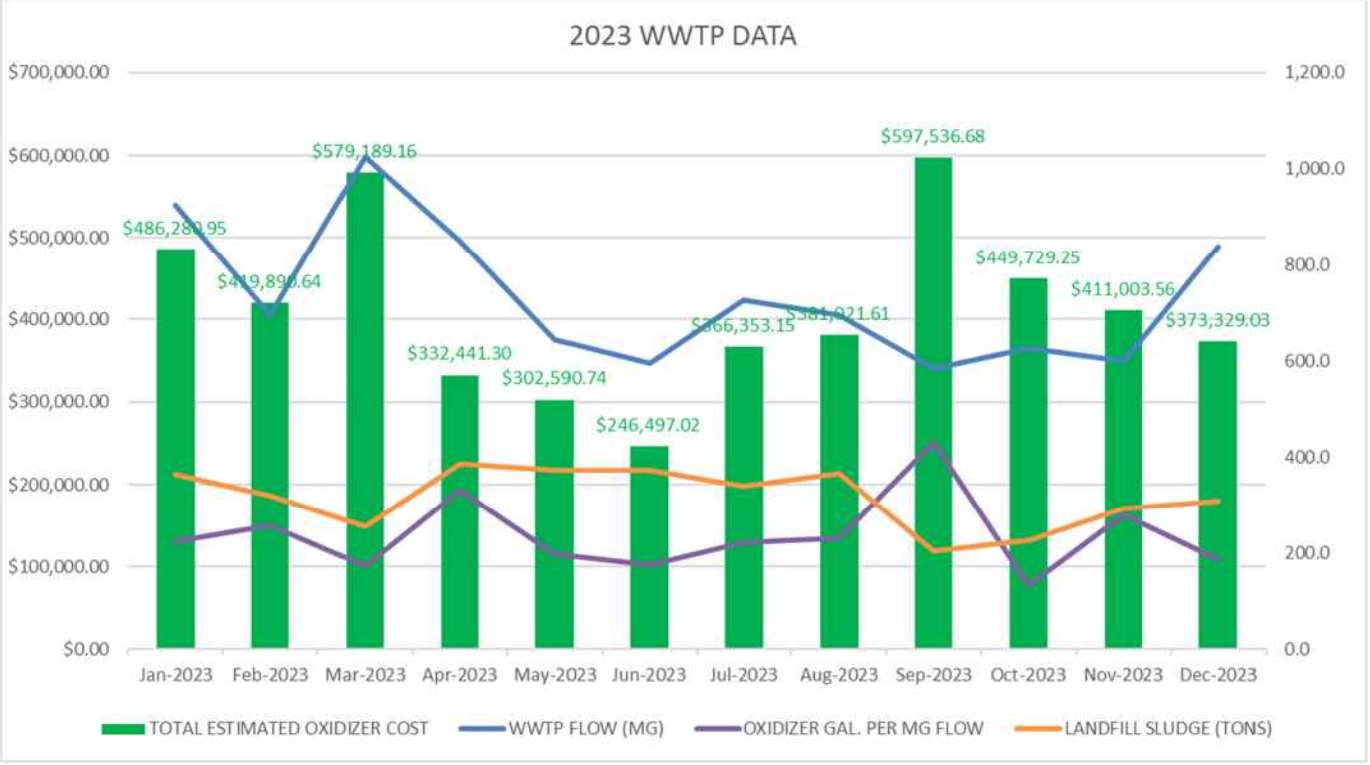
2023 OXIDIZER BUDGET

BUDGET =	$9,000,000.00	for year		
COST =	$4,945,863.09	to date		
% USED =	54.95%	to date		
BUDGET =	$24,657.53	per day avg.	$750,000.00	per month avg.
COST =	$13,550.31	per day avg.	$412,155.26	per month avg.
	24.1	Flow (MGD)	365	total days

WWTP DATA		OXIDIZER USEAGE				SLUDGE REMOVAL			
MONTH	FLOW (MG)	H2O2 (GAL)	NaOCl (GAL)	GAL PER MG FLOW	TOTAL ESTIMATED COST	LANDFILL SLUDGE (TONS)	SOLIDS THROUGH PUT (%)	FERRIC CHLORIDE (TONS)	LIME (TONS)
Jan-2023	924.9	0	203,550	223	$486,280.95	364.8	136.7	36.9	39.7
Feb-2023	693.8	0	175,760	258	$419,890.64	319.5	181.2	31.7	23.3
Mar-2023	1,024.5	0	242,440	172	$579,189.16	255.7	77.1	42.8	44.8
Apr-2023	850.2	0	139,155	330	$332,441.30	385.6	111.0	39.5	51.3
May-2023	643.0	0	126,660	198	$302,590.74	372.6	120.4	34.1	47.8
Jun-2023	594.4	0	103,180	175	$246,497.02	372.1	154.4	35.4	49.2
Jul-2023	725.6	0	153,350	223	$366,353.15	338.7	100.8	35.9	54.7
Aug-2023	694.0	0	159,490	230	$381,021.61	366.9	144.1	33.3	36.5
Sep-2023	582.8	0	250,120	430	$597,536.68	203.2	122.4	27.1	37.2
Oct-2023	626.5	0	188,250	133	$449,729.25	226.2	123.0	29.7	37.4
Nov-2023	599.5	0	172,040	279	$411,003.56	292.0	176.5	29.3	38.1
Dec-2023	839.6	0	156,270	186	$373,329.03	309.0	133.0	40.5	38.7
TOTALS	8,798.9	0	2,070,265	237	$4,945,863.09	3,806.2	133.6	416.3	498.6

Low value for year
High value for year


2024 WWTP DATA
$265,000.00
$260,000.00
$255,000.00
$250,000.00
$245,000.00
$240,000.00
$235,000.00
$230,000.00
$225,000.00
$220,000.00
1,000.0
900.0
800.0
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
$258,941.76
$236,255.88
Jan-2024
Feb-2024
Mar-2024
Apr-2024
May-2024
Jun-2024
Jul-2024
Aug-2024
Sep-2024
Oct-2024
Nov-2024
Dec-2024
TOTAL ESTIMATED OXIDIZER COST
WWTP FLOW (MG)
OXIDIZER GAL. PER MG FLOW
LANDFILL SLUDGE (TONS)


2023 WWTP DATA
$700,000.00
$600,000.00
$500,000.00
$400,000.00
$300,000.00
$200,000.00
$100,000.00
$0.00
1,200.0
1,000.0
800.0
600.0
400.0
200.0
0.0
$579,189.16
$597,536.68
$449,729.25
$411,003.56
$373,329.03
$332,441.30
$302,590.74
$246,497.02
Jan-2023
Feb-2023
Mar-2023
Apr-2023
May-2023
Jun-2023
Jul-2023
Aug-2023
Sep-2023
Oct-2023
Nov-2023
Dec-2023
TOTAL ESTIMATED OXIDIZER COST
WWTP FLOW (MG)
OXIDIZER GAL. PER MG FLOW
LANDFILL SLUDGE (TONS)

7. SECURITY REPORT— John Accardo 1/09/2024

1. No WWTP security incidents were reported in December.

8. INFORMATION TECHNOLOGY (I.T.) 3/15/2024 – Clayton Hotchkiss

Primary System Statuses

- **VMware Environment** – No issues to report.
- **New World Cloud** – No issues to report.
- **Exchange Office 365** – Adjusting settings based on new third-party requirements for domain-based authentication / sender policy framework. Protects against spoofing attempts with NFWB.org email accounts.
- **Network WTP/WWTP/Gorge** – No issues to report, new gorge firewall operating properly.
- **Network Security –** No incidents to report.

Updates/Issues Addressed/Resolved for the Current Month: (Not Included: Daily Tasks/User Issues)

WTP – Sean Caple resolved doorbell issue.

WTP – Main security gate will be upgraded using Verkada hardware, will need to develop plan and schedule to trench for direct-bury ethernet and fiber cables to the gate and required procurements.

WWTP – paused work on paging system pending outcome of capital projects RFP.

GPS – Plan developed for procurement of materials and hardware to add cameras, need to determine schedule. Furture, more complex project is to install a cellular failover.

NFWB – Still testing SMS software to notify employees in the event of an emergency.

NFWB – Darktrace monitoring MS365, procured 1 year service contract after free trial sucessfully concluded. Will continue to evaluate and deploy free cyber security resources through CISA.

NFWB – Advance 2000 has started work related to IT disaster recovery and backup plan, specifically related to Veeam backup server. Further plans include migrating backup for common drive in a manner that will improve recovery of lost files. Will need to develop written plan incorporating these changes.

NFWB – Encountered issues during testing prior to deploying print management software, “printer logic.” Error is related to print spool, a support ticket has been sent to vendor. Prepared to support printer/copier RFP or procurement at management’s direction.

NFWB – Waiting to receive additional network switches ordered to better accommodate telephones, Verkada hardware, etc.; project is approximately 50% complete. Will add additional IP addresses to network (needed because of increased number of devices) and also will improve network management and security.

NFWB – Assisted in Environmental Laboratory project by adding communications cables, jacks, and phones as required.

9. OPERATIONS EXECUTIVE - Updated 3/12/2024 – Dave Conti

- Nussbaumer and Clark has developed a Preliminary Scope of additional work for Project #3.
- The Lucity work order software is now in use. Assets are being added and updated.
- Capital project proposal review is complete.
- The transformer replacement at WWTP PC #2 is in progress. Both new transformers are installed. One is powered and the other is nearly complete.
- Carbon bed media replacement is complete at WWTP.
- WTP emergency generator system is set to be tested 3/15/2024.
- Relocation/renovation of lab services is in progress at WTP.

NIAGARA FALLS WATER BOARD RESOLUTION # 2024-03-006

ACCEPTING LABELLA PROPOSAL
FOR WATER MAIN REPLACEMENT ENGINEERING SERVICES

WHEREAS, in January 2024 the Niagara Falls Water Board issued a request for proposals for engineering services in connection with various planned capital projects, including for replacement of several water mains; and

WHEREAS, the Water Board has been awarded grant funds which will partially offset the total cost of the water main replacements that are the subject of this resolution; and

WHEREAS, a total of five proposals were received for the water main replacements; and

WHEREAS, Water Board staff recommend acceptance of the proposal by LaBella Associates to perform the water main replacement engineering services described below, as awarding multiple projects to one engineering firm allows for administrative efficiencies and cost savings, including by facilitating bid packages with multiple projects, and because LaBella's proposal demonstrates that it has qualified personnel, and the lowest overall proposed fee to perform this engineering work:

Capital Item	Project Description	DWSRF Grant No.	LaBella Proposed Engineering Fee for Survey, Design, and Bidding
W9	10th St. & Michigan Ave. Main - Lockport St. to Ontario St. & 10th St. to 11th St.	18588 and 19056	$52,000
W17	Laughlin Dr. Main - 82nd St. to Bollier Ave.	19056	$48,000
W21	Ontario Ave. Main - 13th St. to Main St.	19056	$41,000
W25	Van Rensselaer Ave. Main - 900 Block	19056	$8,000
W29	Witkop Ave. and 85th St. Loop	19056	$43,000
W13	81st St. Main - Frontier Ave. to Niagara Falls Blvd.	18587	$83,000
W15	College Terrace Main - Madison St. to College Ave.	18587	$20,000
W24	Rivershore Drive Main - S. 86th St. to 91st St.	18587	$36,000
	Estimated Cost for Geotechnical Investigation for All of the Above Projects		$84,760
	Total Recommended Award:		**$415,760**

WHEREAS, the Water Board has determined to award only the survey, design, and bidding engineering services for these water main replacement projects to LaBella at this time, with award of construction inspection and administration services to be pending negotiation of an appropriate not-to-exceed fee once bid packages are developed and information has been obtained regarding the sequence of construction for the water main replacements;

NOW THEREFORE BE IT

RESOLVED, that on behalf of the Niagara Falls Water Board, its Chairperson hereby is authorized to execute an agreement to be negotiated with LaBella Associates to perform engineering survey, design, and bidding for the water main replacement projects referred to as Capital Items W9, W17, W21, W25, W29, W13, W15, and W24, consistent with LaBella's February 19, 2024 proposal and for a total fee not to exceed $415,760.

Water Board Personnel Responsible for Implementation of this Resolution:

Executive Director
Director of Technical & Regulatory Services
General Counsel

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:

Capital Plan Items:	W9, W17, W21, W25, W29, W13, W15, and W24
Capital Items Provided by:	D. Williamson
Available Funds Confirmed:	B. Majchrowicz (Financing Plan: EFC/DWSRF)

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	Yes	**No**	**Abstain**	**Absent**
Board Member Asklar	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By:

_____
Nicholas J. Forster, Chairman

Vote Witnessed By:

_____
Sean W. Costello, Secretary to Board

Prepared for:
Michael S. Eagler, Sr.
Acting Executive Director
Niagara Falls Water Board
5815 Buffalo Avenue
Niagara Falls, NY 14304

Submitted by:
LaBella Associates
300 Pearl Street
Suite 130
Buffalo, NY 14202
(716) 551-6281

LaBella
Powered by partnership.

Capital Projects Proposals

NIAGARA FALLS WATER BOARD

FEBRUARY 19, 2024

LaBella
Powered by partnership.

February 19, 2024

Michael S. Eagler, Sr.
Acting Executive Director
Niagara Falls Water Board
5815 Buffalo Avenue
Niagara Falls, NY 14304

RE: RFP- Capital Projects

Dear Mr. Eagler:

In response to the Niagara Falls Water Board's Request for Proposals, I am pleased to provide the attached proposals for the following project categories:

- Standby Generator
- Carbon Area Lighting. Switchyard Improvements
- Water Distribution System Improvements

LaBella Associates, DPC (LaBella) is an established firm, employing over 1,750 team members, 105 of which reside in the Buffalo office. In addition to the engineering team highlighted in Section 7 of this proposal, our diverse team also includes a team of planners and grant specialists that not only assure compliance with funding agencies, but also partner to lean on in pursuit of future funding. All team members identified have the capacity to perform the work as outlined in each categorical proposal.

I trust that this proposal adequately responds to your request and will be sufficient to enable the Board to select LaBella for these projects. Should you have any questions with regard to our proposal or if you need additional information, please do not hesitate to contact me at (716) 710-3036 or mrogalski@labellapc.com.

Sincerely,
LABELLA ASSOCIATES, D.P.C.

Michael Rogalski, PE, LEED AP
Vice-President | Project Sr. Manager

Donald Hoefler, PE
Project Manager

Capital Projects
Request for Proposals
Niagara Falls Water Board

Wastewater Treatment Facility

Location: 1200 Buffalo Avenue, Niagara Falls NY 14304

Projects – refer to attachment A, 2021 Sewer Engineering Report	Submitting On Project, YES or NO
WWTP-12 Roof Repairs	No
WWTP-16 Standby Generator	Yes

Projects – refer to attachment B, 2022 Sewer Engineering Report	Submitting On Project, YES or NO
WWTP-1.2 Influent Channel Leak Repair of Expansion Joints	No
WWTP-1.3 Sediment Basin #5 Treatment of Backwash	No
WWTP-3.2 Grit Pump Flow Meters	No
WWTP-3.3 Rapid Mix Tank Cleaning	No
WWTP-5.5 New PA and Fire Alarm System	No
WWTP-5.6 Carbon Area Lighting, Switchyard Improvements	Yes
WWTP-6.2 Carbon Bed Effluent Cleaning & Inspection	No
WWTP-6.3 Carbon Filter Mud Valve Replacements	No
WWTP-11.6 Removal and Replacement of Plant Water Piping	No

Sewer Collection System

Location: Calumet Avenue, Niagara Falls, NY

Projects – refer to attachment C, 2023 Sewer Engineering Report	Submitting On Project, YES or NO
Calumet Avenue 48 inch brick sewer rehabilitation	No

Water Treatment Plant

Location: 5815 Buffalo Avenue, Niagara Falls NY 14304

Projects – refer to attachment D, 2021 Water Engineering Report	Submitting On Project, YES or NO
WTP-2.1 - SCADA Control System Upgrades	No
WTP-6.1 - Chlorine System Upgrades	No

Capital Projects
Request for Proposals
Niagara Falls Water Board

Water Distribution System

Location: various throughout City of Niagara Falls NY

Projects – refer to attachment D, 2021 Water Engineering Report	Submitting On Project, YES or NO
W2 - 20 inch main from Beech Avenue Storage Tank to Ontario Street	Yes
W9 - 10th Street & Michigan Ave - Lockport St to Ontario St & 10th St to 11th St	Yes
W17 - Laughlin Drive Main - 82nd Street to Bollier Avenue	Yes
W21 - Ontario Avenue Main - 13th Street to Main Street	Yes
W25 - Van Rensselaer Avenue - 900 Block	Yes
W29 - Witkop Avenue and 85th Street Loop	Yes

Projects – refer to attachment E, 2023 Water Engineering Report	Submitting On Project, YES or NO
Alternative 2H - Install New Ground Storage Tank and Pre-Packaged Pumping Station at Beech Avenue	Yes
W13 - 81st Street watermain - Frontier Avenue to Niagara Falls Boulevard	Yes
W15 - College Terrace watermain - Madison to College Avenue	Yes
W24 - Rivershore Drive watermain - S. 86th Street to 91st Street	Yes

TABLE OF CONTENTS

LaBella
Powered by partnership

SECTION 1.

STANDBY GENERATOR PROPOSAL

LaBella
Powered by partnership.

February 19, 2024

Michael S. Eagler, Sr.
Acting Executive Director
Niagara Falls Water Board
5815 Buffalo Avenue
Niagara Falls, NY 14304

RE: WWTP-16 Standby Generator
LaBella Proposal No. P2305689

Dear Michael:

LaBella Associates, D.P.C. is submitting the following proposal to Niagara Falls Water Board (NFWB) to provide engineering design services associated with providing back-up standby power for the wastewater treatment plant (WWTP) at 1200 Buffalo Ave., Niagara Falls, NY. This is based on the Request for Proposal (RFP) for Capital Projects issued by the NFWB and the "Wastewater Treatment Plant Capital Improvement Projects Engineering Report and Estimates", dated November 2021. This proposal outlines our understanding of the project, proposed scope of work and associated fees.

PROJECT UNDERSTANDING

The current power distribution system throughout the WWTP is distributed at 13.8-kilovolts and transformed down to a utilization voltage, typically at 480-volts, then 208/120-volts. There are only two back-up standby generators on site which does not allow for full 100% operation of the treatment process in a power outage.

The goal of this project is to provide on-site standby power so that the entire WWTP process can function in the same manner as if the process was on utility power. This may mean 100% generator back-up or partial back-up energizing most loads so there is no interruption to wastewater treatment process. Whatever approach is implemented, it will be based NFWB input and the allocated budget. According to the 2021 Report and the RFP, the budget for the Standby Generator project is $1,500,000.

There are several approaches to accomplish the above stated goals. During the Survey and Conceptual Design phase, the design team will survey the entire electrical distribution system and become familiar with NFWB's treatment plant process. Several conceptual designs for a standby power system with associated construction costs will be presented to the NFWB for consideration. Once and design approach is selected the design team will commence the Design Documents phase. Consideration will be given to generator lead times and necessary upgrades to existing electrical distribution equipment. Also, there will be impact on other design disciplines such as structural, architectural, civil and mechanical. These disciplines will be included in the final design package and coordinated accordingly.

SCOPE OF SERVICES

The RFP describes the scope of services with the following tasks that will be provided as part of our proposal as outlined below:

- Task 1: Survey
- Task 2: Conceptual Design
- Task3: Design Documents
- Task 4: Assist with NYS EFC Reporting
- Task 5: Bidding Assistance
- Task 6: Construction Administration
- Task 7: Construction Inspection

ASSUMPTIONS & EXCLUSIONS

The following is a list of assumptions and services excluded from this proposal. However, should these items become necessary; we would appreciate an opportunity to negotiate a fee.

- An existing AutoCAD or similar version site survey that provides topographic, boundary and utility information will be provided by NFWB. Performing site survey is not included. If required, we can provide a separate proposal for those services.
- Electronic AutoCAD floor plans of the buildings will be provided by NFWB.
- As-built record drawings of the WWTP are available for use during design.
- Up to two construction cost estimates will be provided at the 60% and 95% submissions.
- Hazardous material sampling, lab testing and report are not included. If it been determined suspect material exists and will affect construction, we can provide a separate proposal for those services.
- Variance Applications is not included.
- It is assumed there will be no building additions for the standby generator expansion. If required, we can provide a separate proposal for those services.
- Load testing of existing generators are not included. NFWB will provide all necessary kilowatt demand information through utility bills. If required, we can provide a separate proposal for those services.

FEES

The following is our Not-to- Exceed fee including our direct expenses broken out as follows:

• Survey	$7,500.00
• Conceptual Design	$15,000.00
• Design Documents	$90,000.00
• Bidding Assistance	$7,500.00
• Construction Administration	$30.000.00
• Construction Inspection	TBD
Total:	$150,000.00

Construction Inspection (CI) services are difficult to determine until a conceptual standby power system has been developed and approved. This generator project may not be as labor intensive as a typical civil engineering project, therefore may not require full-time

inspection for the duration of the construction period. Also, we understand the NFWB may have available qualified staff that could support some CI functions. Once the project has been developed, we propose to negotiate CI services at that time.

ACCEPTANCE

If this proposal is acceptable, we are ready to start work upon receipt of written authorization or Notice to Proceed, followed by execution of the NFWB Agreement. This will serve as our agreement for the proposed services. If you have questions or require further clarification, please contact me directly at (716) 710-3036 or email at mrogalski@labellapc.com. We appreciate the opportunity and look forward to working with you.

Respectfully submitted,
LABELLA ASSOCIATES, D.P.C.

Michael D. Rogalski, PE, LEED AP
Vice President – Regional Manager Building Engineering

SECTION 2.

CARBON AREA LIGHTING, SWITCHYARD IMPROVEMENTS PROPOSAL

LaBella
Powered by partnership.

February 19, 2024

Michael S. Eagler, Sr.
Acting Executive Director
Niagara Falls Water Board
5815 Buffalo Avenue
Niagara Falls, NY 14304

RE: WWTP-5.6 Carbon Area Lighting, Switchyard Improvements
LaBella Proposal No. P2305689

Dear Michael:

LaBella Associates, D.P.C. is submitting the following proposal to Niagara Falls Water Board (NFWB) to provide engineering design services associated for Carbon Area Lighting and Switchyard Improvements at 1200 Buffalo Ave., Niagara Falls, NY. This is based on the Request for Proposal (RFP) for Capital Projects issued by the NFWB and the "Wastewater Treatment Plant Capital Improvement Projects Engineering Report and Estimates", dated November 2021. This proposal outlines our understanding of the project, proposed scope of work and associated fees.

PROJECT UNDERSTANDING

The lighting system in the Carbon Building is not conducive to the environment. The area appears to be a mix of linear fluorescent (perhaps replaced with LED tubes) and old Metal Halide high-bay luminaires. The intent could be to replace the lighting system in kind or evaluate the layout and propose a new layout with LED luminaires constructed to withstand the environment with lighting levels that conform to Illuminating Engineers Society (IES) guidelines.

It is unclear what the Switchyard improvements entail. LaBella has a power system division that specializes in medium voltage distribution and outdoor switchyards. Our power system engineer, Tom Kennedy Jr., PE is on our team and will work with the NFWB and evaluate equipment in the switchyard and provide recommendation for improvement that meet the allocated budget. According to the 2021 Report and the RFP, the budget for the Carbon Area Lighting and Switchyard Improvements is $500,000.

SCOPE OF SERVICES

The RFP describes the scope of services with the following tasks that will be provided as part of our proposal as outlined below:

- Task 1: Survey
- Task 2: Conceptual Design
- Task3: Design Documents
- Task 4: Assist with NYS EFC Reporting
- Task 5: Bidding Assistance
- Task 6: Construction Administration

- Task 7: Construction Inspection

ASSUMPTIONS & EXCLUSIONS

The following is a list of assumptions and services excluded from this proposal. However, should these items become necessary, we would appreciate an opportunity to negotiate a fee.

- As-built record drawings of the WWTP are available for use during design.
- Up to two construction cost estimates will be provided at the 60% and 95% submissions.
- Hazardous material sampling, lab testing and report are not included. If it been determined suspect material exists and will affect construction, we can provide a separate proposal for those services.
- Variance Applications is not included.
- Electronic AutoCAD floor plans of the buildings will be provided by NFWB.

FEES

The following is our Not-to- Exceed fee including our direct expenses broken out as follows:

• Survey	$5,000.00
• Conceptual Design	$7,500.00
• Design Documents	$30,000.00
• Bidding Assistance	$2,500.00
• Construction Administration	$10.000.00
• Construction Inspection	TBD
Total:	$55,000.00

Our fee is based on 11% of the proposed construction cost. Without knowing the scope of the switchyard improvements, if that work become excessive far exceeding the allocated budget, we would like the opportunity to re-negotiate our fee for the appropriate level of effort required to properly engineer the switchyard improvements.

Construction Inspection (CI) services are difficult to determine until the Switchyard improvements have been identified. Depending on the level of complexity of the lighting project there may not the need for a full-time inspection for the duration of the construction period. Also, we understand the NFWB may have available qualified staff that could support some CI functions. Once the project has been developed, we propose to negotiate CI services at that time.

ACCEPTANCE

If this proposal is acceptable, we are ready to start work upon receipt of written authorization or Notice to Proceed, followed by execution of the NFWB Agreement. This will serve as our agreement for the proposed services. If you have questions or require further clarification, please contact me directly at (716) 710-3036 or email at mrogalski@labellapc.com. We appreciate the opportunity and look forward to working with you.

Respectfully submitted,
LABELLA ASSOCIATES, D.P.C.

Michael D. Rogalski, PE, LEED AP
Vice President – Regional Manager Building Engineering

SECTION 3.

WATER DISTRIBUTION SYSTEM IMPROVEMENTS PROPOSAL

LaBella
Powered by partnership.

February 19, 2024

Michael S. Eagler, Sr.
Acting Executive Director
Niagara Falls Water Board
5815 Buffalo Avenue
Niagara Falls, NY 14304

RE: **Water Main Replacement (Various Streets in Niagara Falls, NY)**
Scope & Fee Proposal

Dear Michael:

LaBella Associates, DPC (LaBella) is pleased to submit the following proposal to the Niagara Falls Water Board (NFWB) in response to the Request for Proposals (RFP) for Capital Project Design Services. LaBella's design professionals have successfully completed, design, permitting, and bidding of various watermain replacement projects across New York State, including Erie County Water Authority and the NFWB.

LABELLA IS A PARTNER

At LaBella, we aim to be more than just a provider of professional services; we aspire to be a true partner to our clients. Recognizing that the NFWB is currently undertaking a historic upgrade to their existing water and wastewater systems, we are committed to effectively communicating the design with the NFWB throughout the process. Our approach is designed to ensure that the NFWB's vision and requirements are fully integrated into the project, while minimizing additional workload on staff. By fostering open communication and collaboration, we aim to create solutions that are both innovative and aligned with NFWB's goals, ensuring that we add value beyond the conventional client-service provider relationship.

INTRODUCTION AND UNDERSTANDING OF THE PROJECT

Recognizing the critical nature and urgency of the required improvements to the water system, and their significance for the Niagara Falls community, we propose a comprehensive scope of work designed to efficiently meet the required grant timeline. Per the RFP, it is our understanding that the NFWB seeks qualified Professionals to design and administer several portions of water main replacement across the City of Niagara Falls. We stand ready to deliver support as our proposal includes survey field work/ data collection, design, permitting, and bidding assistance services.

This proposal is in response to the following scope items from the RFP:

NFWB Project #	*Project*
W2	20 inch main from Beech Avenue Storage Tank to Ontario Street (~ 3,200 LF)
W9	10th Street & Michigan Ave - Lockport St to Ontario St & 10th St to 11th St (~ 2100 LF)
W17	Laughlin Drive Main - 82nd Street to Bollier Avenue (~1,800 LF)

W21	Ontario Avenue Main - 13th Street to Main Street (~2,000 LF)
W25	Van Rensselaer Avenue - 900 Block (~300 LF)
W29	Witkop Avenue and 85th Street Loop (2,450 LF)
W13	81st Street watermain - Frontier Avenue to Niagara Falls Boulevard (~3,400 LF)
W15	College Terrace watermain - Madison to College Avenue (~900 LF)
W24	Rivershore Drive watermain - S. 86th Street to 91st Street (~1,500 LF)

The following represents a comprehensive overview of the scope of work outlined in this proposal:

Technical Approach:

- *Task 1 (Survey):* LaBella will provide survey that involves verification of existing conditions and equipment, integration with existing project elevations and measurements, documentation of other existing features in the project area, establishment of baseline control and benchmarks, and comprehensive mapping of all gathered data as necessary for the preparation of design and construction documents.

- *Task 2 (Conceptual Design):* The LaBella design team will collaborate with NFWB to develop initial schematic water main layouts, identify proposed pipe materials and diameters, assessing hydraulic requirements, and integrating the proposed infrastructure with the existing NFWB water system to ensure efficient water distribution and minimize service disruptions to customers.

- *Task 3 (Design Documents):* The Design Documnents phase involves developing permit review level engineers report, drawings, and specifications which include assessment of alternatives, evaluation of cost, and preliminary coordination existing utilities. Through the Detailed Design Phase, LaBella will develop comprehensive construction drawings and specifications, include hydraulic calculations, material selection and sizing, as well as final coordination with local authorities for permits.

- *Task 4 (NYS EFC Reporting):* LaBella routinely collaborates with state agencies on grant-funded projects. We will coordinate the proposed work with the New York State Environmental Facilities Corporation (NYSEFC) on behalf of the Niagara Falls Water Board (NFWB). This includes assisting the NFWB with MWBE and EEO reporting requirements by preparing all necessary documentation for quarterly reporting. Additionally, following construction, LaBella will obtain and submit required items to the EFC as part of their Document Collection and closeout process. This encompasses providing a variety of documents such as pay applications, inspection reports, MWBE reports, American Iron & Steel certificates, wage rate interviews, change orders, and meeting minutes, along with completing the Document Collection Form questionnaire and coordinating with the NFWB for their signature.

- *Task 5 (Bidding Assistance):* LaBella will assist the Niagara Falls Water Board (NFWB) throughout the project's bidding phase, including:

    - Distributing Bid Documents in PDF format to the NFWB, NYS DEC, and NYS EFC for review and administrative purposes, with hard copies available at both the

Consultant's and the NFWB Engineer's offices. For distribution to prospective bidders, the Project Manual will be available for online download.

- Responding to bidder inquiries, clarifying questions, and preparing necessary bid addenda (as needed).

- Facilitating a pre-bid conference at the project site to assist the NFWB, addressing technical queries.

- Evaluating bids from the three lowest bidders at bid opening for adherence to requirements, including any proposed equipment and material substitutions.

- Generating a bid evaluation report to identify the lowest responsible bidder and provide recommendations on substitutions.

- Communicating responses to bidder questions and clarifications, as well as issuing bid addenda and the bid evaluation report to the NFWB electronically in PDF format.

- Managing the list of bidders, handling inquiries, and disseminating bid documents and addenda.

- Upon NFWB's approval of the low bid(s), the consultant will:

- Prepare conformed contract documents.

- Draft agreements for the NFWB and low bidder(s) and gather necessary documentation for agreement finalization.

- Organize a post-bid/preconstruction meeting at the WWTP with low bidder(s) to overview the contracting and construction procedures.

- Issue a Notice to Proceed for each contract on behalf of the NFWB.

- *Task 6 (Construction Administration):* During Construction, LaBella will coordinate with NFWB and the Contractor to oversee the construction process, ensuring compliance with design specifications and completion of project record drawings. This role will include managing contractor coordination, conducting progress meetings, negotiating change orders and project documentation.

- *Task 7 (Construction Inspection):* Construction observation will task LaBella and their MWBE/ WBE subconsultants with on-site observation to monitor progress, verify adherence to design specifications, document the quality of materials and workmanship, address any issues or deviations from plans, and act as the liaison between the NFWB and the contractor as needed.

DESIGN TEAM CONSIDERATIONS

LaBella takes pride in its professional design team spread across the state. The NFWB will gain from our extensive experience and talent pool available statewide while working with local (Buffalo) engineering staff throughout design and construction. We are particularly proud of our strong relationships with multiple municipal water system clients, including the NFWB. We are eager to leverage this experience and professionalism for the benefit of the NFWB.

MWBE UTILIZATION GOALS

Beyond our in-house design team, LaBella will utilize our extensive network of MWBE (Minority and Women-Owned Business Enterprises) design partners to support the project, to fulfill the NFWB's utilization goals. Upon approval, LaBella will provide a detailed MWBE utilization plan consistent with NFWB goals.

PROJECT SCHEDULE AND FEES

LaBella recognizes the importance of adhering to the strict schedule requirements detailed in the RFP. A major advantage of partnering with LaBella is access to an extensive team of talented engineers and designers across New York State, enabling us to conduct simultaneous design and drafting activities. Additionally, during the Preliminary Design phase, we will evaluate the feasibility of combining several of the smaller projects into single bid documents, which will decrease construction costs due to consolidation mobilization and other realized cost synergies. Below is our anticipated design and construction schedule that exceeds the requirements of the RFP to provide a buffer, should construction of the projects experience unexpected delays. (*Note: The following schedule details high level phasing. LaBella will continuously update the overall project schedule for NFWB to review throughout design and construction. The schedule represents overlap of Survey and Design phases as we anticipate to proceed with design as survey data becomes available..)

- Project Kickoff (April 2024)
- Survey and Data Collection Phase (April 2024 - July 2024)
- Preliminary Design Phase (June 2024 – October 2024)
- Detailed Design Phase (October 2024 – February 2025)
- Bidding Phase (February 2025 – April 2025)
- Construction Phase (Summer 2025 – Summer 2027)
- Construction Completion (Fall 2027)

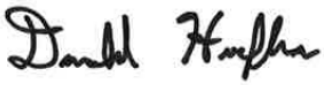
*Schedule Note: Due to increased design complexity and need for enhanced coordination with CSX, project W2 20" main from the Beech Ave. tank to Ontario Street watermain may surpass the outlined design and construction schedule. Nevertheless, it is expected that construction will conclude prior to the April 2029 completion deadline specified in the RFP.

Proposed Fee: Please see our proposed fee on the following page.

We appreciate the opportunity to provide this proposal. We are proud of our ability to provide high quality service and fair pricing. Should you have any questions or need further information, please do not hesitate to reach out.

Respectfully submitted,

LaBella Associates



Donald J. Hoefler, PE
Senior Civil Engineer – Municipal

Theodore E. Donner, PE
Senior Civil Engineer - Municipal

NFWB Water Main Replacement - Professional Services Budget		
NFWB Project #	Task Description	Proposed Not-To-Exceed Fee (Survey, Design, and Bidding)
W2	**Beech Avenue Storage Tank to Ontario Street (~4,165 LF)**	
	Survey, Design, and Bidding	$ 110,000
	Construction Administration	$ 33,320
	W2 Total	**$ 143,320**
W9	**Lockport St to Ontario St & 10th St to 11th St (~2,100 LF)**	
	Survey, Design, and Bidding	$ 52,000
	Construction Administration	$ 16,800
	W9 Total	**$ 68,800**
W17	**82nd Street to Bollier Avenue (~2,450 LF)**	
	Survey, Design, and Bidding	$ 48,000
	Construction Administration	$ 19,600
	W17 Total	**$ 67,600**
W21	**13th Street to Main Street (~2,100 LF)**	
	Survey, Design, and Bidding	$ 41,000
	Construction Administration	$ 16,800
	W21 Total	**$ 57,800**
W25	**Van Rensselaer Avenue - 900 Block (~300 LF)**	
	Survey, Design, and Bidding	$ 8,000
	Construction Administration	$ 2,400
	W25 Total	**$ 10,400**
W29	**Witkop Avenue and 85th Street Loop (2,200 LF)**	
	Survey, Design, and Bidding	$ 43,000
	Construction Administration	$ 17,600
	W29 Total	**$ 60,600**
W13	**Frontier Avenue to Niagara Falls Boulevard (~3,500 LF)**	
	Survey, Design, and Bidding	$ 83,000
	Construction Administration	$ 28,000
	W13 Total	**$ 111,000**
W15	**Madison to College Avenue (~1,000 LF)**	
	Survey, Design, and Bidding	$ 20,000
	Construction Administration	$ 8,000
	W15 Total	**$ 28,000**
W24	**S. 86th Street to 91st Street (~1,850 LF)**	
	Survey, Design, and Bidding	$ 36,000
	Construction Administration	$ 14,800
	W24 Total	**$ 50,800**
	Total Survey, Design, Bidding and Construction Administration Fee	$ 441,000
	****Estimated Total Geotechnical Investigation Fee***	$ 84,760
	Total Construction Administration Fee	$ 157,320
	*****Total Construction Inspection Fee***	$ 254,340
	Total Overall Fee	**$ 937,420**

*Note - Individual project areas will be evaluated on a site by site basis to determine the need for full Geotechnical Investigation in an attempt to control total project costs.

**Note - Based on a percentage of Proposed Construction Costs. Construction duration varies based on timing of material deliveries and the final scope of the project. Therefore, Construction Administration and Inspection services fee is shown as Estimated at this point. There is potential for cost savings due to combining multiple projects from Construction Mobilizations Costs as well Administration and Inspection Services.

Any Permit Fees - particularly CSX fees are to be paid directly by the Niagara Falls Water Board

SECTION 4.

FIRM OVERVIEW

ABOUT LABELLA

At LaBella Associates, our job is to create – structures, plans, ideas, results. As a nationally recognized Design Professional Corporation, that's a given, right?

But here's what really drives us: creating partnership between our team and our clients. So much so that we become one team, unified in the unrelenting pursuit of exceptional performance on each and every project. Reliability. Accountability. Collaboration. Respect. Not skills we went to school for, but innate in LaBella team members.

The pursuit of partnership is embedded in our culture – has been since our inception in 1978. And it affects client outcomes in profound ways. It means we're built to expertly execute projects from start to finish. That we have the talent and resources to take on any challenge. That projects are completed on time, on budget, and beyond expectations. And that we win awards – not just for our talent, but also for our ethics, employee culture, and growth.

Today, our wheelhouse is broad, with four key service offerings: Buildings, Energy, Infrastructure, and Environmental. Our reach is widespread with over 1,500 staff located throughout the country and Europe. We're headquartered in Rochester, NY– but our impact is seen, felt, and experienced around the world.

NEW YORK OFFICE LOCATIONS

TECHNICAL CAPABILITIES

INFRASTRUCTURE

- Civil Engineering
- Environmental
- Planning
- Transportation Engineering
- Land Surveying

BUILDINGS

- Architecture
- Planning
- Buildings Engineering
- Environmental
- Land Development & Landscape Architecture

ENVIRONMENTAL

- Environmental Consulting
- Environmental Contracting
- Buildings Engineering
- Solid Waste

ENERGY

- Program Management
- Renewables
- Planning
- Power Systems
- Environmental
- Civil Engineering

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FIRMWIDE ORGANIZATION

CHIEF EXECUTIVE OFFICER
Steve Metzger, PE

BOARD OF DIRECTORS

PRESIDENT
Jeffrey A. Roloson, AIA

CHIEF FINANCIAL OFFICER
Rob Pepe

ARCHITECTURE & INTERIORS
Municipal/Criminal Justice
Commercial
Education
Religious
Healthcare
Arts & Recreation

BUILDINGS ENGINEERING
Mechanical, Electrical & Plumbing
Structural
Energy
Commissioning
Hydropower

CIVIL ENGINEERING
Municipal Engineering
Infrastructure
Site Development
Gas Design
Landscape Architecture
Inspection
Athletic Facilities
Planning & Grants

ENVIRONMENTAL
Environmental Due Diligence - Phase I & Phase II
Regulated Building Materials
Brownfield & Urban Redevelopment
Environmental Compliance
Environmental Contracting & Drilling
Energy, Utility & Natural Gas

PROGRAM MANAGEMENT
Field Construction Management
Program Development
Project Management Plans
Risk Management
Procurement/Expediting
Quality Assurance/Quality Control

POWER SYSTEMS ENGINEERING
Substation Design
Protection, Control & Automation
Substation Maintenance
Transmission Line Design
Circuit Analysis
Project Management

TRANSPORTATION
Bridge & Structural Design
Highway & Street Design
Transportation Planning & Traffic Engineering
Construction Engineering
Surveying & Mapping

WASTE & RECYCLING
Permitting/Design/CQA
Ops Consulting/Operator Training
Gas System Permitting/Design
Gas System O&M
Environmental Compliance
Organic Waste Management & Recycling

MARKETING

HUMAN RESOURCES

ACCOUNTING & INFORMATION TECHNOLOGY

MECHANICAL & ELECTRICAL ENGINEERING

Whether your project requires new systems or the maintenance and retro-fitting of existing, our engineers have the technical know-how to improve building performance. Our mechanical, electrical, plumbing, and fire protection engineers work with facility managers to increase energy efficiency, continue operations while addressing capital improvements, and provide system controls and monitoring.

Mechanical Engineering Services

- HVAC/Precision Cooling System Design
- Plumbing
- Fire Protection
- Distribution Systems
- Building Systems
- Facilities Evaluation and Design
- Industrial Process Piping and Systems

Electrical Engineering Services

- Electrical Main Switchgear and Power Systems
- Lighting and Life Safety Design
- Fire Detection and Alarm Systems
- Security and Access Control Systems
- Telephone and Data Communications
- Electric Utility Engineering
- Process Control and Instrumentation

Fire Protection Systems Experience

At LaBella, our fire protection engineers review your needs, identify hazards and code requirements, and design systems that aid in preventing, controlling, and mitigating the effects of fires.

We assist building owners in meeting their fire protection system goals. We have provided third party review for the design submissions of others in support of building codes and standards.

Our fire protection engineers provide the following services:

- Code Compliance Review
- Wet and Dry Pipe Design
- Hydraulic Calculations
- Fire Pump Design
- Foam/Chemical Systems
- Smoke Control Design
- Fire Alarm Design
- Fire Sprinkler Design
- Fire Suppression Design
- Mass Notification Design
- Backflow Prevention

Energy Engineering

- Energy Audits
- Energy Conservation Services
- Performance Contracts
- Lighting Retrofits
- Co-Generation
- Energy Management Systems
- NYSERDA Assistance

Commissioning Services

- Evaluation of Facility Requirements
- Compliance and Performance Reviews
- Field Verification
- Identify and Correct System Installation Deficiencies
- Review of Operations and Maintenance Manuals for Compliance
- Post Construction Assessments

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We've dehumidified water parks and electronically locked prisons. We've shored historic buildings from the river rapids below them. And we've put energy to work smarter and more efficiently then ever before.

Whether your project requires new systems or the maintenance and retro-fitting of existing, our engineers have the technical know-how to improve building performance. Our multi-disciplinary team of mechanical, electrical, plumbing, fire protection and structural engineers work together on a full range of services, from foundation design to commissioning. We work with facility managers to increase energy efficiency, continue operations while addressing capital improvements, and provide system controls and monitoring.

BUILDINGS ENGINEERING

Mechanical Engineering
- HVAC/Precision Cooling System Design
- Plumbing
- Fire Protection
- Distribution Systems
- Building Systems
- Facilities Evaluation and Design
- Industrial Process Piping & Systems

Energy Engineering
- Energy Audits
- Energy Conservation Services
- Performance Contracts
- Lighting Retrofits
- Co-Generation
- Energy Management Systems
- NYSERDA Assistance

Structural Engineering
- Structural Design & Inspections
- Load Ratings
- Construction Phase Engineering
- Utility Structural Design
- Foundation Design

Commissioning Services
- Evaluation of Facility Requirements
- Compliance & Performance Reviews
- Field Verification
- Identify & Correct System Installation Deficiencies
- Review of Operations & Maintenance Manuals for Compliance
- Post Construction Assessments

Electrical Engineering
- Power Distribution Systems
- Lighting & Life Safety Design
- Fire Alarm Engineering
- Security & Access Control Systems
- Telephone & Data Communications
- Electric Utility Engineering
- Process Control & Instrumentation

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ph. (877) 626-6606
www.labellapc.com

CIVIL ENGINEERING

LaBella provides a broad range of civil engineering services that are performed by staff experienced in project administration, design, and construction.

Wastewater

Collection, Conveyance and Treatment

Treatment Plant Operations

Infiltration and Inflow Studies

Sewer Rehabilitation

Sludge Management

Stormwater Management

Conveyance

Stormwater Management Facilities & Practices

SWPPP Inspections

MS4 Management

Municipal Engineering

Town & Village Boards

Planning & Zoning Boards

Utility Design

Gas & Electric

Municipally Owned

Site Development

Site Selection/Evaluation

Planning Board Assistance

Site Layout

Grading & Utility Design

Stormwater Management

SPDES Compliance

Domestic Water

Source Development

Treatment, Storage & Distribution

Mapping

3D Surface Modeling

GPS & GIS

Hydraulics

Backwater Analysis & Flood

Watershed Hydrologic Studies

Dynamic Stormwater Computer Modeling

Street Design

Pavement Analysis & Evaluation

Roadway & Streetscapes

Traffic Analysis

Construction Services

Inspection

Plants

Water Mains

Sewers

Tanks

Roadways

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SECTION 5.

FAMILIARITY WITH NYSEFC REQUIREMENTS

FIRM EXPERIENCE

Recent Successful Grant Applications

LaBella has been successful in securing over $540 million for municipal clients in the last 40 years. The following describes some of the NYSEFC grant applications prepared for municipal clients by LaBella that were funded **in the last five years.** For many of these projects, we also supported our clients with planning, engineering, architectural, and environmental services to progress the projects—often to completion.

$12 MILLION LOCALLY SINCE 2018

NYSDEC Water Quality Improvement Project (WQIP) Program

Communities include:

- Town of Queensbury Rockhurst Sewer District $6.1M Requested/Funded (2021)
- Lake George Land Conservancy ClarkHollow Bay Land Acquisition $3.7M Requested/Funded (2021)
- Town of Stillwater Saratoga Lake Water Quality Study $30k Requested/Funded (2019)
- Town of Lake George Wastewater Treatment Plant $2.5M (2018)

$4.2 MILLION

Environmental Facilities Corporation Green Innovation Grant Program (GIGP)

Communities include:

- City of Cohoes Canal Square Park $1.1M Requested/Funded (2017)
- Village of Hudson Falls Paris Park $725k Requested/Funded (2018)

$630 THOUSAND LOCALLY IN RECENT YEARS

NYSEFC Engineering Planning Grants

Communities include:

- Village of Massena WWTP Upgrades $50k Requested/Funded (2022)
- Village of Massena Sewer Slip Lining $50k Requested/Funded (2022)
- Town of Lake George Caldwell Sewer District I/I Study $50k Requested/Funded (2019)

FIRM EXPERIENCE

Recent Successful Grant Applications

$17.5 MILLION IN LAST 5 YEARS

NYSEFC Water Infrastructure Improvement Act (WIIA)

Communities include:

- Village of Pawling MTA Trunk Sewer $508k Requested/Funded (2023)
- Village of Attica Water Treatment Plant Improvements $5M Requested/Funded (2022)
- Wayne County WWTP Regional Tank $3.9M Requested/Funded (2019)

12 PROJECTS IN 3 YEARS

NYSEFC Drinking Water State Revolving Fund (DWSRF) and Clean Water State Revolving Fund (CWSRF)

Communities include:

- City of Glens Falls WWTP $815k Requested/Funded (2018)
- City of Glens Falls Henry Street $468k Requested/Funded (2019)

SECTION 6.

RELEVANT EXPERIENCE

GENERATOR EXPERIENCE

ERIE COUNTY DEP & DSM

East Aurora Water Resource Recovery Facility Comprehensive Electrical Study

LaBella Associates performed a comprehensive electrical study for Erie County Department of Environmental & Planning, Division of Sewerage Management on the East Aurora Water Resource Recovery Facility, a wastewater treatment plant located in East Aurora, NY.

The specific focus of the study was on a failing backup power generation system and a lack of redundancy for a facility considered to be critical infrastructure.

LaBella performed a building condition assessment of electrical systems via field survey, staff interviews, and an investigation of record documents. In addition, LaBella documented existing equipment types, the condition of equipment, and any code deficiencies by system type.

Based on the electrical study findings, specific recommendations were given for identified deficiencies, with priority and probable construction costs provided for each.

LaBella was able to provide multiple upgrade options and layouts for modernizing the backup power generation system for redundancy, to bring the system up to Critical Operations Power System (COPS) standards, and to account for future plant process upgrades.

Study Cost: $18,400

CLIENT PARTNER

Mary L. Plesh, P.E.
Sanitary Engineer
Erie County
Div. of Sewerage Management
716-858-7407
mary.plesh@erie.gov

LaBella provided multiple upgrade options and layouts for modernizing the WWTP's backup power generation system for redundancy.

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ERIE COUNTY DEP & DSM

East Aurora Water Resource Recovery Facility (WRRF): Control Building Interior Improvements

LaBella Associates D.P.C., under its term agreement with Erie County Department of Environment & Planning was retained to provide full architectural, engineering, and construction inspection services for the renovation of the former Control Building that once served as the central hub of the wastewater treatment plant.

The existing Control Building was vacated and needed to be used to its full potential. The building, built in the early 1950s, is approximately 1,800 square feet, 2-story, and underwent structural repairs and building envelope improvements such as a new roof and windows in 2016. The project intended to move program functions from the on-site temporary trailer to the Control Building, thereby removing the trailer from the site to free up valuable space.

The project included a laboratory testing area, separate men's and women's locker rooms with toilet and shower facilities, an employee break room, office space, and general storage. All new interior finishes with new doors were provided. Furniture & equipment was either relocated from the temporary trailer or provided as part of the contract.

The building included significant modifications of the interior spaces, including the total gut of the entire second floor and a portion of the first floor. All HVAC, plumbing, and electrical systems were gutted with all new systems and equipment installed. The original building was not air-conditioned, thereby requiring new rooftop HVAC equipment. New utility services from the site, such as water, gas, sewer, communication (internet / SCADA), and electric power, were installed.

CLIENT PARTNER

Mary L. Plesh, PE
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Erie County
Div. of Sewerage Management
(716) 858-7407
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LaBella provided complete construction administration and daily inspection services of the project working with four prime contractors and the County to see the project through to completion.

Construction Cost: $1,015,276
Year Complete: Feb 2023

LaBella
Powered by partnership.

DRESSER-RAND

Guascor Power 2 MW Genset Power Plant

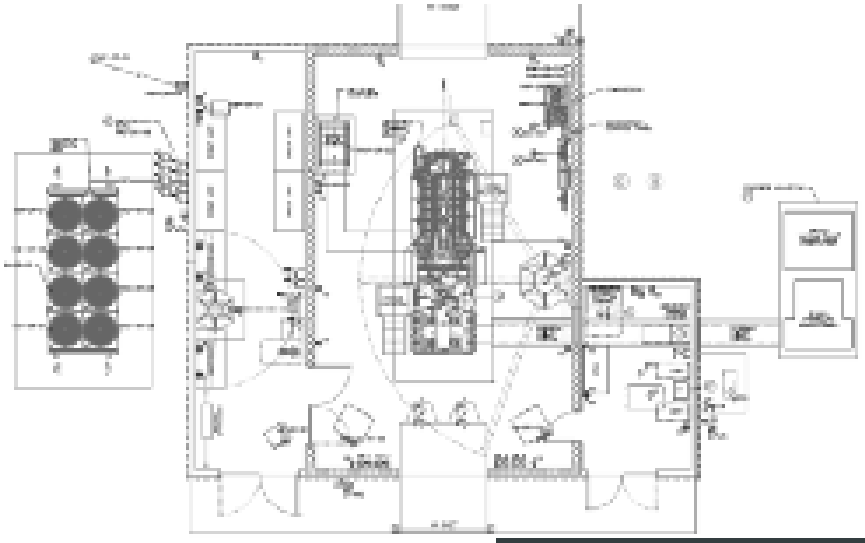
CLIENT PARTNER

Confidential

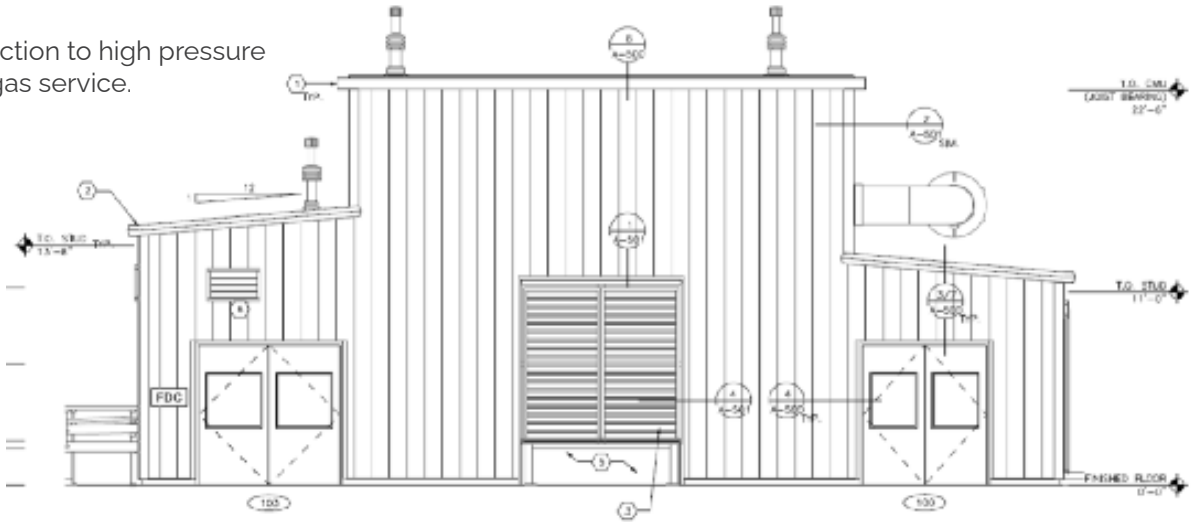
LaBella Associates worked with LeChase Construction to complete design services for the Guascor Power 2 MW Genset Power Plant in Olean, NY. LaBella provided design services for architecture, mechanical, plumbing, electrical and structural engineering.

Other work included:

- 2 MW gas fired generator and ancillary equipment.
- Design of interconnection piping, control and power wiring.
- New generator building including maintenance shop and control room.
- Tight acoustical requirement
- Environmental control of generator building including make-up/relief air systems.
- Interconnection to high voltage plant distribution.
- Coordination with utility concerning interconnection or power.
- Connection to high pressure plant gas service.



LaBella provided design services for architecture, mechanical, plumbing, electrical and structural engineering.



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DAEMEN COLLEGE

Charles J. Wick Campus Student Center Standy Generator

LaBella had to submit to the Town of Amherst Planning board to obtain approval for the project.

LaBella provided engineering services for the design of a standby natural gas exterior generator for the Charles J. Wick Campus Student Center at Daemen College in Amherst, New York.

The project involved connecting strategic loads within the building that would be served by a generator during an power outage as students seek a safe place to stay.

A new 208/120volt, 3-phase, 125-kW natural gas-fired generator serves the following:

- Heating Equipment
- Sump Pumps
- Kitchen Equipment
- Cooler / Freezers
- Café Dining Lighting
- Security Desk

Several panelboard feeders that serve these loads were intercepted and re-routed to a new 400-amp distribution panel and a 400A-3 Pole automatic transfer switch. A new concrete pad and 6-inch round, concrete-filled bollard were installed for physical protection of the exterior generator.

LaBella had to submit to the Town of Amherst Planning Board to obtain approval for the project. This required revising the location of the generator to satisfy the Town's Planning Board.

Construction Cost: Est. $150,000

Year Completed: 2018

CLIENT PARTNER

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LaBella
Powered by partnership.

ERIE COMMUNITY COLLEGE

Campus-Wide Replacement of Emergency Generators

LaBella Associates was selected to design generator replacements at select buildings (12 total) on the Erie Community College (ECC) North Campus-Williamsville, NY; South Campus – Orchard Park, NY and the City Campus – Buffalo, NY. Most of the existing standby power generators were past there useful life and some did not operate at all. Most existing generators were located inside each building which did not conform to current codes. New natural gas generators were located outside existing buildings to conform with code, freeing up valuable space in mechanical rooms.

The power distribution connecting the generators were reconfigured to conform to the latest National Electrical Code (NEC) by adding an automatic transfer switch to serve non-life safety loads. New natural gas piping is tapped at the main meter at each building to fuel the outdoor generators. Some of the electrical panels serving back-up generator loads were replaced in-kind due to the age and condition. In some buildings, as a cost saving approach, existing generators that are fair-good condition remained and new emergency and exit sign lighting was designed to comply with the NEC, saving the cost of replacing a generator and adding a transfer switch.

Completion: December 2021

Construction Cost: $977,260

(Top Photos) New Generator at ECC North, Spring Student Center

(Bottom Photo) New Generator at ECC South, Building 2

CLIENT PARTNER

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LaBella
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MONROE COUNTY

Children's Detention Center, Electrical Utility Separation

Design included the interception of the existing underground feed and reroute it to a new medium voltage pole riser near the main driveway to the facility.

LaBella was retained by Monroe County to upgrade the existing emergency generator system that supplies the Children's Detention Center.

Electrical services to the facility were fed from the State Facility power distribution switchgear on the South side of Rt. 251. The medium voltage (15 kV class) switchgear was used to distribute power throughout the facilities and also served as the connection point for the facilities standby power generator.

Design included the interception of the existing underground feed and reroute it to a new medium voltage pole riser near the main driveway to the facility. A pad mounted, 275 kW, exterior enclosed, diesel generator with a 600 A, exterior-rated automatic transfer switch and exterior rated generator distribution switchboard was installed near the entrance sally port. The equipment was sized to support all current building loads, anticipating future expansion building loads and to provide full facility backup.

A new 480V building service feeder was installed to send the generator distribution switchboard to each building as well as picking up the gate power and perimeter lighting. New 480V service were also installed in each building and the existing building distribution was re-fed from this service.

Construction Cost: $312,000

Year Completed: 2015

CLIENT PARTNER

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LaBella
Powered by partnership.

NFTA

Niagara Frontier Transportation Authority
485 Cayuga Drive Back-up Data Center

New air conditioning for the data center and backup generator will serve the backup data center.

This project consists of converting an empty 830 square foot, first floor space into a backup data center for the Buffalo Niagara International Airport (BNIA). An existing 2,466 square foot office space above will receive new electric and lighting. New air conditioning for the data center and backup generator will serve the backup data center.

A pre-engineered data rack solution was provided. This system consisted of eight separate cabinets integrated into one system. In addition to housing IT electronics, this system is equipped with self-contained cooling, back-up cabinet exhaust, self-contained fire protection, 40 KVA UPS with batteries and an overhead power distribution system.

The backup power system consist of a natural gas 125-kW, 120/208-volt outdoor generator with weather proof enclosure. The existing grade will be saw cut for a new concrete pad, concrete bollards surround by a chain link fence. Two automatic transfer switches are to be provided in the building to serve the data center equipment and the office space above.

Construction Cost: $351,400

Year Completed: 2020

CLIENT PARTNER

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LaBella
Powered by partnership.

NFTA

Electrical Vault Upgrade at Airport

CLIENT PARTNER

Dennis Lupp, PE
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The Niagara Frontier Transportation Authority retained LaBella to upgrade the main electrical vault equipment at the Niagara Falls International Airport. The project consisted of replacing the existing airfield lighting constant current regulators and replacing the existing 250-kW diesel Onan generator.

The existing constant current regulators for the airfield lighting had reached their useful life expectancy. The project included replacing five (5) existing 480V airfield lighting constant current regulators with new 480V constant current regulators. Two of the five regulators will be used as a hot spare (connected and ready to go) and a cold spare (available to be connected) regulator. Additionally, two (2) existing 240V regulators were replaced with new 480V constant current regulators. This required the removal of existing transformers and a re-distribution of power feeders to the new regulators.

The existing controls for all of the regulators were existing to remain. The existing generator had been relocated to the airport from another airport in 2002 and had reached its useful life. The generator replacement consisted of replacing the existing 250-kW diesel generator with a new one. The existing automatic transfer switch, remote annunciators and battery charger were also replaced. One of the remote annunciators was located in the airfield tower and was not readily available to the maintenance personnel. This remote annunciator was removed and a new indication system was designed. The new system included a telephone dialer and visual indication on the outside of the electrical vault building to indicate when the generator is running and when there is a fault. The telephone dialer allows the system to dial several phone numbers and provide prerecorded messages. This allows the maintenance personnel to respond as needed more quickly.

The project included the reuse of the existing louver for air intake and exhaust. Power was provided to new motor operated dampers. The existing fuel–oil day tank and pumping system was re-used with new fuel piping from the day tanks to the new generator.

The power to the airfield lighting must remain operation twenty four hours a day seven days a week. Temporary power during construction was designed with a mobile trailer mounted generator to serve as a standby during construction.

LaBella also provided construction support services.

Construction Cost: $220,000
Year Complete: 2018

LaBella
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UPMC CHAUTAUQUA WCA

Switchgear & Generator Replacement

The University of Pittsburgh Medical Center (UPMC) Chautauqua WCA (the former Women's Christian Association Hospital) retained LaBella for an upgrade to the main electrical equipment of the hospital. The project consisted of replacing the existing Federal Pacific custom double ended switchgear rated at 480/277-volt, 4000-amp with integral automatic transfer switches, replacement of the three 500-kW diesel Onan generators.

The Federal Pacific double ended switchgear was removed in its entirety. This allowed room to add a paralleling generator switchgear. Three 500-kW generators were replaced with two 750-kW units. The design also included connecting an existing standalone 1 –MW Cummins diesel generator that was installed 5 years prior for an emergency department addition to the hospital. The existing 1-mW will now parallel with the two new 750kW units.

A new power distribution approach eliminates two large transfer switches, provides smaller ampacity transfer switches, and adds several transfer switches all to provide the facility with better load management. Bypass isolation, closed transition transfer switches are used for Life Safety and Critical Branch load while standard closed transition type transfer switches were used elsewhere.

The existing main 4000-amp Square normal main switch gear was modified with motorized circuit breakers to achieve a main-tie-main configuration that did not exist. Temporary power during construction was design with a mobile 2-MW trailer connected to a motorized circuit breaker in the normal switchgear to serve as a standby during construction.

To comply with the National Electrical Code and NFPA 110, a separate 2-hour rated room was built to separate normal power equipment and emergency equipment. New HVAC for ventilation of the generator room included two new roof mount air intakes and the reuse of the 3rd generator louver for additional air intake. The new generator utilize the existing exhaust openings with new louvers and dampers. The existing fuel–oil pumping system was replaced with new fuel piping and day tanks. The existing main underground 12,000 fuel tank recently replaced is to remain. Minor structural modifications on the floor below were made to accommodate the new generators. New concrete pads for each generator were design to absorb the vibrational load.

Completion Date: July 2019
Total Construction Cost: $2,910,000

CLIENT PARTNER

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LaBella
Powered by partnership.

LIGHTING & SWITCHYARD EXPERIENCE

CITY OF GASTONIA

Water Treatment Plant Renovation & Upgrades

CLIENT PARTNER

Matt Bernhardt
Director of Public Works
704-866-6843

LaBella has been a client of the Gastonia Water Treatment Plant for over 50 years.

The City of Gastonia underwent a substantial capital improvement project for the upgrades of their water treatment plant that was originally designed by the LaBella team. This project involved major upgrades to the existing infrastructure as well as the addition of new buildings and water treatment infrastructure.

The major engineering work for this project included: rebuilding the process trains 1 thru 4 with membrane filters; major upgrades to the electrical system including energy efficient lighting; complete renovation and upgrade to building mechanical systems including energy efficiency HVAC systems; new laboratory and office spaces; new perimeter security fencing; upgrade the existing building façade; stabilization of structures in the south plant; constructing a 5.0 MG clearwell; and installing updated SCADA systems. The project was produced and coordinated using REVIT modeling which provided detailed coordination between multiple engineering disciplines.

Construction Cost: Est. $58 Million

Year Complete: Est. July 2018

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AVANGRID

South Perry Substation

South Perry Substation is an existing 115/69/34.5 kV substation serving electrical utility customers in the southern tier of New York State.

To support growth and improve reliability in the area, Avangrid initiated a project to upgrade an existing 115/34.5 kV transformer to a higher MVA rating, as well as adding a redundant 115/34.5 kV transformer and associated switchgear, bussing, and controls.

Beyond the upgrades to the 115/34.5 kV system, a new 230/115 kV bulk power substation was also introduced at the site to harden the 115 kV distribution system.

LaBella Associates was initially retained to perform detailed engineering for the protection, control, monitoring, and automation systems at this site. These services were performed by our protection and control engineering team in our Power Systems Division.

As the project progressed, LaBella's environmental team was retained to prepare spill prevention control and countermeasures (SPCC) plans and modifications to the civil and electro-mechanical designs to address oil containment concerns in the event of a spill.

When the design was approaching completion, LaBella's civil engineering team was retained to prepare solutions for storm water management which were not addressed in the original design, as well as to obtain the required site plan approvals and associated building permits required from the local authority having jurisdiction.

CLIENT PARTNER

Kyle Duck
Manager - Programs/ Projects - NYSEG
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Avangrid initiated a project to upgrade an existing 115/34.5 kV transformer to a higher MVA rating, as well as adding a redundant 115/34.5 kV transformer and associated switchgear, bussing, and controls.

LaBella prepared Storm Water Pollution Prevention plans (SWPP) as well as modifications to the existing civil work to meet the project's needs, and obtained the required approvals to progress with construction.

Construction is currently underway, with completion of the 115 kV yard anticipated in 2018, and completion of the 230 kV yard anticipated in 2019.

Construction Cost: $30 Million

Year Completed: Est. 2019

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DASNY

Electrical Upgrades at University of Buffalo – Ellicott Complex

The University of Buffalo, as part of a facility condition assessment, has identified the electrical distribution equipment at the Ellicott Complex, which mainly serves as student residence dormitories, requires to be upgraded. The assessment concluded that Fargo, Evans (formerly Porter), Red Jacket, Richmond, Spaulding and Wilkeson Quadrangle would be included in a multi-phase, multi-year project upgrade. As part the current DASNY Term Contract, LaBella was retained to preform full engineering services for the electrical upgrade project.

All six buildings range in similar size and age, from 9 to 10 stories, from 143,000 to 174,000 square feet and they all were open for occupancy in 1974. Typically, floors one through four are the full size of the building footprint, the fifth floor is approximately half the building footprint and floors sixth through ten have a minimal square footage footprint.. Much of the equipment is over 45 years old and past its useful life. The following is a general summary of the work for each building:

- Replace the existing 4000-amp, 480/277-volt switchgear consisting of three, 2000-amp fused bolted pressure switches with new 3000-amp switchgear and three 1200-amp solid state circuit breakers, sub-metering, surge suppressor device and a N.O./N.C. circuit breaker arrangement for a portable generator connection. Based on kW demand readings the switchgear was able to be downsized.
- Replace three 2000-amp, main lug only, 480/277-volt Main Distribution Panels, with new 1200-amp MDPs
- Replace approximately 15-20 distribution panels throughout. Panels are rated at 480/277-volt and 208/120-volt, ranging from 400-amps to 1,000-amp.
- Retrofit and/or replace approximately 70-80 branch panelboards throughout. Panels are rated at 480/277-volt and 208/120-volt, 100-amp and 225-amp.
- Replace approximately 7-10 dry type transformers, 480-volt primary to 208/120-volt secondary, ranging from 15kVA to 300kVA.
- Replace all common area lighting. Corridor lighting consists of a T8 fluorescent bare lamp strip concealed above in a ceiling cove have been replaced with an LED Retrofit kit. Existing downlights were fitted out with LED retrofit kits. Stair hall lighting consisting of a T8 fluorescent bare lamp strip concealed above in a ceiling cove, were replaced with LED wall mount luminaries. Approximately 800-900 luminaires were retrofitted or replaced. New corridor lighting controls were replaced, connecting lighting to the building management system.
- Replace approximately 60-80 exit signs in their entirety, with LED type. An additional 10-15 exit signs are added to comply with current code.
- Replace electrical receptacle and switch devices in all dormitory rooms, bathrooms, corridor, etc. Depending on building, totals range from 500-1,000.
- Preparation of arc-flash and coordination studies for each building.

To accommodate these replacements modifications were made to the power distribution system for better reliability and safety based on coordination studies performed by LaBella. Also, existing door modifications and replacements were necessary to accommodate electrical equipment installation. Minor hazardous material abatement is required for exit sign installation and other building modifications required to accommodate new electrical equipment.

CLIENT PARTNERS

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LaBella
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DASNY

Electrical Upgrades at University of Buffalo – Ellicott Complex

With the multi-phase, multi-building project approach LaBella determined Wilkeson to be the first building for electrical upgrades since it is scheduled to be closed in the summer of 2019 for interior renovation work. The following lists the schedule of buildings in order of priority and completion.

Wilkeson Quad

Status: Completed in January 2021

Cost: $1,375,000

Evans Quad (formerly Porter)

Status: Completed August 2022

Cost: $744,000

Richmond Quad

Status: In construction, Estimated August 2024 completion

Cost: $1,244,400

Fargo Quad

Status: In construction, estimated January 2025 completion

Cost: Estimated at $1,570,000

Spaulding Quad

Status: Starting construction

Cost: $1,811,000

Red-Jacket Quad

Status: Starting design

Cost: Estimated at $1,800,000

LaBella
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HIGH VOLTAGE ELECTRIC SERVICE

Renssealaer County Sewer District #1 115KV Breaker, 13.2KV Recloser and Relay Replacement

CLIENT PARTNER

Gus Mininberg
High Voltage Electric Services, Inc.
518-869-4961
kv115@aol.com

Pictured left is a SEL-851 Feeder Protection Relay that was used for this project.

Project initially started as development of a maintenance plan but during the site visit the existing 115kv circuit switcher displayed a red flag along with a 13.2kv recloser being inoperable. Knowing this HVES and LaBella worked in close collaboration to find a replacement solution. End result new GE SF6 circuit breaker and the SEL-851 for protection on the 115kv side. 13.2kv side is GW viper with SEL-651R2.

Provided the following services:

1. Physical layout of two (2) new 115kv breakers.
2. New protection and control drawings for the two (2) 115kv breakers.
3. Using SEL Grid configurator to program SEL-851
4. Programing of the two (2) GW VIPER with SEL-651R2 for control.

During the course of this project LaBella has been evaluating the use of the new SEL-851 and providing feedback to Schweitzer Engineering.

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NORTH TONAWANDA CSD

Energy Performance Contract

North Tonawanda City School District enlisted LaBella to provide engineering services for an energy performance contract to upgrading existing HVAC, lighting and plumbing systems while providing substantial energy savings. Existing systems across six schools including controls infrastructure, water heating systems, lighting, and air handling equipment were all past their expected life.

LaBella assisted with the development of the districts RFP and the selection of an Energy Service Company (ESCO) who would audit the facility and implement potential projects.

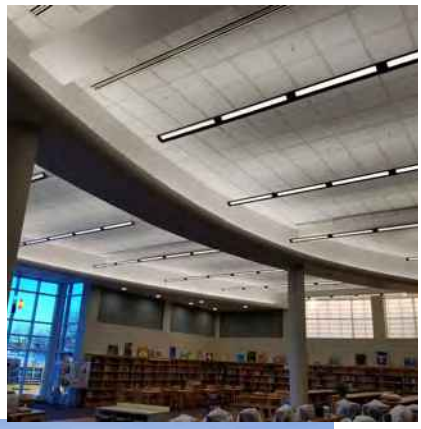
After district review and approval of the recommended measures, LaBella developed design documents and specifications for construction and performed commissioning services to ensure proper implementation. The measures installed as part of the energy performance contract saved the district a total of $176,190 annually.

The scope of the project includes:

- Interior & Exterior Lighting
- Controls Hardware/ Software
- Boiler Plant Replacements
- Pool Dehumidifier Replacement
- Domestic HW Systems
- Culinary Exhaust Controls
- Air to Air Heat Recovery

Project Cost: $5,323,867

Year Complete: 2021



The measures installed as part of the energy performance contract saved the district a total of $176,190 annually.

CLIENT PARTNER

Anthony Montoro
Assistant Superintendent
North Tonawanda CSD
716-807-3536

LaBella
Powered by partnership.

NEW YORK POWER AUTHORITY

NYC H+H/McKinney Turnkey Comprehensive Energy Upgrades Project

Project Location

CLIENT PARTNER

William Dickerson
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NYPA
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Basis-of-Design W2W Heat Pump System

In 2022, LaBella was engaged by the New York Power Authority (NYPA) to execute a comprehensive energy upgrades project at the Dr. Susan Smith McKinney Nursing and Rehabilitation Center, part of the NYC Health + Hospitals network.

The facility is 175,193 sq. ft. and is located in Brooklyn's East Flatbush neighborhood. The DSSM facility serves thousands of patients in a disadvantaged area of NYC and is a part of the larger Kings County hospital campus which is a cornerstone of the community.

Utilizing a progressive design-build approach, LaBella developed design documents for upgrades at DSSM, including the following scope of work:

- LED lighting upgrade, with replacement of ~2,700 fixtures
- BMS upgrade, including conversion from pneumatic to digital
- Chiller replacement, involving removal of the electrical centrifugal chillers and replacement with 2 banks of modular, water-to-water heat pumps for connection to a future geothermal loop (700 tons total installed)

LaBella hosted a private bid, and recommended awards to design-build partners for the implementation phase of the project, in which LaBella will act as the Construction Manager.

This project preceded a district geothermal study of the larger Kings County hospital campus, in which LaBella determining feasibility of installing a ground loop to serve McKinney, and 3 other buildings in the area. This project will be one of the first of its kind in NYC.

Project Value: $8.3M

Design Completed: July 2022

Estimated Completion: Summer 2024

LaBella
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LABELLA EXPERIENCE

Power Systems Experience

LaBella provides full service engineering designs for all facets of utility power systems, from concept through commissioning. Our attention to detail has resulted in LaBella projects becoming design standards for our clients. In challenging conditions, our experience has allowed us to provide innovative solutions to achieve our client's goals. Some examples of recent full-service design projects:

Western New York: 12 kV Expansion

Substation Expansion project, adding a second 115 kV source, a second 12 kV transformer, 115 and 12 kV bus ties, SF6 switchgear and control house, full system automation and HMI, and a new yard cable trench system. Space constraints required developing unique 115 kV vertical combination

Year Complete: 2017

structures, combining dead end support, instrument transformers, disconnect switches, and a circuit breaker bay.

Western New York: New 115-34.5 kV Substation

Green field indoor substation, including architectural design, in a mixed residential and commercial area. The project included (2) new 115 kV sources, 115 kV SF6 switchgear, (2) 30/40/50 MVA transformers, 34.5 kV SF6 switchgear, automation, and all supporting systems. This challenging assignment

Year Complete: 2018

provided a maintainable design, but also met strict noise level and architectural appearance requirements from the municipality.

Southern Tier New York: 230-115-34.5 kV Substation Expansion

Substation Expansion project, adding a third 115-34.5 kV transformer, new 34.5 kV bus and distribution breakers, replacement of all existing 34.5 kV line circuit breakers, control house expansion, Power Line Carrier Communications Improvements, and numerous

Year Complete: Est. 2019

other ancillary items.

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SUNY FREDONIA

Critical Maintenance Projects

The following list of Civil, Architectural, Mechanical, Electrical and Plumbing critical maintenance projects were completed at the SUNY Fredonia campus. Most of these projects were under $100,000 in construction costs.

Alumni and Gregory Halls, Bathroom Upgrades – Renovations to eight existing student bathrooms within Alumni Hall and ten bathrooms in Gregory Hall. Bathrooms were renovated to be ADA accessible. Completed 2012

Exterior Lighting Improvement Rockefeller Plaza – Replaced (74) canopy downlights with LED type. Provide new handrail lighting. Provide ACM abatement on existing downlights, Completed 2016

Jewett Hall – Replace AC-7 – Replaced 2000 CFM indoor air handling unit chilled water cooling only for an interior office space, complete 2016.

Maytum Hall Replace Water Heater – Relocate existing 72 KW instantaneous electric water heater from exterior wall to prevent freezing, complete 2017.

Mason Hall Lighting – Replace (11) 12ft. pedestrian style light poles with LED type, replace all underground wring back to panel, complete 2017.

Grissom and Andrews Hall – Replace 150 GPM Duplex Sewage Ejector Pump in basement. Separate project for each building, completed 2017.

Williams Center Grease Trap – Provide report to address grease build up issue in pipe, provide

recommendations to rectify problem and obtain contractor pricing, complete 2017.

Gregory Hall – HVAC Upgrade – Provide a new 2,600 CFM AHU, 7.5 ton DX cooling with new VAV ductwork distribution system for new communication marketing department 1st floor offices, complete 2017, Cost $135,000.

Dods Hall – Women's Locker Room Toilet Replacement- Site visit and specification to replace wall hung toilets, complete 2017

Fire Alarm System Cost Estimating – Provide rough order of magnitude cost estimating to replace and upgrade fire alarm/ mass notification systems in the Service Complex, complete 2018.

Gregory Hall AC Rehab – Replace outdoor condensing unit and chilled water heat exchanger for 2nd floor University Police office, completed 2018.

Site Lighting Improvements – Phase I – Replace (21) 12ft. pedestrian style light poles with LED type between University Commons and Chautauqua Hall, replace all underground wring back to panel, complete 2018.

CLIENT PARTNER

Tim Bentham
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SUNY Fredonia
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Campus Roadway/Milling - Working with Services, evaluate existing pavements, specify and produce bid construction documents annually for the last 3 years.

Pedestrian Safety Improvements - Assist the Campus with ongoing evaluation of existing sidewalk conditions and recommending replacement inclusive of ADA curb cuts and cross-walks. Developed projects over the last 3 years

Fenton Hall Patio Reconstruction - Provided design services for the replacement of a 1,000 s.f. concrete patio, complete with drainage and landscaping. Work is scheduled to be completed in the Summer of 2022.

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WATER DISTRIBUTION EXPERIENCE

CITY OF BUFFALO

Water System Improvements - 2021 South Project

CLIENT PARTNER

Peter Merlo, PE
Principal Water Engineer
Buffalo Water Board
716-851-4771

LaBella Associates was selected by the City of Buffalo to complete the Water Distribution System Improvements – 2021 South Project. The project consists of replacing the existing watermain with a new ductile iron pipe watermain throughout a neighborhood in South Buffalo. The project consists of the following roadways:

- Abby/New Abby Street: 3300 LF
- Baraga Street: 2000 LF
- Germania Street: 1650 LF
- Mystic Street: 1350 LF
- Beacon Street: 1100 LF
- Boone Street: 900 LF
- Pembina Street: 700 LF
- Bell Avenue: 670 LF
- O'Connor Avenue: 650 LF
- Amelia Street: 220 LF

The Water System Distribution System – 2021 South Project represents the most recent City of Buffalo, project along with others, that the City of Buffalo is completing to represent the City of Buffalo's on-going efforts to comply with the Environmental Protection Agency's Lead and Copper Rule Revisions. Along with other requirements, the Rule Revisions requires municipal water systems to inventory their customer's water services and document full replacement (within the right-of-way AND from the right-of-way to the meter) of any lead service contamination.

The project design consisted of working with the City of Buffalo to determine the most efficient replacement alignment that minimizes utility conflicts and maximizes utility separation distances. The utility crowded urban right-of-way with an existing twin 84" sewer throughout much of the neighborhood complicated the proposed alignment. Once the alignment was finalized LaBella

worked with the City of Buffalo to review water services throughout the project. Water service records were reviewed and summarized. Record locations with documented lead services were identified for replacement. Water services with incomplete/ indeterminant lead water service records were also identified to be field verified and replaced as necessary.

Trench and pavement restoration treatments were outlined, the project was finalized and reviewed with the City of Buffalo. The project was bid in the Fall of 2023. LaBella addressed bidder's questions, issued addendums, reviewed the bids and completed a bid tabulation. LaBella made a final bid recommendation to the City of Buffalo for approval.

Construction is anticipated to begin in Spring 2024. LaBella will provide the general services during construction and resident inspection for the project.

Construction Cost: $5,520,150

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CITY OF BUFFALO

Fruit Belt Waterline Cleaning and Lining

CLIENT PARTNER

Peter Merlo, P.E.
Principal Water Engineer
Buffalo Water Board
716-851-4771

The City of Buffalo's location on Lake Erie and at the western end of the Erie Canal fueled vibrant continuous growth through the first half of the 20th century. The City's growth was supported by its proximity to the lake which has provided it with an abundant source of affordable drinking water. During this growth, a majority of the City of Buffalo Water infrastructure, consisting of approximately 825 miles of water main pipe, 23,860 valves, 80,000 service connections and 7,966 fire hydrants, were constructed. As a critical piece of infrastructure, the water system must be functional 24 hours a day, 7 days a week; however, the public often overlooks this artery until there is a disruption of service or inadequate pressure to fight a fire. As the population decreased during the second half of the 20th century, the demand on the existing system stabilized to less than 50% of the system's designed capacity. As an older system, the operation and maintenance costs of the water system increases yearly; thus requiring the City to manage the system, its maintenance, and repair/reconstruction as financially efficient as possible.

Cleaning and relining the watermain was considered as a cost effective alternative to the reconstruction of approximately 5 miles of watermain within the neighborhood.

The City hired LaBella to improve the water system serving the east side of the Fruit Belt neighborhood, which had been plagued with low water pressure and volume. The system's deficiencies in this neighborhood were a result of the tuberculation of the existing cast iron watermains. Tuberculation is a bacterial-based oxygen-driven form of corrosion that results in iron oxide precipitation. The deposition of iron oxide (tubercles) from the water, as opposed to material being "taken away, has progressively clogged the pipes through the years.

Since the watermains were considered structurally sound based on review of the watermain break records, the project called for the cleaning and relining instead of replacement of approximately 5 miles of watermain within the neighborhood

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CITY OF BUFFALO

continued

The cleaning of the watermain, mechanically removes the tuberculated build up iron oxide while the relining process reestablishes the cement lining within the watermain.

The cleaning of the watermain, mechanically removes the tuberculated build up iron oxide while the relining process reestablishes the cement lining within the watermain. The cleaning and relining of the pipe rejuvenates and extends its service life while improving service pressure and volume.

Full reconstruction of the watermain would require that the full length of the watermain is excavated, removed, replaced, and would require extensive restoration of the project area; whereas cleaning and relining of the watermain is facilitated by excavation of access ports at select locations in the project area. The cleaning and relining equipment is inserted into the system at the access ports and the watermain is cleaned and relined between access ports. The access ports are repaired with new pipe and the area is restored to pre-construction conditions.

The cleaning and relining process requires a smaller work zone footprint, reduces the disruption to the neighborhood's service, and is less expensive than full reconstruction.

LaBella worked with the City of Buffalo to solicit project bids, ultimately awarding the $4.4 million dollar project to Mainlining America, LLC.

We are also tasked with keeping the neighborhood informed of the construction progress and associated disruptions, LaBella provided construction administration and resident inspection services. The cost effective cleaning and relining project was successfully completed in only 2 years increasing area wide pressures extending the service life of the rejuvenated watermain on a shorter less disruptive schedule the full reconstruction.

Construction Cost: $4.4 Million

Construction Completed: November 2019

CITY OF ROCHESTER WATER BUREAU

3B and 3C Lead Service Line Replacement

CLIENT PARTNER

Michael Bushart
City of Rochester Water Bureau
(585) 428-7500

LaBella Associates was selected by the City of Rochester Water Bureau (RWB) to complete 3B and 3C Lead Service Line Replacement Projects. The Lead and Copper Rule, as updated by the Environmental Protection Agency, establishes new regulations, testing and timeframes to better protect children and communities from the risks of lead exposure. The City of Rochester has taken a proactive approach to identify and replace lead water service lines with the goal of replacing all lead services by 2030.

The typical water service replacement consists of two segments, with each segment having differing maintenance designations. The "outside" service consists of the portion of the water service from the connection at the main to the curb valve. This portion is typically located in the public right-of-way and by City Code, RWB is responsible for maintenance of this section. The "inside" service is considered the section located between the curb valve to the building located typically on private property. The property owner is responsible for maintenance and replacement of this section.

The City of Rochester replacement projects replace all the "outside" service portions and replaces all "inside" services that contain lead (either lead, lead-lined iron or galvanized iron). The projects include design efforts to document and verify known service materials, development of plans outlining the replacement of all outside services and all "known" lead inside services and includes investigatory work to identify all undocumented inside services and replace if lead is identified. The efforts for 3B and 3C Lead Service Line Replacement consists of 922 services and 743 services respectively.

Blueprints of the Lead Service Line.

LaBella is responsible for the review and assembly of all City-maintained GIS Data (water facilities, rights-of-way, property information, trees, etc..) and County maintained GIS sewer data. We will review the pavement conditions of the project streets, outline areas of spot milling, deep milling and crack sealing and outline the final surface treatment between chip sealing and milling and overlaying. LaBella staff handle SEQRA documentation including applications to NYS Office of Parks, Recreation and Historical Preservation, as well as coordinate with all utilities within the project area to assess impacts and outline planned upgrades to their facilities prior to completion of the project.

Labella will complete a preliminary and final plan submittal including an engineering report, project specifications and cost estimates. We will assist in the bidding of the project by completing addenda, attend and assist the pre-bid meeting, analyze the bids and submit a letter of recommendation for award.

Labella will handle the construction administration of the project including public information meetings, attending the pre-construction meeting, shop drawing review and field change sketches. LaBella's team will provide all Resident Project Representation services throughout the duration of construction.

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ERIE COUNTY WATER AUTHORITY

Castle Hill Pump Station Replacement

CLIENT PARTNER

Michael J. Quinn, PE, BCEE
Sr. Distribution Engineer
Erie County Water Authority
mquinn@ecwa.org
(716) 685-8203

Erie County Water Authority (ECWA) acquired the Castle Hill Pump Station and associated distribution system from the Town of Aurora in 2019.

The existing pump station, which serves approximately 200 residences, lacks sufficient space for operation and maintenance, excludes numerous features ECWA desires, and includes antiquated and inefficient pumps. Per ECWA preference and to comply with applicable regulatory requirements, the existing pump station will be replaced.

To document the existing pump station's deficiencies and ensure the project's eligibility for a Water Infrastructure Improvement Act grant, LaBella completed a preliminary engineering report including an existing conditions evaluation, alternatives analysis, life-cycle cost estimate, and suggested asset investment schedule.

The replacement pump station will be constructed on the same site. Similar to the existing configuration, the new pumps' suction pipe will branch off of an existing main which serves as the inlet and outlet to a 1 million gallon storage tank, owned by the Village of East Aurora, also located at the site.

To maintain adequate distribution system pressure despite the varied topography of the service area, the distribution system includes several pressure zones regulated by pressure reducing valves. LaBella created a hydraulic model of the distribution system, incorporating data from ECWA GIS, to facilitate the selection of process equipment. The model enables the simulation and evaluation of multiple scenarios, thus ensuring the selection of the most appropriate process equipment for the new pump station.

After the selection of process equipment based on the established design parameters, LaBella designed the pump station building using our multidisciplinary expertise in architecture, civil, structural, geotechnical, and mechanical/electrical/plumbing (MEP) engineering. LaBella's team coordinated closely with ECWA to ensure the building design includes all desired features.

Our team is versed in building information model (BIM) design tools, which allows for more efficient integration of overlapping design requirements and schedules. LaBella's environmental specialists helped shepherd the project through the State Environmental Quality Review (SEQR) process, and our regulated building materials team identified any hazardous materials present in the existing pump station and specified safe disposal methods.

LaBella will complete design documents for review by the Erie County Health Department, and then assist ECWA with construction procurement, administration, and observation.

Project Cost: Estimated $2M

Project Completion: Estimated 2023

Construction Schedule: TBD (pending ECWA budgetary considerations)

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ERIE COUNTY WATER AUTHORITY

LA-005 - Water System Improvements
City of Tonawanda

CLIENT PARTNER

Michael Quinn
Sr. Distribution Engineer
Erie County Water Authority
sdenzler@ecwa.org

LaBella Associates was selected by the Erie County Water Authority (ECWA) to complete the 2021-2022 Water System Improvements within the City of Tonawanda. Contract LA-005 consisted of upgrading/replacing the existing watermain with new ductile iron pipe watermain on the following project roadways:

City of Tonawanda

- Niagara St - 1460 LF – 8" DIP
- Two Mile Creek – 840 LF – 8" DIP
- Maldiner Ave - 1060 LF – 12" DIP
- Cranbrook Rd - 420 LF – 12" DIP
- Syracuse St - 80 LF – 8" DIP
- Cornell Ct - 290 LF – 8" DIP
- Linwood Ave - 80 LF – 8" DIP
- Crestwood Ct - 140 LF – 8" DIP
- Walter Ave – 110 LF – 8" DIP
- Morgan St – 1270 LF – 8" DIP
- Fillmore Ave – 1360 LF – 12" DIP
- Highland Ave – 1570 LF – 8" DIP
- Steiner Ave – 910 LF – 8" DIP
- Milton St – 310 LF – 8" DIP
- Queen St – 300 LF – 8" DIP
- King St – 40 LF – 8" DIP
- Dexter St – 30 LF - 8" DIP
- Hillcrest Rd - 30 LF – 8" DIP

The project design included working with ECWA to determine an efficient replacement alignment that minimizes utility conflicts and maximizes utility separation distances. Coordination meetings with ECWA finalized the alignment and advanced design. The watermain replacement design and proposed restoration was reviewed and approved by the City of Tonawanda. Design improvements were coordinated with the New York State Department of Transportation and Erie County Department of Public Works who have maintenance jurisdiction over Niagara Street and Two Mile Creek Road, respectively.

Plans and specifications were finalized and a construction estimate was completed. The project was reviewed and approved by ECWA and the Erie County Health Department.

LaBella worked with ECWA to successfully bid the project. Bids were reviewed and a recommendation letter was issued to ECWA. COVID-19 and supply chain issues delayed the start of construction. Construction started in the Fall of 2023.

To date, approximately 25% of the project is completed. Construction is anticipated to resume late winter/early spring of 2024. LaBella will continue to provide the General Services During Construction and Resident Inspection.

Construction is anticipated to be completed in Summer of 2024.

Construction Cost: $3,530,000

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ERIE COUNTY WATER AUTHORITY

LA-001 - Water System Improvements
Town of Cheektowaga and Village of Lancaster

CLIENT PARTNER

Steve Denzler
Distribution Engineer
Erie County Water Authority
sdenzler@ecwa.org

Each year, the Erie County Water Authority (ECWA) completes a series of watermain reconstruction projects within their Service Area. ECWA contracted with LaBella Associates to complete the 2020-2021 Water System Improvements within the Town of Cheektowaga and Village of Lancaster. Contract LA-001 consisted of upgrading/replacing the existing watermain with 8" ductile iron pipe watermain on the following project roadways:

Town of Cheektowaga

- Shanley Street - 1420 LF
- Griswold Street - 1000 LF
- Pleasant Pkwy - 350 LF
- Willowlawn Pkwy - 420 LF
- Meadowbrook Pkwy - 460 LF

Village of Lancaster

- Sturm Street - 560 LF
- Aurora Street - 1570 LF
- Scott Street - 500 LF
- Holland Avenue - 450 LF

The project design included working with ECWA to determine an efficient replacement alignment that minimizes utility conflicts and maximizes utility separation distances. Coordination meetings with ECWA finalized the alignment and advanced design. The watermain replacement design was reviewed and approved by the municipalities (Town of Cheektowaga and Village of Lancaster) as well as the New York State Department of Transportation and Erie County Department of Public Works who have maintenance jurisdiction over Clinton Street (Shanley Street connection) and Aurora Street, respectively.

Once final design was established, project specifications were finalized, and the construction estimate was completed, the project was submitted to Erie County Health Department for approval. LaBella addressed Contractor questions and completed and issued addenda. LaBella reviewed the bids and made a final recommendation to ECWA.

LaBella and ECWA successfully bid the project in January 2021. The project was started in April 2021 and completed in October of 2021. LaBella was responsible for general services during construction, and construction inspection. LaBella worked with ECWA to review the project in conjunction with Town of Cheektowaga's sanitary sewer project and successfully negotiated trench restoration in lieu of milling and overlaying the impacted roadways, resulting in significant cost savings to ECWA. LaBella's field representation worked to keep neighbors informed and ECWA received positive feedback for our efforts.

Construction Cost: $2.0 million

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TOWN OF KENDALL

Water System Improvements

LaBella Associates was retained for the design of eight projects to install approximately 25 miles of water mains to extend the Town's distribution system. Many residential wells had become contaminated from failing septic systems. Other wells suffered from poor quantity during the summer months. These projects completed a major loop to reinforce fire flows and provide greater reliability of service within the Town and included chlorine booster stations and pressure control vaults. The projects were funded through a combination of grants and loans from H.U.D. Small Cities program and Rural Development.

Grant Management Experience

Our firm has extensive experience in developing and administering public infrastructure projects throughout Western New York. We have assisted numerous communities to develop applications for CDBG and other funding for water, sewer and other projects. In many cases, we have also assisted the grantees to implement, complete and close out the grant awards. Our primary role is to assist the community to comply with the regulatory and other requirements of the funding agency, including procurement, environmental review, financial management, reporting and other requirements. We work closely with the project engineers to ensure that the CDBG contract conditions are included in the bid and contract documents and that labor standards provisions are monitored throughout the construction period. We closely monitor the project budgets, prepare drawdown requests and budget modifications, if needed. We assist the grantee to prepare reports to the funding agencies, as required. In addition, we work with grantees to compile the documentation needed for the CDBG monitoring of the completed project and guide grantees through the monitoring process and project close out.

CLIENT PARTNER

Tony Cammarata
Town Supervisor
(585) 659-8201
supervisor@townofkendall.com

LaBella has completed over 25 miles of water mains to extend the Town's distribution system.

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SECTION 7.

KEY STAFF

TEAM ORGANIZATION

We build a project team by thoughtfully engaging professionals that have demonstrated reliability, accountability and collaboration.

NIAGARA FALLS WATER BOARD

GENERATOR, LIGHTING & SWITCHYARD TEAM

Russell Stoll, PE
Technical Advisor
(BUFFALO OFFICE)

Michael Rogalski, PE, LEED AP
Project Manager
(BUFFALO OFFICE)

Tim Webber, PE
Principal-In-Charge
(ROCHESTER OFFICE)

ELECTRICAL

Adam Lysiak, PE, LEED AP, LC
(BUFFALO OFFICE)

Thomas Kennedy, PE
(ROCHESTER OFFICE)

Timothy Zuch, PE
(BUFFALO OFFICE)

MECHANICAL

Charlie Raimondo, PE
(BUFFALO OFFICE)

ARCHITECTURE & STRUCTURES

Stephen Parrish, RA
(BUFFALO OFFICE)

Maureen Retzlaff, PE
(BUFFALO OFFICE)

W/M/DBE PARTNERS

JM Davidson Engineering
W/DBE

KHEOPS Architecture, Engineering & Survey
M/DBE

Lu Engineers
M/DBE

Kubit Engineering
W/DBE

Foit-Albert Associates
M/DBE

Ravi Engineering
MBE

Prudent Associates
M/DBE

MICHAEL D. ROGALSKI

Vice President / Regional Manager Building Engineering

Mike is a Vice President and Regional Leader for LaBella's Buffalo MEP and Structural Group. He has over 33 years of experience in electrical design and specification of power distribution systems, grounding and lighting systems, and QA/QC for manpower projects. Mike has extensive skills in contract document preparation, client services, construction budget monitoring, engineering design support and project management services.

PE, LEED AP

Professional Engineer
NY, NJ, OH, PA, MA, LA, NC, SC

EDUCATION

SUNY University at Buffalo: B.S., Electrical Engineering

Erie Community College: A.A.S., Electrical Engineering Technology

ORGANIZATIONS

National Council of Examiners for Engineering & Surveying

US Green Building Council-LEED Accredited Professional

NFTA: Buffalo Niagara International Airport Standby Generator Expansion—Buffalo, NY

Project Manager for $1.4M project to add three (3) diesel generators and electrical distribution work to provide standby power to jet bridges and gate counters.

NFTA: 175 Aero Drive BNIA Transit Airport Police Building—Buffalo, NY

Principal Engineer for the upgrade of electrical systems to comply with Critical Operation Power Systems per the NEC. Work included a new electrical service and add a new 125 kW generator. Approximate project cost is $350,000

NFTA: BNIA Emergency Generator Study—Buffalo, NY

Project Manager to study options to upgrade back-up power at the Buffalo Niagara International Airport. Report provided five alternatives ranging from $1.2 million to $5 million.

NFTA: Electrical Vault Upgrades at Niagara Falls International Airport—Niagara Falls, NY

Project Manager for the upgrades to the main electrical vault equipment at the airport. Project consisted of replacing the existing airfield lighting constant current regulators and replacing the existing 250-kW diesel Onan generator. Project also included the reuse of the existing louver for air intake and exhaust. Approximate cost was $250k.

NFTA: Buffalo Niagara International. Airport, 485 Cayuga Back-up Data Center—Buffalo, NY

Project Manager for a $350k electrical mechanical project that featured a new gas-fired, 125-kW backup generator to serve data center and ancillary office space. Work included power distribution to data center equipment, data rack cooling and general cooling of the data center space. New power and lighting to office space and a 48-strand fiber optic cable from the adjacent air field ductbank.

Daemen College: Wick Campus Center Standby Generator, Amherst, NY

Project Manager for the design of a standby natural gas exterior generator for the Wick Campus Student Center at Daemen

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College. The project involved connecting strategic loads to a new t 208/120 volt, 3-phase, 125-kW natural gas fired generator was used, Several panel-board feeders that serve these loads were intercepted and re-routed to a new distribution panel and automatic transfer switch.

Erie Community College: Campus Wide Generator Replacement—Williamsville, NY

Project Manager for generator replacement for the three ECC campuses, covering 10 buildings with new generator sized from 30kW to 150kW. Project cost approximate $900,000

SUNY College at Potsdam: Generator Upgrades—Potsdam, NY

Project Manager for the replacement of diesel generators at 10 campus buildings. Responsible for the preparation of feasibility study, construction documents, bidding and construction administration through close-out. Project cost was approximately $650,000. Work included removal of existing diesel generators; replaced with appropriately sized diesel units, upgrade transfer switches for code compliance (life safety and stand-by), removed remote fuel tanks and piping with sub base tanks under generator fuel lines, power distribution modifications, site/civil modifications including concrete pads and retaining walls at Raymond Hall.

Monroe County: Frank E. VanLear WWTP—Rochester, NY

Electrical Engineer for a multi-million dollar upgrade to the 135 mgd treatment plant facility near Lake Ontario. Work included upgrade several motor control centers, new aeration blowers; new dual feed 480-volt electric service. Upgrade electrical distribution equipment at all exterior basins; new lighting and instrumentation wiring. Provided services from construction documents through close-out.

Village of Newark: WWTP Reconstruction—Newark, NY

Electrical Engineer for an approximate $23 million reconstruction of the existing 3 MDG WWTP. Work included a new 480-volt, 1600-amp service, power distribution and fiber optic cabling throughout site, new blower building, upgrade pump station, new material handing building, new influent building that process raw sewage classified as Class 1, Div. 1, and other upgrades. Provide full electrical engineering and with instrumentation & control for all processes.

Village of Waterloo: WWTP Upgrades—Waterloo NY

Electrical Engineer for an upgrades to the existing 1.25 MDG plant that include a new chemical feed building, upgrades to the clarifiers, a new UV process station and miscellaneous upgrades the main plant building.

Mount Crested Butte WWTP—Mount Crested Butte, CO

Electrical Engineer for 1.2 MGD expansion of the current plant. Designed new 480/277 volt, 1600amp electric service and coordinated with local utility, designed emergency power system which consisted of 750 KW diesel generator and PLC controlled load steps. Designed power distribution, which includes motor control centers to all buildings. Designed branch power and lighting systems in hazardous locations for all buildings. Designed lightning protection system and ground grid system for entire site.

Erie County Sewer Authority—Lancaster, NY

New 7,000 sf addition to existing Erie County Sewer District building in Lancaster NY, replaced entire electric service, power distribution, lighting, fire alarm and security system in the existing building.

Monroe County: Trolley Blvd Pump Station—Gates, NY

Electrical Engineer for a multi-million dollar upgrade to the pump station on Trolley Street in Rochester. Provided a new 1600-amp 480/277-volt service, new motor control centers. Three new 280-HP lift pumps with VFDs, harmonic filters and manual transfer switch to generator cable tap box for a portable generator. Provided instrumentation and control wiring to serve the process.

Village of Newark: Pump Station NYS Rte 31—East Newark, NY

Electrical Engineer for a new pump station building to replace underground lift pumps. New 208/120-volt 400-amp service to serve two 20-HP pumps, new lighting and 60 KW exterior natural gas generators was provided. Provided instrumentation and control wiring to serve the process.

ADAM LYSIAK

Senior Electrical Engineer

Adam is a Senior Electrical Engineer with 15 years experience in a wide range of project types including commercial, education, industrial, and healthcare projects, with an emphasis on power distribution and lighting design. He also has experience in fire alarm, site lighting, access control, and communications systems.

PE, LEED AP, LC
Professional Engineer
NY, OH

EDUCATION
SUNY University at Buffalo: B.S., Electrical Engineering

CERTIFICATIONS/ REGISTRATIONS
U.S. Green Building Council—Leadership in Energy and Environmental Design Accredited Professional

National Council on Qualifications for the Lighting Professions—Lighting Certified Professional

NFTA: 175 Aero Drive BNIA Transit Airport Police Building—Buffalo, NY

Project Engineer for the upgrade of electrical systems to comply with Critical Operation Power Systems per the NEC. Work included a new electrical service and add a new 125 kW generator. Approximate project cost is $350,000.

East Aurora WRRF, Erie County Sewer District Number 8 - Control Building Improvements (electrical condition assessment and study)

Lead electrical engineer on comprehensive electrical condition assessment and study to determine existing conditions, paths to upgrade, engineers opinion of probable costs, and priorities to upgrade the plant; which had few redundancies and a failing backup generator and transfer switch. The assessment found other failing devices, code, and safety issues. Recommendations for priorities, multiple upgrade paths, and next steps were given to help client prioritize and budget for upgrades.

East Aurora WRRF, Erie County Sewer District Number 8 - Control Building Improvements (design and bid/construction admin)

Lead electrical engineer on full interior renovation of the old control building to create new lab space, office, breakroom and wash areas, relocation of plant computer and communications systems, expansion of plant fiber network, and full MEP systems replacement; while maintaining existing plant process equipment.

East Aurora WRRF, Erie County Sewer District Number 8 - Control Building Improvements (electrical upgrade project)

Project Manageron comprehensive electrical upgrade project to correct deficiencies found in electrical study and increase redundances. Includes new service, service electrical building, generator, separating MCC's with individual transfer switches, general electrical upgrades, safety and convenience upgrades. Includes survey and geotechnical report to allow for proper consideration of overall site layout to avoid problematic areas which may in the future be prone to flooding where the existing electrical service is, and to get electrical equipment out of the way of the

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process area to allow for a plant UV treatment process expansion in the future.

Gastonia Water Treatment Plant: Twin Rivers Utilities—Gastonia, NC

Project Engineer for a $60 million comprehensive renovation and refit of a water treatment plant including a 30,000 sf addition and a 52,000 sf renovation. Project included substantial power distribution upgrades to bring the facility to modern standards including a new 480V main-tie-main unit substation fed from medium voltage, a new 208V distribution with redundant power feeds into the plant, and all new distribution throughout the plant.

Tioga County: DSS Generator Addition—Owego, NY

Project Electrical Engineer providing additional backup power to a portion of an existing office building and integrating this with the existing power distribution system.

Monroe Community College: MCC Downtown Campus Infrastructure Separation, Demolition, and Abatement Construction Project—Rochester, NY

Project Electrical Engineer for the separation of electrical utilities of the MCC purchased buildings from Kodak owned buildings, including a new medium voltage switchgear, medium voltage transformers, and a new fire pump.

Buffalo Public Schools: School 95 Waterfront Academy Roof and Air Handler Replacement—Buffalo, NY

Sr. Electrical Engineer responsible for this project which includes replacing nine indoor air handling units, kitchen exhaust fan replacement, steam trap replacement, and upgrading pneumatic controls to digital.

Dunkirk City School District: 2020 Planned Facilities Upgrades Project (2019-2020)—Dunkirk, NY

Lead Electrical Engineer that provided design and construction administration services for a project which involved new door access control system across the district, new lockdown notification systems, boiler & HVAC replacements & upgrades, secure vestibule entrance/main office & cafeteria additions/renovations at School 7.

North Tonawanda Central School District: 2015 Capital Improvement Project (2016)—North Tonawanda, NY

Electrical Engineer that provided design and construction administration services for a project which involved the conversion of antiquated elementary school into middle school including new power distribution & boiler room. Assisted with design of campus conversion from Co-Gen plant to Utility fed electrical service. Collaborated with staff to ensure consistency across project.

Niagara Frontier Transportation Authority: BNIA 485 Cayuga Backup Data Center—Cheektowaga, NY

Electrical Engineer that managed construction support services during installation of project which involved conversion of warehouse storage space to a backup data center and office space.

DASNY: Electrical Upgrades at University of Buffalo, Ellicott Complex, Wilkeson Quad—Buffalo, NY

Electrical Engineer for facility condition assessment to identified electrical equipment that needed to be upgraded at the Ellicott Complex. Wilkeson Quad needed the following upgrades: switchgear with new amps and circuit breakers with submetering, main distribution and branch panels, transformers, all common areas, corridor, downlighting, stair hall lighting, and wall mount luminaries were replaced with LED retrofit kits (approximately 800). Also, replaced exit signs with LED types.

Town of Greece: New Police HQ Building—Greece, NY

Project Engineer leading the lighting design for a new 28,181 sf, two-story police headquarters building utilizing efficient luminaire and control systems.

Rochester Gas & Electric: Russell Station MLS Building Upgrade—Rochester, NY

Project Electrical Engineer for the repurposing and renovation of a Main Lift Station into a ground water treatment station. Project included new industrial process equipment and maintaining existing process equipment.

THOMAS KENNEDY JR.

Power Systems Engineer

Tom has over 13 years of experience in the Power Engineering Field. He is experienced with design, specifications and construction support for a range of projects. Tom has designed protection and control systems for various low, medium, high voltage configurations and distributed generation based around Schweitzer Engineering, Basler, and Beckwith equipment. He has performed engineering studies including short circuit coordination, arc flash studies, and soil resistivity tests. Part of Tom's duty at LaBella is coordinating work flow with remote offices for substation projects.

PE

Professional Engineer
NY, PA, ME, CT, NH, VT, NC, OR

EDUCATION

University of Pittsburgh at Johnstown; B.S., Electrical Engineering Technology

SEL University: Prot 401 - Protecting Power Systems for Engineers

University of Wisconsin-Madison: National Electrical Safety Code IEEE C2-2017

High Voltage Electric Service, Inc.: Rensselaer County Sewage Treatment Plant, 115 kv Breaker Replacement—Troy, NY

Performed 3D scans of the existing substation and general arrangements of breakers. Designed relay schematic designs using new SEL-851.

High Voltage Electric Service, Inc.: Lydall 34.5 kv Disconnect Switch Replacement—Hoosick Falls, NY

3D scanned existing structure and developed design drawings for installation of the new 34.5 kv disconnect switch.

High Voltage Electric Service, Inc.: Regeneron 13.8kv Emergency Generator Coordination & Relay Programming—Tarrytown, NY

Developed and implemented relay settings and configuration files for a (4) 4 MW diesel generator system interconnected with the facility 115kv to 13.8kv main substation.

RG&E Filmore Generator Replacement—Rochester, NY

Performed site work to verify conditions and developed options for the replacement of the generator. Designed electrical service for the RG&E facility consisting of two buildings and determined on how the work will be done in phases.

RG&E Station 5 Headgates Assessment—Rochester, NY

Performed site work to determine what repairs were needed to the existing electrical damaged during the flooding event. Prepared a report detailing the repairs needed and developed electrical drawings based on the report.

NYSEG Amenia Substation Rebuild—Amenia, NY

Electrical Engineer providing the design on the protection and control aspects of the substation rebuild with GIS switchgear enclosed in the control house. Designed relay panels, AC/DC distribution and communications systems for 69kV/46kV/13.2kV station.

NYSEG Silver Springs Substation—Silver Springs, NY

Electrical Engineer providing the design on the protection and control aspects of (2) 4.8kV and (1)

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34.5kV breaker replacement and upgrading the 34.5kV Motor Op control. Designed new relay panel for distribution circuits and the motor op control. Created Bills of Materials and Cable schedules. Performed site visit to verify existing equipment and wiring.

NYSEG Warsaw Substation—Warsaw, NY

Electrical Engineer providing the design on the protection and control aspects of (2) 12.5kV and (1) 4.8kV breaker replacement. Designed new relay panels for distribution circuits. Created Bills of Materials and Cable schedules. Performed site visit to verify existing equipment and wiring.

SUCF: SUNY Cobleskill Substation Switchgear Replacement—Cobleskill, NY

Electrical Engineer providing work on the protection and control design of the new switchgear. Developed the Relay Three Line and performed the relay and fuse coordination for the project. Prepared maintenance commissioning plan and sequence of operation for the substation.

NYSEG Westover Goudey 34.5kV Cap Banks—Binghamton, NY

Electrical Engineer providing the work on the protection and control aspects of (4) 34.5kV Cap Banks at (4) different substations. Designed relay panels, performed fault current CT saturation calculations and created Bills of Materials and Cable schedules.

High Voltage Electric Service, Inc.: Regeneron 115kv Main Substation—Tarrytown, NY

Developed relay settings for (14) feeder relays on the 13.8kv distribution system.

Messer Air Products

Designed a replacement substation 115kv/13.8kv MVA rated.

Gravity Renewables: Chittenden Falls Hydro Neutral Grounding Reactor—Cazenovia, NY

Designed and implemented (2) neutral grounding for 1 MW hydro exporting to National Grids 13.2 kv system. Existing site data was gathered from a 3D scan.

Gravity Renewables: Dahowa Hydro IA—Greenfield, NY

Developed programming for SEL RTAC (Dahowa Hydro) communications to National Grid Orion RTU. Coordinated with National Grid and NYISO for communication and commissioning along with taking part in the testing of the system. Implemented an HMI for the Interconnection with the Hydro facility and National Grid with the ability to see power production and operate and close the 34.5kv recloser.

FLO Breaker Replacement—Various locations

Electrical Engineer providing the work on the protection and control aspects of (42) Distribution Breakers. Designed relay panels and created Bills of Materials and Cable schedules. Performed site visit to verify existing equipment and wiring.

NYSEG Battery Replacement Projects—Various locations, NY

Electrical Engineer for 12 NYSEG substations battery replacement designs with voltage 24.48.125 VDC.

Soil Resistivity Tests —Various Locations, NY

Electrical Engineer performing soil resistivity at over 10 substations. Proposed testing location and prepared report on the tests.

Co-generation Plants Various Clients—New York NY

Electrical Engineer providing the interconnection and electrical system design of a combined electric generation and heating plant. Co-gen plants ranged in size from 100-500kw. Prepared interconnection documents for submission to local utility and developed specifications based on client needs and all applicable building codes.

Harris Corporation 4kV Switch Replacement—Rochester, NY

Electrical Engineer providing field work to determine gear size and feeder lengths. Updated the facilities short circuit values and developed engineering drawing to show location of the new 4kV switches.

Revere Copper Relay and Switchgear Upgrade—Rome, NY

Electrical Engineer providing drawings for a switchgear and relay upgrade based on client specifications.

GAMESA Chestnut Flats Wind Farm—Altoona, PA

Electrical Field Engineer providing monthly inspections and maintenance recommendations to the owners.

Substation Transformer Testing—Various locations throughout Pennsylvania, West Virginia and Maryland.

Electrical Field Engineer responsible for performing maintenance tests on substation transformers.

TIMOTHY B. ZUCH

Senior Electrical Engineer

Tim is a Senior Electrical Engineer with 34 years of experience encompassing various project types including higher education, industrial, commercial, water treatment, and amusement parks. This work included design of substations, power distribution, motor controls, grounding, lighting protection, lighting, telephone/data communication, and fire alarm systems.

PE

Professional Engineer: NY, TX, NH

EDUCATION

State University College at Buffalo: Master of Science, Industrial Technology

State University College at Buffalo: Bachelor of Technology, Electrical Engineering

Erie Community College: Associate of Science, Engineering Science

NYPA: Zinc-Air Energy Storage System Enabling at the University of Buffalo—Buffalo, NY

Sr. Electrical Engineer for an electrical upgrades project at the UB Baker Chilled Water Plant. This project included enabling work associated with the installation of a Zinc-Air Energy Storage System being installed as a separate project to support the chilled water plant during peak load situations and reduce demand charges during summer operation.

Water Treatment Facility— Crested Butte, CO*

Electrical engineer who designed the electrical systems for the new facility. The design included a new electrical service, power distribution to the facility and process equipment, grounding, lightning protection, fire alarm, and lighting systems.

Hornell WPCP Improvements Phase 1— Hornell, NY

Sr. Controls Engineer for $6M project for replacement of process equipment and building systems.

East Aurora WRRF – Electrical Upgrade Project — East Aurora, NY

Electrical Engineer for the replacement of electrical distribution equipment and replacement of standby generator.

Kensington Expressway– Buffalo, NY

Electrical Engineer working with subconsultant and National Grid to coordinate new 23-kV electrical service for new expressway tunnel project. Designed substation building for the two single ended metered substations.

Six Flags Fiesta Texas Raptor Roller Coaster—Antonio, TX*

Electrical Engineer that designed the power distribution to the coaster motors and and control conduit arrangements to the field mounted control devices.

Six Flags Fiesta Texas Dive Roller Coaster—Antonio, TX*

Electrical Engineer that designed the power distribution to the coaster motors and and control conduit arrangements to the field mounted control devices.

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*Projects under previous experience

CHARLES F. RAIMONDO

Senior Mechanical Engineer

Charlie has more than 22 years experience in HVAC design. His responsibilities include all facets of project management, such as maintaining client relations, generating contract documents, construction administration, and quality control. He has extensive experience in mechanical design and code compliance.

PE
Professional Engineer
New York

EDUCATION
University at Buffalo: B.S., Mechanical Engineering

ORGANIZATIONS
American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)

US Green Building Council-LEED Accredited Professional

Town of Amherst Waste Water Treatment Plant: HVAC Improvements to Various Buildings—Amherst, NY

Sr. Mechanical Engineer for HVAC system design, project management and construction administration of a multi-building HVAC improvement project throughout the Town of Amherst waste water treatment plant. Project included replacement of boilers and air handling units, upgrading controls and energy improvement measures.

Van De Water Treatment Plant & Raw Water Pump Station HVAC Upgrades—Tonawanda, NY

Sr. Mechanical Engineer & Project Manager to upgrade the HVAC controls and systems within the two facilities. The existing HVAC systems within VDWTP has antiquated controls, some of which are not functioning and some require manual operation. RWTP has antiquated stand-alone controls.

Buffalo Water Authority: Col. Ward Pumping Station Renovations—Buffalo, NY

Sr. Mechanical Engineer for HVAC system design of a renovation to the engineering office building and laboratory space in the filtration plant. Project included modernization of the existing steam heating and ventilation systems within the two spaces.

SUNY Fredonia: Science Technology Education and Laboratory Facility—Fredonia, NY

Sr. Mechanical Engineer for HVAC system design and construction administration of a 90,000 sf state-of-the-art new construction science and technology education and laboratory facility. Project included a 400 ton central chilled water plant, high efficiency central hot water boiler plant and laboratory environmental controls. Building was designed to comply with LEED Silver Certification Status.

SUNY Fredonia: Maytum Hall Renovation—Fredonia, NY

Sr. Mechanical Engineer for HVAC system design, construction administration and project management of a multi-phased renovation and HVAC system upgrade of the Campus's existing I.M. Pei designed administration high rise tower. The 800-ton central chilled water plant was completely replaced with high efficient chillers, which feeds five surrounding buildings. A new decentralized boiler plant was added to feed five surrounding buildings and taken off the Campus central high temperature loop. Project also included a complete overhaul of the four-pipe fan coil system, new central VAV air handling units for common spaces and updated digital controls.

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STEPHEN PARRISH

Project Architect

As an Architectural Designer and Project Manager, Mr. Parrish has provided project design and management for over 25 years. Steve has vast experience designing for Industrial and Manufacturing projects with an emphasis on those involving hazardous materials and ADA requirements. He is extremely proficient in Quality Assurance and Code Reviews, which expedites the review processes with local and state authorities thus ensuring that aggressive deadlines are met through creative, practical and efficient solutions to complex code issues

RA
NYS Registered Architect

EDUCATION
University at Buffalo, State University of New York: Bachelors of Professional Studies in Architecture

ORGANIZATION
LEED Accredited Professional

NYS Certified Code Enforcement Official

IIMAK, New Print & Test Lab - Amherst, NY
Project Architect; IIMAK was looking to consolidate their print lab, testing lab, & wide format print lab into a single space in a central location to serve a dual function. The main use of the lab is to serve as the day-to-day print lab used for testing & troubleshooting. It will also serve a show-piece space during client visits to allow customers to see IIMAK's products used in the customer's printers.

Pine Pharmaceuticals, New Pharmaceutical Manufacturing Facility - Tonawanda, NY
Project Manager; Design of a new 25,000 s.f. facility comprised of FDA cGMP and USP 797 and 800 compliant ISO Level 8, 7, and 5 hazardous and nonhazardous compounding clean rooms. Approx. 15,000 s.f. of the building is dedicated to manufacturing, fulfillment and warehousing operations, and the balance of 10,000 s.f. accommodates office and employee support functions.

Pine Pharmaceuticals, Addition Design - Tonawanda, NY
Project Manager; Based on early, tremendous growth, Pine needed to expand their clean room space as well as their shipping/ receiving & warehouse areas. With the increase in capacity, a new employee entrance, additional locker rooms, & a break room were included. The new 48,000sf addition almost triples the square footage of the building and allows for future clean room expansion within the building shell.

Ivoclar Vivadent, Office & Manufacturing Additions/ Renovations - Amherst, NY
Project Manager; Experiencing robust business growth, LaBella and the Client undertook a strategic planning initiative to identify how to take best advantage of their Amherst, NY facility to accommodate anticipated staffing growth and to consolidate manufacturing operations. The project included 6,000 s.f. of new office space, 12,000 s.f. of warehouse and distribution space and 6,000 s.f. of manufacturing space along with additional parking and associated site work.

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MAUREEN RETZLAFF

Senior Structural Engineer

Maureen serves as a Senior Structural Engineer in the Buildings Group of LaBella's Structural Engineering Division and has over 11 years of experience. Her main responsibilities include document production and project assistance. She has experience in RAM Structural, AutoCAD and Revit for document production. Maureen also has project experience in higher education, K-12, healthcare, and local municipalities.

PE

Professional Engineer, NY

EDUCATION

University at Buffalo: M.S. Structural and Earthquake Engineering

University at Buffalo: B.S. Civil Engineering

Northland Corridor: Redevelopment Project, Phases 1 & 2—Buffalo, NY*

Structural Engineer responsible for the renovations made to the existing 235,000 sf structure, comprised of more than 9 separate buildings. The project scope included a full structural assessment of the existing space, analysis of all existing roof truss members and reinforcement to meet current code loading requirements and added weight of renovations. A steel framed mezzanine design was also developed, along with structural support of reconfigured doors, windows, wall and roof openings, and updated mechanical equipment. Responsible for full structural design and for production of construction documents.

Big Ditch Brewing Company: 6700 Transit Road—Cheektowaga, NY*

Structural Engineer for the proposed 100,000+ sf brewing facility, to include a restaurant, banquet space, offices, and warehouse/production space. Structural design included a two-story steel framed building with moment frames for lateral resistance and a 70-foot-long steel truss to clear span the space. Additionally, the warehouse area was designed with joists and joist girders for the roof framing system, and load bearing precast concrete tilt-up walls on the exterior. A reinforced concrete structure, with a flat plate roof slab design, supported multiple roof mounted fermenting tanks and was designed to accommodate additional tanks in the future. Responsible for all structural design and for producing construction documents and details.

Cummins Engine Plant Conveyor System—Jamestown, NY*

Structural Engineer responsible for the analysis of the existing steel roof framing with the addition of a large overhead conveyor system, used to support diesel engines.

MJ Mechanical at 95 Pirson Parkway—Tonawanda, NY

Structural Engineer for the new 39,000 sf office and warehouse facility. Roof framing of the building was designed using open web joists and joist girders, supported by interior steel columns and exterior precast concrete bearing walls. Responsible for full structural design and assistance of document production.

**Completed under previous employment*

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TEAM ORGANIZATION

We build a project team by thoughtfully engaging professionals that have demonstrated reliability, accountability and collaboration.

NIAGARA FALLS WATER BOARD

WATER DISTRIBUTION TEAM

Russell Stoll, PE
Technical Advisor
(BUFFALO OFFICE)

Don Hoefler, PE
Project Manager
(BUFFALO OFFICE)

Tim Webber, PE
Principal-in-Charge
(ROCHESTER OFFICE)

PROJECT ENGINEERS

Kris Winkler, PE
(BUFFALO OFFICE)

Theodore Donner, PE
(ALBANY OFFICE)

Jason Ebbs, PE
(ROCHESTER OFFICE)

Timothy Petranchuk
(BUFFALO OFFICE)

Jacob Bowers, EIT
(BUFFALO OFFICE)

CONSTRUCTION ADMINISTRATION / INSPECTION

Ali Said
(BUFFALO OFFICE)

Phil Lakso
(BUFFALO OFFICE)

Jacob Bowers, EIT
(BUFFALO OFFICE)

W/M/DBE PARTNERS

JM Davidson Engineering
W/DBE

KHEOPS Architecture, Engineering & Survey
M/DBE

Lu Engineers
M/DBE

Kubit Engineering
W/DBE

Foit-Albert Associates
M/DBE

Ravi Engineering
MBE

Prudent Associates
M/DBE

DONALD HOEFLER

Senior Civil Engineer

Don has 29 years of experience in municipal engineering design, principally on infrastructure projects. He has served as a project engineer and manager on many watermain designs and pump station facilities.

PE
Professional Engineer, New York

EDUCATION
Clarkson University: BS Civil Engineering

ORGANIZATIONS
Newstead Planning Board

Erie County Water Authority: LA-001 Water System Improvements—Cheektowaga & Lancaster, NY

Senior Project Engineer for the project consisting of design and construction of 7,000 LF of watermain for a neighborhood in Cheektowaga and various locations in the Village of Lancaster. The design portion consisted of coordinating with the ECWA, review and approval of all agencies, and assisted in the completion of project plans, specifications and estimate. Also, provided bidding support and general services during construction.

Sanitary Sewer Replacement – Gasport NY

Senior Project Engineer for the design, preparation of contract documents, bidding and construction oversight for the replacement of approximately 1200 LF of sanitary sewer along State Street. State Street is adjacent to and parallels the Erie Canal. The existing clay tile sanitary sewer was experiencing significant infiltration. Worked with the Town of Royalton to design a replacement sewer that achieved the required invert elevations while cost effectively managing the impacts of the existing bedrock elevation.

Erie County Water Authority: LA-005 Water System Improvements—City of Tonawanda, NY

Senior Project Engineer for the Water Authority project for replacing ~12,000 LF of watermain in the City of Tonawanda. The project consisted of design coordination with the ECWA, obtaining design concurrence/approval from the City of Tonawanda, NYSDOT and Erie County Health Department and assisting in the completion of project plans, specifications and estimate.

City of Buffalo, Fruit Belt Waterline Cleaning and Lining—Buffalo, NY

Senior Civil Engineer; led the effort to improve the water system serving the east side of the Fruit Belt neighborhood which had been plagued with low water pressure and volume. Since the watermains were considered structurally sound based on review of the watermain break records, the project called for the cleaning and relining instead of replacement of approximately 5 miles of watermain within the neighborhood. LaBella was tasked with keeping the neighborhood informed on the construction progress and associated disruptions and provided construction administration and resident inspection services.

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RUSSELL J. STOLL

Senior Civil Advisor

Russell is an experienced Project Manager and Professional Engineer with over 42 years of broad and varied engineering project experience. He has been a manager, engineer, and municipal liaison for Erie County Water Authority and is experienced in managing teams and coordinating tasks and projects to produce on-time and with-in budget results. Russell is excellent at communication, interpersonal, supervisory skills, and leadership ability and maintains a broad overview while attending to detail.

PE

Professional Engineer, NY, NJ, CT

EDUCATION

SUNY Buffalo: B.S. Civil Engineering (Cum Laude)

Erie Community College: A.A.S. Construction Technology

ORGANIZATIONS

Board Member – Cross Connection Control Foundation of the Niagara Frontier

Adjunct faculty - Erie Community College, Construction Technology/Civil Technology Department

Professional presentations: NYWEA, AWWA, Various municipal training seminars

Past Member - Town of Amherst Traffic Safety Board

Past Director – Engineering Society of Buffalo

CERTIFICATIONS

LEED® Accredited Professional

Grade D Water Operators Certificate

**Completed under previous employment*

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Erie County Water Authority: Chief Operating Officer—Erie County, NY

Responsible for the Operations division, including staff, facilities, and assets. Authority-level approvals, governmental affairs communications, and liaise with local, state, and federal legislators. Coordinate and communicate with similar water authorities throughout New York State, provide media response to inquiries, and provide authority-level leadership. (2019-2023)

Erie County Water Authority: Executive Engineer—Erie County, NY

Responsible for operation, maintenance, and regulatory compliance of the Authority's water treatment plants, storage tanks, pump stations, and distribution system, including staff oversight, budgeting, capital improvements planning, and execution. Review work and projects performed by department heads, unit heads, and operations directors within engineering and operations departments. Liaise with municipalities, other water authorities, and municipal departments. (2016-2019)

Erie County Water Authority: Distribution Engineer—Erie County, NY

Supervisor of Design, responsible for review of water system improvement project designs and construction documents, backflow prevention design submittal, as-built records and maps, and staff supervision. The Municipal Liaison was responsible for coordinating between ECWA and municipalities in the service area. (2012-2015)

TVGA Consultants: Senior Project Manager/Associate—Various Locations, NY

Senior Project Manager for design and construction phase projects for multi-phase, multi-discipline, and multi-consultant public and private sector infrastructure and building projects. Responsible for client/project development, preparation of proposals, scopes of work, and associated budgets. Preparation and technical review of project deliverables, including reports and designs, and managing project schedules and budgets. Project team/ sub-consultant selection and coordination and staff management. (2008-2011)

KRISTOPHER WINKLER

Senior Civil Engineer

Kris is a Project Manager with over 24 years of experience responsible for managing a variety of Civil-Site projects across New York State. His responsibilities include managing projects from start to finish including site layout, grading, drainage, sewers and utilities. Kris has experiencing navigating site projects through regulatory review and permitting agencies. He regularly manages projects collaborating directly with clients, design team, CM team, and site contractors. He supervises civil engineering technicians and performs Quality Control and design task oversight. Kris has experience in preparing designs and calculations for stormwater management, combined and sanitary sewers, erosion control, grading, site layouts, utilities, cost estimating and roadways. Kris regularly coordinates with MEP Building Engineers and Architects for both new building and building renovation projects and prepares cost estimates for site development.

PE

Professional Engineer, New York License No. 084011

EDUCATION

State University of New York at Buffalo: B.S. Civil Engineering

ORGANIZATIONS

American Public Works Association: Member

Buffalo Sewer Authority (BSA): Green Infrastructure Term Assignments— Buffalo, NY

As Green Infrastructure Engineer prepared or supervised green infrastructure designs for various Buffalo DPW streetscape projects including Genesee Street Gateway project, Niagara Street Rehabilitation Phase 3, 4, 4A and Fillmore Avenue Rehabilitation. Design work included off site detention in abandoned lots, porous pavement parking lots, and rain garden designs for water quantity control. Approved field changes working directly with BSA and Inspection staff.

Moot/Campbell Water Service Replacement Project, Buffalo State College — Buffalo, NY

Civil Project Manager for major water service replacement (8" and 6" Domestic, 4" Fire Protection). Prepared construction documents and performed contractor over site working directly with Campus Facility Director and Plumbing staff. Design work including supervision of civil technicians, participating in Pre-Bid meeting, responding to pre-bid and post bid rfi's. During construction coordinated water shut downs, pressure and disinfection testing with campus and site contractor. Approved contractor payment applications.

Erie County Water Authority: City of Tonawanda Water Improvements— Tonawanda, NY

As Civil Engineer, Kris supervised preparation of a Stormwater Pollution Prevention Plan (SWPPP) and Sediment and Erosion Control Design for this water main replacement project. Kris supervised staff for meeting NYSDEC stormwater permit requirements.

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THEODORE E. DONNER

Civil Engineer

Ted is a Civil and Environmental Engineer with specialized experience in Water/Wastewater Management and Municipal Engineering. Ted has more than 10 years of experience working with municipalities throughout New York State leveraging strong project management and communication skills to deliver a synchronized design process

PE
Professional Engineer, NY

EDUCATION
SUNY College of Environmental Resource Engineering: B.S. Environmental Resource Engineering

Niagara Falls Water Board (NFWB)—Niagara Falls, NY

Project Manager for State Funded Capital Improvements Projects at the Niagara Falls Water Board wastewater treatment facility. Engineering services include overseeing more than 11 projects to upgrade various phases of the wastewater treatment process.

NFWB Water Mains—Niagara Falls, NY

Replacement of 50+ year old failing water mains throughout the City of Niagara Falls, NY. Improvements were also designed throughout the system to improve resilience and fire flows.

Town of Lockport and Town of Newfane, NY

Project Engineer for Design and Construction of Townwide Wastewater distribution system improvements including a combination of Inflow and Infiltration investigation, repairs, and pump station upgrades.

NFWB: WWTP Capital Improvement Project—Niagara Falls, NY

The NFWB Wastewater Treatment Plant (WWTP) is a physical/chemical treatment plant designed originally in the 1970's to handle significant industrial use in the City of Niagara Falls, NY. Ted served as Project Manager for a $27M Capital Improvement Project at the 48 MGD. Involved directly in design of various improvements to the electrical system, 20 MGD gorge pumping station, carbon filtration system, and various other components within the facility. Additionally, assisted in development of a long term improvement plan at the WWTP as well as evaluation of feasibility of converting the existing WWTP to a biological treatment plant.

NFWB: Water System Improvements—Niagara Falls, NY

Developed several improvements for an aging industrial water system, encompassing piping replacement, water system modeling, and the design of enhanced storage solutions

Niagara County Water District Improvements, Niagara County, NY

Various improvement projects to the 24 MGD water treatment and water distribution system.

North Chautauqua County Water District, Niagara County Water District, and Town of Evans, NY

Project Engineer for development of the District and improvements throughout the member communities. Projects included storage and distribution system improvements throughout the region, consistent with the Districts goal to provide safe and reliable water to customers.

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JASON R. EBBS

Project Manager

Jason has over 12 years of design experience in the field of civil engineering. With a diverse design background in commercial, educational, and the municipal market sectors, he has worked on a variety of different projects in New York, New Jersey, and Pennsylvania. Jason specializes in site development, utilities, water main, sanitary sewer, and stormwater management. Jason continues to demonstrate positive leadership skills and excellent client coordination and communication abilities associated with each of his projects.

PE

Professional Engineer, New York

EDUCATION

Rochester Institute of Technology: B.S. Civil Engineering

ORGANIZATIONS

American Public Works Association

Member of the Town of Penfield Transportation Committee

Village of Albion – South Clinton & West Academy Street Water Main Improvements:

Project involved the replacement of approximately 4,800 lf cast iron water main pipe in the Village of Albion to meet current ISO fire flow requirements. Project involved a hydraulic analysis of the existing and proposed water system, preparation of and Engineering Report, and Orleans County Department of Health Approval.

SUNY Oneonta: Site Improvements & Safety Upgrades Hunt Union Parking, Water Lines & Bugbee Road—Oneonta, NY

Project Included: Redesign of Hunt Union Parking Lot, redesign of Bugbee Road & Ravine Parkway Intersection, replacement of City & Campus owned water mains, grading and drainage improvements, stormwater management measures to meet NYSDEC SWPPP requirements.

Town of Mendon – Water System Improvements – Extension 5 to Water District No. 1:

Project involved the installation of approximately 7,100 lf of polyethylene encased ductile iron water main, water service installation, hydrants and other appurtenances. Project involved coordination with the Town of Mendon, and Monroe County Water Authority (MCWA), Monroe County Department of Health (MCDOH), Monroe County Department of Transportation (MCDOT)and New York State Department of Environmental Conservation (NYSDEC) approval.

Clinton Water Department: Main Street Water Main Replacement–Borough of Lebanon, NJ*

Project involved the design of 6,160 lf of 8" ductile iron pipe water main to replace an existing deteriorating 6" main. The project also included two stream crossings via directional boring with HDPE pipe. The design also included water service connections, disinfection & dechlorinating, appurtenances, and abandonment of the existing main. Oversaw the preparation of plans, and cost estimate. Prepared construction documents (front end & technical specifications). Coordinated and reviewed soil sampling results. Coordinated with local agencies to obtain road opening and soil conservation permits. Coordinated with the New Jersey Environmental Infrastructure Trust [illegible] funding.

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TIMOTHY PETRANCHUK

Senior Civil Designer

Timothy's experience includes the design of various projects for local municipalities. His very broad background in survey, site design, road reconstruction, and water and sanitary sewer installation/replacement, storm sewer installation/replacement gives him the versatility to function strongly within many disciplines. He has performed in the capacity of Engineering Designer for the preparation of contract documents including digital terrain modeling, generating profiles and cross sections, earthwork calculations and quantity take offs, sheet layouts, specifications, cost estimates. He is proficient in the use of several software packages and he has extensive experience in AutoCAD Civil 3d and Water CADD.

EDUCATION

Mohawk Community College: AAS, Civil Engineering Technology

Erie County Water Authority: LA-001 Water System Improvements—Cheektowaga & Lancaster, NY
Senior Designer for the construction of 7,000 LF of watermain for in the Town of Cheektowaga and Village of Lancaster. Completed the project layout for review and approval of the ECWA. Prepared project bid documents consisting of project plans, details and interconnections and specifications. Submitted the plans to and obtained approvals from the Erie County Health Department. Will complete the record drawings to ECWA requirements.

Erie County Water Authority: LA-005 Water System Improvements—City of Tonawanda, NY
Senior Designer for the construction of 12,000 LF of watermain for in the City of Tonawanda. The project included the completion of the project layout for review and approval of the ECWA and preparation of the project plans, details and interconnections and specifications. The project is currently in design with a proposed February 2022 bid date.

North Central Watermain—Village of Springville, NY
Senior Designerfor the Community Development Block Grant (CDBG) project for the replacement of ~ 2,000 LF of watermain in the Village of Springville. Completed the project plans, specification and estimates in compliance with CDBG requirements and obtained Erie County Health Department approvals.

City of Buffalo, Fruit Belt Waterline Cleaning and Lining—Buffalo, NY
Construction documents for the cleaning and lining of 25,000 linear feet of cast iron water main within the city's fruit belt neighborhood. Project involved the review of existing utility information from records. The project involved the creation of plans, specifications and details and the Department of Health approval

Erie County Water Authority: T-18, Lackawanna Watermain Replacement—Lackawanna, NY
Sr. Designer on a waterline replacement project involving the replacement of ~6,000 LF of undersized and severely deteriorated cast iron waterlines with new 8" ductile iron piping with all associated appurtenances. Duties included utility collection, right of way, and property owner information for plan and profile preparation along with construction details.

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JACOB C. BOWER

Civil Engineer

Jake has 4 years of civil engineering field and design work. He has experience working on municipal projects as a designer, construction inspector and as a project engineer. Jake has experience in large infrastructure projects such as water main distribution, sanitary sewer collection, low pressure sewer systems, pump station design, roadway design and erosion & sediment control design and inspection. Additionally, prior to joining LaBella, Jake worked for a site contractor as a laborer installing utilities and completing many different site projects.

EDUCATION

Cleveland State University, Bachelor in Civil Engineering

PROFESSIONAL ORGANIZATIONS

Tau Beta Pi Engineering Honor Society

Town of Kendall: Water District No. 10 - Kendall, NY

The USDA Rural Development sponsored project included preparation of three separate contracts for the construction of the 6500 lf of new ductile iron and pvc water main. Jake assisted with the design and the construction management throughout the project, He also, was responsible for organizing and completing the documentation required by Rural Development for the 3 contracts to receive the appropriate funding.

Seabreeze & Vicinity Water District: Seneca Road Water Main Replacement - Irondequoit, NY

The project consisted of the replacement of 1350 LF of 6" DIP water main on Seneca Rd with 8" directionally drilled HDPE pipe. The existing main was nearing the end of its serviceable life and had numerous breaks that damaged the road and residential private property. The project was particularly challenging do to the steep slopes, existing utilities and soil conditions. Jake assisted with the design, construction administration and construction inspection throughout the project.

Town of Irondequoit: REDI MO. 68 - Bay Shore Boulevard Sanitary Improvements - Irondequoit, NY

The Project is to connect 30 parcels sewage to the Monroe County Collection system via a Low Pressure Sewer System (LPSM) and abandon the current residential septic treatment. The project requires 2400 LF of 1"-3" DR-11 LPSM and the installation of 29 Grinder Pumps, Alarm Panels and Laterals. Jake assisted in the design and coordination with various agencies regarding funding and permitting throughout the design portion of the project.

Town of Irondequoit: REDI MO. 64 – Bay Village Pump Station Replacement - Irondequoit, NY

The Project included the removal and replacement of an existing pump station with a new 18' deep station designed with submersible pump. The project also involves the abandonment of an existing ACP force main and installation of 2,100 LF of new directionally drilled HDPE forcemain. Jake assisted in the design of the new pump station and force main and conducted the construction administration throughout the project.

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PHILIP J. LAKSO

Construction Inspector

Phil has 38 years of experience in Engineering Supervision of Highway and Bridge reconstruction projects in Western New York. Phil's experience spans many WNY agencies including NYSDOT, NYSTA, as well as many local Cities, Towns, Villages, and Counties. Most recently Phil has worked on several projects with both the City of Buffalo and Chautauqua County as exemplified with the following:

EDUCATION

Erie Community College: Construction Technology

CERTIFICATIONS

Level 4 NICET, Highway Construction

OSHA 10-Hour Safety Course

Soils and Erosion Control Training (NYSDEC)

City of Buffalo Department of Public Works, Seneca Street Rehabilitation- Buffalo, NY: Resident Engineer/Office Engineer
This $2.5M project completed in 2018 involved full depth roadway reconstruction, milling and overlaying, decorative LED street lighting installation, curb and sidewalk replacements, landscaping amenities, traffic signal modifications, drainage improvements, and new signing and striping.

Chautauqua County Department of Public Facilities. Millennium Parkway – Talcott St. Extension - City of Dunkirk, NY Resident Engineer/Office Engineer
The project consisted of 0.8 miles of roadway reconstruction in mixed residential and commercial portions of the City, as well as 0.6 miles of new highway through an adjacent Brownfield Redevelopment Site. This $6.8M project included new drainage facilities, replacement of an old failing large culvert, a new traffic signal, intersection improvements to accommodate larger vehicles, utility relocations, as well as SWPPP inspections and other NYSDEC environmental compliance components.

City of Buffalo, Department of Public Works Kenmore Ave. Reconstruction - Buffalo, NY Chief Inspector
This $7.5M phased rehabilitation project from Klauder St. to Main St. spanned several municipalities and involved both residential and commercial properties. This project consisted of both full depth reconstruction as well as some sections of mill and overlay, granite curb installation, sidewalks and handicapped ramps, drainage and traffic signal installation, as well as new project signing and striping.

Chautauqua County Department of Public Facilities, Progress Drive Rehabilitation and Middle Road Re-Alignment - Dunkirk NY. Resident Engineer/Office Engineer
This $2.5M highway reconstruction and realignment project was completed to Improve Access to the North County Industrial Corridor. Along with the highway work, this project included many drainage features including open roadside ditches, underground detention, a project SWPPP as well as temporary and permanent stormwater maintenance structures.

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ALI SAID

Civil Engineer / Construction Inspector

Dynamic, accomplished Construction Site/ Field Engineering and construction inspection highly regarded for 12+ years of progressive experience in facilitating construction across project, site, and field engineering. Respected as a motivational, influential leader and collaborator who ensures on-time, high-quality results while remaining within budget. Builds and maintains lasting relationships, driving clear communication and organizational coordination through a people-focused approach. Out-of-the-box thinker who excels in solving complex problems to deliver superlative outcomes.

EDUCATION

University at Buffalo, State University of New York: BS Civil Engineering

Siblin College: Associate of Applied Science in Architecture

Erie County Water Authority: LA-001 Water System Improvements—Cheektowaga & Lancaster, NY
Resident Project Engineer for the construction of 7000 LF of watermain for at various locations in Cheektowaga and the Village of Lancaster. Provided the day to day project inspection, coordinated field changes and change orders with the Contractor and ECWA, processed pay applications and interfaced with the residents impacted by the construction and will compile the information for the completion of the record drawings.

City of Buffalo: Fruit Belt Waterline Cleaning and Lining Project - Buffalo, NY
Senior Inspector for this $4M project. Ali inspected construction and produced clear, concise reports to organize needs and workflow. He focused on continuously optimizing the use of project resources, including in-house, external contractors, & subcontractors, leading to $100K+ in annual cost savings despite operational challenges. Ali is responsible for ensuring flawless execution on daily project plan covering measurements, drawings, GPS locating, pipes installing, etc. and authored and regularly updated a handbook to convey best practices, common issues, and lessons learned. He maintains clear communication in discussing project progress details with clients & contractors, emphasizing actionable reporting/updates and upholding the highest professional standards and works with senior leadership to effectively manage contractor's invoices ($1M/month) by inspecting & monitoring the progress at construction sites, creating new standard operating procedures to improve issues resolution.

Erie County Water Authority: LA-005 Water System Improvements—City of Tonawanda, NY
Project Engineer and Resident Inspector for completing the design of ~12,000 LF of watermain in the City of Tonawanda. Provided design and estimating support.

North Central Watermain—Village of Springville, NY
Construction Inspection for the construction of ~2,000 LF of watermain on North Central Avenue from Main Street to Eaton Street in the Village of Springville. Responsibilities consisted of coordinating with the contractor, processing the pay application and completing the record drawings.

LaBella
Powered by partnership.

NIAGARA FALLS WATER BOARD RESOLUTION # 2024-03-007

ACCEPTING NUSSBAUMER & CLARKE PROPOSAL FOR WATER TREATMENT PLANT SCADA CONTROL SYSTEM UPGRADE ENGINEERING SERVICES

WHEREAS, in January 2024 the Niagara Falls Water Board issued a request for proposals for engineering services in connection with various planned capital projects, including for upgrades to Supervisory Data Acquisition and Control ("SCADA") equipment at the Water Treatment Plant, certain elements of which are original to the plant, to replace outdated equipment and to add additional sensors and functionality to improve efficiency and effectiveness of plant operations and maintenance; and

WHEREAS, the Water Board has been awarded grant funds which will partially offset the total cost of the SCADA control system upgrades as part of Drinking Water State Revolving Fund ("DWSRF") project No. 19056; and

WHEREAS, one proposal was received for the water treatment plant SCADA upgrade work, from Nussbaumer & Clarke and dated February 19, 2024; and

WHEREAS, Water Board staff have reviewed that firm's proposal, which includes a reasonable statement of the firm's project understanding as well as project staff with appropriate qualifications and experience; and

WHEREAS, because certain preliminary engineering services are required in order properly to develop a full scope for engineering design and bidding, Nussbaumer & Clarke's proposal is to conduct survey and conceptual design work for a total lump sum fee of $12,000, with a proposal for full engineering and design work contingent on the exact scope of work determined to be appropriate;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that on behalf of the Niagara Falls Water Board, its Chairperson hereby is authorized to execute an agreement with Nussbaumer & Clarke, Inc., to perform survey and conceptual design of upgrades for the water treatment plant SCADA system, consistent with that firm's February 19, 2024 proposal and for a lump sum fee totaling $12,000.

Water Board Personnel Responsible for Implementation of this Resolution:

Executive Director
Director of Technical & Regulatory Services
General Counsel

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:

Capital Plan Items:	WTP-2.1, SCADA Control System Upgrades
Capital Items Provided by:	D. Williamson
Available Funds Confirmed:	B. Majchrowicz (Financing Plan: EFC/DWSRF)

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	Yes	**No**	**Abstain**	**Absent**
Board Member Asklar	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By:

_____
Nicholas J. Forster, Chairman

Vote Witnessed By:

_____
Sean W. Costello, Secretary to Board

Proposal

for

Engineering Services

Niagara Falls Water Board
Request for Engineering Services
Capital Projects – Water Treatment Plant

Prepared For:
Niagara Falls Water Board
5815 Buffalo Ave.
Niagara Falls, NY 14304

Prepared By:
Nussbaumer & Clarke, Inc.
80 Main Street, Unit A
Lockport, New York 14094

24P1-0018

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Prepared By:
Nussbaumer & Clarke, Inc.
80 Main Street, Unit A
Lockport, New York 14094

Company Experience

Embarking on a journey toward a massive 5-year Capital Improvement project encompassing your Wastewater Treatment Facility, Sewer Collection System, Water Treatment Plant, and Water Distribution System requires a partner who not only understands your unique challenges but also possesses the local insight and commitment to transform your vision into reality.

Enter Nussbaumer & Clarke, Inc. (Nussbaumer) - your seasoned ally in the successful completion of capital projects.

Imagine a team deeply rooted in Western New York, with local offices in Lockport, North Tonawanda, Buffalo, and East Aurora, positioned strategically to respond swiftly to your community's needs. For over 90 years, we've been more than just consultants; we've been designers of local success stories, contributing to the growth and prosperity of communities throughout New York State.

Our story isn't just about our rich history; it's about empowering our community with tailor-made solutions that address your specific challenges. As a full-service firm, we bring a wealth of local experience, ensuring that our designs are not only well-informed but also attuned to the intricacies that make your community unique.

Led by owners Michael T. Marino, P.E., and Michael J. Borowiak, P.L.S., our dedicated team members, including licensed engineers, land surveyors, and certified construction inspectors, are more than professionals — they're your neighbors, passionate about enhancing the places we all call home.

Our collaborative approach is not just about providing services; it's about building enduring relationships with our clients. With a focus on technical ability and client satisfaction, we've successfully partnered with hundreds of municipal, utility, and private clients. This breadth of experience has given us a profound understanding of the delicate balance between community needs and environmental impact.

At Nussbaumer, we pride ourselves on being more than consultants — we're advocates for your community's success and safety. Our commitment to quality, integrity, and innovation sets us apart, making us a trusted advisor and friend throughout the lifecycle of your projects, regardless of size.

We believe in providing quality and valuable consulting engineering services that transcend conventional standards. As we look forward to continuing our dedicated service to communities, we're excited about the prospect of collaboratively contributing to the sustainable development and resilience of the places we collectively call home.

Let's embark on this journey together — where your community's success is not just a goal but a shared commitment.

"Empowering our clients' visions, our proven track record reflects effective cost control, efficient design and approvals, steadfast schedule maintenance, quality work, and unwavering responsiveness."

As requested, please find below the relevant information addressing the criteria outlined in Appendix A of the NFWB RFP.

Our firm has become one of the oldest, complete solution, multi-disciplined professional services **corporations** with over **90 years** of proven experience in water, wastewater, electrical, structural and mechanical engineering projects. Two of our four offices are in Niagara County within 20 miles of the project sites, which provides proximity of resources, management, and tools.

Contact Information:

Firm Name:	Nussbaumer & Clarke, Inc.
Contact Person:	Michael T. Marino, PE, Chief Executive Officer
Main Address:	3556 Lake Shore Road, Suite 500, Buffalo, NY 14219
Niagara County:	80 Main St., Unit A, Lockport, NY 14094
Telephone Number:	(716) 827-8000
Fax Number:	(716) 826-7958
Email:	mmarino@nussclarke.com

Nussbaumer is a Professional Engineering **corporation licensed to do business in New York State**.

Any other names under which proposer has done business in the past 10 years:
Nussbaumer & Clarke, Inc. has not done business under any other name(s) in the past 10 years.

List all subsidiary and parent companies:
Nussbaumer & Clarke, Inc. operates independently without any subsidiaries or parent companies.

History of Debarment, Suspension, or Termination:
Nussbaumer & Clarke, Inc. has never been debarred or suspended by any government entity. We have not been found not responsible or declared in default for any contract. No contracts have been canceled for cause, and we have not been required to pay liquidated damages.

Bankruptcy Proceedings:
Nussbaumer & Clarke, Inc. has not filed for bankruptcy or been subject to any involuntary bankruptcy proceedings.

Legal Actions or Investigations:
Nussbaumer & Clarke, Inc. has not been a party to any legal action or government investigation related to our business practices. Neither the firm nor any of our principals or agents have pleaded guilty or entered into a consent order in connection with fraud, collusion, bid rigging, price fixing, or bribery.

Key Staff

Embarking on transformative capital projects requires a partner who not only understands your community's unique challenges but is also deeply entrenched in the local fabric. Meet Nussbaumer & Clarke, Inc., your trusted ally, bringing forth a team of highly qualified professionals committed to delivering successful outcomes for the Niagara Falls Water Board (NFWB).

Our dedicated staff, based in the heart of Lockport and Buffalo, boasts more than experience – they are local and familiar with the intricacies of the project area and its distinctive challenges. Choosing Nussbaumer means choosing a team that not only works locally but lives and breathes the community's needs and is able to offer an unparalleled level of responsiveness.

In the realm of water treatment plant projects, our team shines. Armed with extensive experience, we specialize in hydraulic modeling, developing detailed engineering design plans and Contract Documents, providing Bidding Assistance, Construction Administration, Construction Inspection, and funding coordination with agencies such as EFC. Nussbaumer is familiar with the intricacies of funding programs such as, WIIA, BIL, CDBG, GIGP, and tailoring customized work plans specific to your project's needs. Our track record speaks for itself – successful outcomes that reflect a commitment to excellence.

What sets us apart is not just our technical prowess but our longstanding relationships with funding agencies as well as local and state regulators. These connections not only expedite project timelines but also create a collaborative environment, ensuring a seamless navigation of potential challenges. When you choose Nussbaumer, you're choosing a partner dedicated to precision, timeliness, and the technical excellence of our staff. Further, Nussbaumer prides itself on employing an experienced, highly qualified construction inspection team to help ensure proper attention to project details as the project design becomes reality.

Allow us to introduce our team with significant experience in municipal water treatment plants and infrastructure funding. Our project team is poised to help the Niagara Falls Water Board design and installation solutions and prioritize improvements and project efficiencies.

Let's embark on this journey together, where your community's success is not just a goal but a shared commitment.

The key staff members who will work on this Project supporting the NFWB include:

- Michael Marino, P.E., Chief Executive Officer, as Client Relationship Manager
- Craig Alexander, S.E., P.E., Structural Project Oversight & QA/QC Review
- James Zgoda, Project Manager
- Andrew Basista, Electrical Engineer
- Daniel Ott, C.P.D., Design & Plumbing Engineer
- Christopher Freese, Construction Services Manager

Mike Marino, P.E. – Client Relationship Manager

Mr. Marino is CEO of Nussbaumer and a civil engineer with over 28 years of municipal engineering experience including time as Assistant Public Health Engineer for the Niagara County Department of Health. He supports dozens of municipalities with project development and identification of funding options. His experience includes evaluation, design, and construction of a wide variety of municipal water and wastewater infrastructure projects throughout WNY. Mike will work with you to ensure all your needs are met.

Craig Alexander, S.E., P.E. – Structural Engineering / Project Manager

Mr. Alexander brings an impressive 26-year track record as a seasoned civil/structural engineer, contributing his wealth of expertise to a diverse range of municipal, commercial, and industrial projects. His comprehensive experience encompasses key responsibilities such as design development, structural analysis and design, preparation of construction documents, specifications, and providing vital support throughout the construction phase. Clients throughout Western New York have benefited from Mr. Alexander's specialized skills, and we are confident that his leadership will contribute significantly to the success of this endeavor.

James Zgoda – Electrical Engineering

Mr. Zgoda's wealth of expertise spans over 34 years in electrical/mechanical design experience, showcasing a mastery of electrical systems. His expertise extends across various domains within the energy and electrical fields, underscoring his comprehensive understanding of the intricacies associated with solar farms and other energy-focused projects. His deep-rooted relationships with National Grid and other utilities position him as an asset to our team. These established connections not only ensure a streamlined communication process but also enhance our ability to navigate regulatory requirements seamlessly. In addition, Mr. Zgoda's extensive network includes relationships with electrical-focused companies that can play a pivotal role in locally sourcing and producing equipment. This strategic approach not only minimizes potential delays but also contributes to the overall success of the project.

Andrew Basista – Electrical Engineering

Mr. Basista has a focus on electrical projects, with an impressive background of 8 years in commercial and industrial electrical experience. Andrew has been instrumental in a variety of electrical initiatives, showcasing his versatility and commitment to excellence. His responsibilities span the entire project lifecycle, from the initial site visit and system specification to creating one lines, site plans, and all necessary drawings. His proficiency extends to managing grid-connected and off-grid projects across various state parks, schools, and administrative buildings. Andrew's meticulous oversight, from training park crews for solar installations to commissioning systems, reflects his commitment to ensuring the success of each project.

Daniel Ott, CPD – Engineer – Plumbing

Mr. Ott is a member of our Mechanical/Electrical/Plumbing (MEP) Department with 37 years of experience, including design of complete plumbing systems, design of lighting systems, and evaluating buildings to ensure they meet the New York State Building. Dan has worked on several treatment plant aspects over the years including water/wastewater treatment plant upgrades, generator upgrades, and pump station renovations.

Christopher Freese, Construction Services Manager

Mr. Freese is a dedicated construction professional with a history of meeting project goals utilizing consistent and organized practices. Chris brings 23 years of experience in construction management on sites of all types and sizes. His site management experience helps ensure site safety, proper construction operations, coordination of on-site staffing, and overall project management of each project site.

Inspection Staff

In addition to our staff identified above we have a bench of depth to help with the construction inspection expertise. Including six NICET certified inspectors and four highly experienced construction inspectors (who are NICET equivalent) our team has a combined 270+ years of industry experience, all with specific water system experience, some of which were former local water utility field staff.

Support Staff

We also have a team of in-house administrative staff who are instrumental in grant writing and administration, and the preparation of written materials, including correspondence, reports and construction related contracts, submittals, and documents. This group is also responsible for conducting quality/accuracy review of written materials prior to distribution to clients.

Introduction of Subconsultants: Enhancing Diversity and Expertise

We recognize the importance of fostering diversity and promoting inclusivity in our projects, aligning with the goals set by the Niagara Falls Water Board. Committed to meeting and exceeding M/WBE and SDVOB goals, we have strategically partnered with a select group of subconsultants who bring a wealth of expertise across various disciplines.

In addition to helping us achieve the specified MBE, WBE, and DBE goals specified by the Niagara Falls Water Board, our esteemed subconsultants play a pivotal role in strengthening our project capabilities. With proficiency in civil, site, survey, inspection, environmental, permitting, process, and structural engineering, they augment our in-house capabilities to ensure comprehensive and timely project delivery.

Our collaborative approach extends beyond meeting compliance thresholds; it reflects our dedication to innovation, and community engagement. By leveraging the collective strengths of our team, strive to deliver successful outcomes that align with both your timelines and budgetary considerations.

A detailed plan to meet, M/WBE and SDVOB goals set forth in the RFP will be developed once each project scope is finalized.

We take pride in the diversity of talents within our extended team, recognizing that a rich array of perspectives leads to more creative solutions and successful project outcomes. As we embark on this endeavor together, we are confident that our collective capabilities will contribute to the success and impact of your transformative project. A more detailed Firm Profile for each company can be found in Appendix B.

JMD has been certified as a Women Business Enterprise (WBE) by New York State and the County of Erie & City of Buffalo Joint Certification Committee. Focused on the water and wastewater industries, staff are all experienced civil engineers, and construction inspectors, many of whom have been working with the Niagara Falls Water Board.

Lu Engineers is a NYS-certified Minority and Disadvantaged Business Enterprise (M/DBE), and a Veteran solely owned Professional Corporation established in 1980. Offering professionals specializing in civil, site, environmental, and transportation engineering.

Advanced Design Group Professional Engineering and Land Surveying, P.C. (ADG) is a local full-service, multidisciplinary civil engineering firm providing planning, design and construction management services for residential, commercial and industrial subdivisions and site plans throughout the country. ADG is certified as a Woman-Owned Business Enterprise (WBE) in the State of New York and Erie County.

KHEOPS, is a New York State Licensed, minority-owned (MBE) professional services firm. Experienced in delivering complete Architectural, Engineering & Land Surveying services.

Encorus Group is certified as a Service-Disabled Veteran-Owned Small Business (SDVOSB) at both the federal and New York State levels. Professional engineers in all major disciplines, registered architects, and field personnel. Also offering an accredited civil materials testing laboratory.

Frandina Engineering and Land Surveying, PC provides high quality land and construction surveying services throughout Western New York. As a wholly-owned Woman Business Enterprise (WBE). The firm is also a certified Disadvantaged Business Enterprise (DBE).

Statement of Understanding

WTP-2.1 – SCADA Control System Upgrades

Nussbaumer has prepared our Statement of Understanding based on information in the Request for Proposals, and our past experience on similar SCADA projects for other utilities. Nussbaumer's understanding of the Water Treatment Plant (WTP) SCADA Control System Upgrade Project for the Niagara Falls Water Board (NFWB) follows and also includes Nussbaumer's approach to completing the scope of Services presented in the RFP.

The existing SCADA system in the WTP is mostly original equipment from the late 1990's. Most of the PLC's in the system are old Allen Bradley PLC-5's that run software that is no longer supported by the manufacturer or conform current industry standards. There also is additional equipment and devices throughout the WTP which are not connected to the SCADA system. Lack of connection for these items in the SCADA system requires the operators to have to walk to various locations to ensure the process is functioning properly. The existing large motor's throughout the WTP have no RTD bearing temperature or vibration sensors connected to the SCADA system. The existing sludge pumping building currently is not tied into the SCADA system. Some equipment that has been installed in this building should be connected to the SCADA system. Access to the sludge pumping building in the winter is difficult at times due to required plowing along the existing access path.

SCADA system upgrades/replacement will be evaluated to meet requirements of the facility.

Nussbaumer proposes to do a conceptual design study to determine the best solution to upgrade or replace the SCADA system. The study will evaluate several options and associated costs for replacement/upgrades to the SCADA system. It will include review of the existing P&ID drawings, existing input/output for each cabinet, and existing network configuration. Additional equipment to be handled by the SCADA system will also be evaluated. Nussbaumer will walk the existing facility with plant personnel to determine what additional equipment needs to be added and/or what additional device signals need to be added to the SCADA system. A secured encrypted radio, WiFi or cellular protocol connection will be investigated to allow communication with the remote sludge pumping station.

The SCADA system shall be designed per EPA Water and Wastewater Cybersecurity and Infrastructure Security Agency (CISA) and ISA 112 SCADA System standards.

This design study will then be used to produce construction documents, including drawings, specifications, a construction estimated cost, and an estimated construction schedule to replace the existing SCADA system.

Task 1: Survey

Nussbaumer will coordinate with the NFWB to acquire any additional drawings and current input/output information needed. Nussbaumer will meet with the appropriate personnel from the WTP to field verify the information on the plans is accurate and determine what additional equipment should be connected to SCADA. During conceptual design, Nussbaumer will make a second visit to the WTP to review and discuss options being considered and field verify any other information required. This information will be used as required to prepare conceptual design, design, and construction documents.

Nussbaumer believes no actual topographic survey will be required for this project.

Task 2: Conceptual Design

The project will begin with a kickoff meeting held between Nussbaumer and NFWB. At this time, Nussbaumer will introduce project staff, establish communication protocols, and review the project understanding, scope of work and other requirements. At this meeting, although most likely unofficially requested prior, official requests will be made to obtain record drawings.

Nussbaumer will begin preparing a conceptual design report to determine work scopes required to meet the NFWB and WTP requirements. The conceptual report will include options and associated construction budget estimates. The NFWB will evaluate options and decide on a final scope of work for design documents. Nussbaumer will request additional meetings while working on this report with the NFWB to discuss options and coordinate with NFWB as necessary to examine existing equipment, determination of needs and recommended improvements. A report submission shall be made to the NFWB detailing these items with estimated costs and conceptual design plans.

Task 3: Design Documents

Upon acceptance of the Conceptual Design Report and options selected to define the scope of work for the design documents, Nussbaumer will provide a cost for the design documents. This fee will be determined by the scope of improvements selected by the NFWB. This engineering cost will be for tasks 3 through 7 and is typically in the 10 to 15% of the estimated construction cost. Upon authorization from the NFWB, Nussbaumer will begin the design documents. The Design phase will include both the preliminary and final designs. The preliminary design will be considered at approximately 70% design level and be submitted to NFWB for review. This submittal will include plans, Contract Documents (including technical specifications) and estimated cost of construction. Nussbaumer will work with the NFWB prior to the submission of the preliminary design documents to make certain the design details used meet NFWB standards and will incorporate as appropriate NFWB Standard Specifications. Nussbaumer will supplement the standard specifications as needed to prepare a complete set of technical specifications. As noted in Addendum No. 1 to the RFP, NFWB does not have standard procurement and contracting requirements. Nussbaumer has used EJCDC documents for these requirements on other similar projects, and we propose to use these in this instance. If used, Nussbaumer will review and discuss the EJCDC procurement and contracting requirements with the NFWB. Included with these procurement and contracting requirements will be the additional forms the NFWB provided in Addendum No. 1.

Furthermore, New York State (NYS) Environmental Facilities Corporation (EFC) has specific documents that are required to be included in the proposal book. Nussbaumer will work with the NFWB and NYS EFC to confirm the appropriate information is included in the proposal book.

Upon receipt of comments to the preliminary design, Nussbaumer will take the design to the approximately 95% design level. As with the preliminary design level, drawings, Contract Documents, and estimate will be submitted to the NFWB for review. If additional changes are made, they will be incorporated into the final documents to be used for bidding.

Task 4: NYS EFC Reporting

This task will be negotiated after the acceptance of the Conceptual Design Task.

Task 5: Bidding Assistance

This task will be negotiated after the acceptance of the Conceptual Design Task.

Task 6: Construction Administration

This task will be negotiated after the acceptance of the Conceptual Design Task.

Task 7: Construction Inspection

This task will be negotiated after the acceptance of the Conceptual Design Task.

Relevant Project Experience

CITY OF BUFFALO
Massachusetts Pump Station Improvements

The City of Buffalo retained Nussbaumer to provide engineering services in connection with the rehabilitation, modifications, and upgrades at the Massachusetts Avenue Pump Station (Mass Station). Phase 1 consisted of electrical system upgrades including the high voltage electrical substation, switchgear, vacuum circuit breakers, transformers, motor control centers, VFD's, panelboards, motors, feeders, and related electrical systems, and controls. Nussbaumer performed an Engineering Study which included the recommended electrical upgrades, associated cost, and implementation schedule.

Based on findings and recommendations of the Study, Nussbaumer is currently working with the City to provide Design and Bidding Services in connection with the following:

1. Rehabilitate the existing 23kV electrical substation in the existing location.
   a. Structural and architectural improvements to the substation building.
   b. New 23kV switchgear, vacuum circuit breakers, protective relaying, DC battery system, and medium voltage transformers with load tap changers.
   c. Modifications to the three National Grid 23kV primary feeders and metering.
2. New substation secondary feeders routed underneath the existing railroad to the pump station via existing pathways (i.e., tunnels and conduits).
3. Addition of permanent standby backup power via a single diesel generator and automatic 5kV transfer switch.
4. New 5kV electrical switchgear, protective relaying, and motor control centers.
5. New low voltage transformers, motor control centers, and panelboards designed for 208V/120V.
6. New electric distribution feeders, both medium and low voltage.
7. Rehabilitate Pump #1.
8. Rehabilitate Motor #1 and convert to brushless DC excitation.
9. Replace Motors #2 and #4 with larger 1750hp induction units.
10. Provide variable frequency drives (VFDs) for Motors #2 and #4.
11. Construct an addition to the Pump Station above the former Chlorine Room for the VFDs, including a HVAC system.
12. Remove the existing hydraulic actuator system for the discharge header valves and tunnel valves and replace hydraulic actuators with electric motor actuators.
13. SCADA control integration to facilitate both local and remote operation of the equipment.
14. Ground fault circuit interrupters and branch circuits to equipment (i.e., dewatering pumps) will be upgraded.

ERIE COUNTY WATER AUTHORITY
Systemwide Standby Power (NC-31)

The Erie County Water Authority (Authority) retained Nussbaumer & Clarke, Inc. to evaluate requirements for the installation of standby power for all of their facilities throughout its service area. The Standby Power Study provides a plan for the Authority to maintain the public water supply during an event in the electric power grid. The project consisted of a system wide evaluation of emergency standby power needs for the Authority's facilities under a localized or a large scale power outage. This included all Authority operated sites including the two water treatment plants, pump stations, storage tanks, the Service Center, Ellicott Square offices, and the Water Quality Laboratory. The purpose of the Study was to evaluate permanent standby power for certain critical locations and an appropriate number of portable generators for the remaining pump stations and/or tank sites to provide average day demands to the Authority's entire service area.

The scope of services was a methodical assessment of each facility to determine whether or not the facility requires permanent standby power or intermittent standby power provided by portable generators. Other parts of the Study included preparing manpower requirements, cost estimates, and fueling and maintenance schedules. The detailed scope of services included:

1. Review and summarize information furnished by the Authority regarding average day system demands, pumping operations, and tank drawdown rates, including SCADA data, GIS based demand data, and water system reports.
2. Review and summarize information regarding equipment and electrical demand at each facility.
3. Complete an evaluation of the standby power needs for each of the Authority's facilities.
    a. Evaluate the need for permanent or portable standby power at each facility by analyzing regulatory criteria, reviewing pumping and storage data, and power outage data.
    b. Identify all equipment which requires standby power supply.
    c. Evaluate emergency generator equipment and appurtenances.
    d. Size generators for the standby power needs at each facility.
    e. Inspect each facility to locate a site for the standby power equipment and a means to connect the standby power equipment to the existing electrical equipment.
    f. Make recommendations for the type and size of standby power equipment and electrical, mechanical, and site modifications required at each facility.
4. Prepare a 5-year strategic plan for installation of the permanent and portable generators.
    a. Prepare a strategic plan for the deployment of the generators under a large scale power outage.
    b. Confirm the number of generators and associated equipment required to maintain the water system in an extended power outage.
5. Determine the staffing requirements for generator testing, maintenance and deployment.
6. Prepare cost estimates for procurement and installation of all equipment, and appurtenances.

CITY OF BUFFALO
Rehabilitation of Equipment in Low Lift Pump Station
Colonel Francis G. Ward Filtration Plant

Nussbaumer & Clarke, Inc. was retained by the City of Buffalo to evaluate the condition of the low lift/raw water (6) and wash water (2) pumps installed circa 1920, and to issue a report including recommendations for improvements to the equipment and facility.

Nussbaumer was subsequently retained to provide engineering services for the design and construction of the recommended equipment rehabilitation and various other improvements at the facility. The work included the complete replacement of the medium voltage electric switchgear, rehabilitating seven of the eight existing pumps and motors, replacing Low Lift No. 6 with a new/smaller variable speed drive pump and motor, installation of a SCADA system and integration with the existing monitoring and control system, and painting of the piping and equipment. Construction of the $3.98M project spanned a five year period and was done in multiple phases to allow the treatment plant to remain in operation while the work proceeded.

The electrical work also included 5kV incoming utility metering, relaying, and disconnects; 5kV automatic transfer switches, 5kV fused motor starters, 5kV fused distribution switches, 4160V - 480Y/277V step down transformers, 480V motor control centers and 5kV, 480V power factor correction capacitors, and short circuit, coordination and arc flash studies. Main-tie-main arrangements were installed on the 5kV switchgear and 480V motor control centers enabling the facility to be fed from either of two separate utility services or plant generators to maintain pumping operations.

These improvements have significantly improved the efficiency, reliability and operation of the pumping equipment and extended the useful life of this important water treatment facility for the customers of the BWB.

Familiarity with NYSEFC & Funding

Nussbaumer brings a wealth of experience and a proven track record in navigating the intricacies of New York State Environmental Facilities Corporation (NYSEFC) requirements. Our familiarity extends beyond mere compliance; we have successfully secured funds for clients and orchestrated the design and management of projects funded through EFC grants and loans.

For years, we have collaborated with municipalities, including the City of Lockport, the Town of Tonawanda, Village of Kenmore, City of Jamestown, and the Town of Cheektowaga, to implement impactful improvements to their water systems, most grant funded.

Having served 11 out of the 20 municipalities in Niagara County, we have established a strong presence and familiarity with the region. Our commitment goes beyond project execution—we actively engage in supporting clients, offering grant writing assistance, and collaborating with various funding agencies. Notably, our extensive experience includes partnering with the City of Lockport on 20 diverse projects, many involving multiple funding agencies. We have also had similar success with dozens of other municipalities outside of Niagara County.

Focusing on our Niagara County experience, coordinating with funding agencies is a strength we bring to the table. We have successfully supported municipalities such as the City of North Tonawanda, Village of Wilson, Village of Lewiston, Town of Pendleton, and Town of Porter, managing over 65 combined projects, all requiring coordination with multiple funding agencies. Our adept team ensures adherence to agency timelines, facilitating accurate and timely reimbursements.

Understanding the critical importance of meeting funding agency timelines, we boast a proven track record of consistently achieving this for our clients. This experience, coupled with our local presence and knowledge of the Niagara County landscape, positions us as a reliable partner.

"Elevating projects through grant experience – our pledge to quality documentation and reporting ensures your vision becomes reality."

Moreover, our experience in water infrastructure is extensive. From studies and evaluations to comprehensive improvement plans, we have successfully undertaken projects of varying complexity. Our capabilities include design, and the preparation of comprehensive engineering plans and reports. We specialize in crafting customized work plans tailored to the unique requirements of each project.

Our proficiency extends to collaborating with funding programs such as DWSRF, CDBG, and WIIA. Our professionals are well-versed in navigating agency-specific timelines, reporting requirements, and reimbursement processes. With a proven track record of delivering successful outcomes, we assure you smooth and efficient project execution.

As we embark on this journey with the Niagara Falls Water Board, our commitment is unwavering—to leverage our local experience and grant qualification to provide you with tailored solutions that align seamlessly with your objectives. We look forward to the opportunity to contribute to the success of your capital projects and the enhancement of the Niagara Falls community.

Availability of Key Personnel

At Nussbaumer, our commitment to the timely and successful completion of your project is rooted in the availability and dedication of our local, qualified staff. The key to our success lies in our deep bench of professionals, all of whom have local experience, ensuring a timely response to your needs.

Our Buffalo office, conveniently located within a 40-minute drive, and our Lockport office within a 20-minute drive, will be the hub for all project-related activities. This strategic positioning allows us to not only understand the unique challenges of the Niagara Falls Water Board's projects but also facilitate a timely response to your requirements.

Our team, comprising engineers, project managers, and support staff, is exclusively based in Western New York, including offices in Lockport and Buffalo. This means that the individuals working on your project are intimately familiar with the local landscape, regulations, and community dynamics. This local connection translates into heightened responsiveness, ensuring that we can promptly address any issues that may arise and adapt to changing project needs.

We recognize that the anticipated project duration spans up to five years, presenting both challenges and opportunities. At Nussbaumer, while we cannot precisely forecast staff availability for such an extended timeframe, our commitment to your project remains unwavering. The inherent strength of our deep bench, comprised of skilled professionals across various disciplines, positions us to meet your evolving needs with flexibility and agility. We understand that project dynamics may shift, and unforeseen circumstances can arise. Rest assured, our adaptability is not just a promise but a testament to our local presence and robust team structure.

Understanding that workload dynamics may fluctuate, we take pride in our ability to pivot and reallocate resources as needed. With a moderate workload on the proposed team, we have the flexibility to scale up or down depending on project demands. This adaptability is a direct result of our robust local team and the synergies we share across our offices.

By keeping our team local, we can ensure consistent, hands-on management and timely responsiveness. This ensures that your project will benefit from the experience and dedication of our professionals, fostering a collaborative and efficient working relationship.

"From responsiveness to agile resource allocation, we are committed to your project's success. With a local team deeply rooted in the community, we pledge to be your partner ensuring that your needs are met promptly, efficiently, and with the dedication only a hometown firm can provide."

As a local firm deeply embedded in the Western New York Community, we understand the value of being present, responsive, and accountable. With Nussbaumer, you can trust that our availability, local experience, and commitment to quality will be instrumental in the seamless and timely completion of your projects. We look forward to the opportunity to demonstrate our capabilities and contribute to the success of the Niagara Falls Water Board's endeavors.

Organizational & Financial Strength

At Nussbaumer, our commitment to organizational and financial responsibility goes beyond mere compliance; it is an integral part of our mission to deliver value and reliability to our clients. Our approach to financial management is designed to benefit you in the following ways:

Transparent and Timely Financial Reporting: We understand the importance of transparency and timeliness in financial reporting. Our commitment to presenting true and fair financial statements, prepared in accordance with generally accepted accounting principles, ensures that you receive accurate and relevant information in a timely manner. This commitment is driven by our belief in providing you with the insights needed for informed decision-making.

Ethical Practices: Our organizational culture is rooted in high moral standards and a commitment to honesty. This ethos extends to our thoughtful processes and affairs, ensuring alignment with industry standards of professional ethics associated with engineering and land surveying code of conduct. By maintaining this ethical atmosphere, we prioritize your trust and confidence in our operations.

Effective Internal Control System: This system assurance of the correctness of our financial accounts and the fiduciary responsibilities we uphold over the assets of the company. It is a proactive measure to mitigate risks and ensure the integrity of our financial operations.

Compliance with Regulations: Our audit reports adhere to applicable rules and regulations set forth by the government. This commitment to compliance is not just a box-checking exercise; it is a pledge to uphold effective standards of financial accountability and regulatory adherence, offering you the confidence that comes with adherence to legal requirements.

Independence and Corporate Governance: We have implemented policies to ensure the independence of our senior management, aligning with corporate governance requirements. This commitment ensures that our decision-making processes remain objective and in line with the interests of our clients. It is a proactive measure to maintain the industry standards of corporate governance, enhancing our accountability to you.

In summary, our commitment to organizational and financial responsibility is a direct reflection of our dedication to providing you with quality service. By choosing Nussbaumer, you are not just gaining a service provider; you are gaining a partner committed to transparency, ethics, and responsibility excellence. We assure you that our systems and practices are designed to serve your interests and contribute to the success of your endeavors.

Logistical Capabilities & Familiarity

We are excited about the prospect of collaborating with the Niagara Falls Water Board (NFWB) on your capital improvement project and addressing the Statement of Logistical Capabilities and Familiarity with the Project Area. At Nussbaumer & Clarke, Inc., our unwavering commitment to delivering successful outcomes is backed by a rich 90-year history of experience in wastewater treatment facilities (WWTF), water treatment plants (WTP), and water distribution systems.

Familiarity with the Project Area:

Our team is familiar with the Niagara Falls Water Board's facilities, having worked on similar projects throughout their careers. In addition, we are currently actively collaborating with 11 out of the 20 communities in Niagara County. Our in-depth understanding of the local landscape, regulatory environment, and community dynamics uniquely positions us to navigate the nuances of the project area seamlessly.

In particular, our ongoing work at the NFWB Wastewater Treatment Facility, focusing on electrical components through our on-call services, demonstrates our current involvement and commitment to enhancing the operational efficiency of critical infrastructure. This experience directly aligns with the scope of projects in your capital improvement plan and reinforces our capability to deliver successful outcomes.

Logistical Capabilities:

At Nussbaumer & Clarke, Inc., we pride ourselves on our robust logistical capabilities honed through decades of managing complex projects. Our commitment to seamless collaboration with NFWB staff and any involved consultants is reflected directly in our collaboration efforts for the WWTP Upgrades – Project No. 3. Beyond this recent project our capabilities in waterline design, construction administration, and construction inspection span decades of staff experience. In addition our rich history of collaboration with EFC and other funding sources has always helped to ensure project success. Our proven commitment to our clients is the cornerstone of our ability to navigate challenges, streamline processes, and deliver unparalleled results for a number of municipal clients in WNY.

Key Client Relationship Manager:

Our dedicated team, led by Michael Marino, P.E., Chief Executive Officer, brings a wealth of experience to the table. With over 28 years of experience and a deep understanding of municipal engineering, Mr. Marino will serve as your Client Relationship Manager for this project. His local residency and previous work with the Niagara Falls Water Board including commissioning support for the Water Treatment Plant uniquely position him to ensure effective communication and project satisfaction in cooperation with the talented staff we bring to this project.

In conclusion, Nussbaumer & Clarke, Inc. is fully equipped to meet the challenges outlined in the RFP. Our familiarity with the project area, combined with our logistical capabilities and seasoned staff, positions us as the ideal partner for the successful execution of NFWB's capital improvement projects.

"Where Experience Meets Efficiency: Nussbaumer & Clarke, Inc. brings a local of logistical capabilities and a understanding of the project area to the table. With a seasoned team boasting extensive experience in wastewater treatment facilities, water treatment plants, and water distribution systems, coupled with key staff members like Michael Marino, P.E., leading the charge, our commitment is not just to projects but to seamless, successful outcomes."

Design & Construction Schedule

At Nussbaumer, we understand the significance of delivering projects in a timely and efficient manner. Our proposed timetable for the design and construction phases is based on our extensive experience and a meticulous understanding of the unique considerations involved in your project. It's important to note that the actual timelines may be influenced by factors such as the time of year, seasonal construction availability, the authorization date to commence work, and a signed contract in place prior to the project kick-off.

TASK	Time Frame
1. Survey	Concurrent with Conceptual Design
2. Conceptual Design	12 Weeks
3. Design Documents	TBD
4. NYS EFC Funding/Agency Reviews	TBD
5. Bidding Assistance	TBD
6. Construction Administration	TBD
7. Construction Inspection	TBD

It is essential to acknowledge that the above timetable is an initial estimate, and we are committed to working closely with you to align our activities with your preferences and project requirements. Our flexibility allows us to adapt to changing circumstances, ensuring that the project progresses seamlessly. Regular communication and collaboration with your team will be prioritized to address any potential adjustments based on external factors.

A detailed schedule will be developed during Conceptual Design. Our goal is to deliver a successful project that meets or exceeds your expectations, and we look forward to the opportunity to contribute to the realization of your vision.

Project Fee

Nussbaumer & Clarke's proposed fee is presented below. Should Nussbaumer be selected by NFWB a detailed breakdown of work elements showing titles, estimated manhours and billing rates will be submitted per the RFP.

TASK	Task Fee	
1. Survey	$ 2,400.00	Lump Sum
2. Conceptual Desing	$ 9,600.00	Lump Sum
3. Design Documents	TBD	
4. NYS EFC Funding/Agency Reviews	TBD	
5. Bidding Assistance	TBD	
6. Construction Administration	TBD	
7. Construction Inspection	TBD	
TOTAL FEE	$ 12,000.00	

Our proposed total fee for Tasks 1 and 2 of the required work is $12,000.00. The proposed cost for Tasks 3 through 7 cannot be determined until scope of the project from the Conceptual Design is determined.

We appreciate the comprehensive overview of the upcoming projects spanning the next five years, each presenting unique challenges and opportunities. Understanding the dynamic nature of these endeavors, we have prepared our fee proposal based on our 2024 rate schedule.

Given the distinct nature and timeline of each project, we acknowledge the potential for variations in the project schedule. Our proposed fee structure is tailored to the specific requirements anticipated for the year 2024. However, we understand that project timelines can evolve, and certain projects may overlap or be executed in tandem.

To accommodate the fluidity of the schedule and ensure transparency, we want to highlight that our proposed fee is contingent on the work being completed within the calendar year 2024. Should any portion of the work extend beyond this timeframe, there will be a rate escalation to align with our subsequent rate schedules.

Our intention is to work collaboratively to navigate the intricacies of the project schedule and explore opportunities for streamlined execution. Flexibility is paramount, and we are open to discussions to align our services with the evolving needs of the projects over the next five years.

Our intent is to offer flexibility and clarity in presenting the financial aspects of our proposal. We are open to further discussions and adjustments based on your preferences or any specific budget considerations. Our primary goal is to ensure that the proposed fee structure aligns seamlessly with the project's requirements and your organization's financial expectations.

Should you require additional details or wish to discuss specific elements of the fee proposal, we welcome the opportunity for further dialogue to address any questions or concerns you may have.

APPENDIX A

Staff Resumes

Michael Marino, PE

Senior Associate

As Chief Executive Officer, Mr. Marino oversees Nussbaumer's municipal engineering department projects in an executive/administrative capacity. He has 28 years' experience in the evaluation, design, and construction of a wide variety of municipal infrastructure projects in New York and Pennsylvania.

Mr. Marino serves as the retained engineer for numerous communities in Western New York, providing invaluable support from project conception to completion. Additionally, he extends his expertise to several other municipalities, offering assistance in securing funding and guiding projects through every stage of development. In his role, Mr. Marino oversees municipal engineering aspects and construction inspection for multiple projects, ensuring adherence to quality standards and regulatory requirements. With extensive experience in evaluating, designing, and constructing various municipal infrastructure projects across Western New York, he brings a wealth of knowledge and expertise to each endeavor.

Recent Experience

- City of North Tonawanda, Wastewater Treatment Plant – Provided QA/QC for the design of power system improvements at the plant. Improvements included two (2) new 5kV utility services, switchgear, transformers, standby emergency generators, transfer switches, and motor control centers. Services also included short-circuit analysis, protective device coordination, and arc-flash risk analysis.

- City of Lockport, NY, Wastewater Treatment Plant (WWTP) Ultraviolet (UV) Light Disinfection Improvements– Project Principal responsible for oversight of the evaluation, design, and construction of the UV light disinfection system for the Lockport WWTP, providing over 90 million gallons per day (MGD) of wastewater treatment for the City and Town of Lockport. The project includes preparation of specifications, drawings, cost estimate, and schedule in accordance with the modified State Pollutant Discharge Elimination System (SPDES) discharge permit's schedule of compliance. The design included calculating the hydraulic performance through the existing plant process tanks and through the proposed UV system within the existing chlorine contact tanks (CCTs); upgrades to existing CCT equipment; elevating equipment for flood resiliency; and installing a UV system bypass for use during maintenance or heavy rain events.

- City of Buffalo– Colonel Ward High Service Pump Improvements - Project Manager responsible for the design for two new high service pumps for the City's Division of Water. New smaller pumps were designed to meet decreasing demands, save on power consumption, and avoid over pressurizing the distribution system. Plans included two new 800 HP 20 mgd vertical centrifugal pumps, which required extensive floor modifications to install a new 48-inch suction header pipe, new flow control rotovalves, several motorized butterfly valves, new discharge piping, and SCADA control upgrades. The project also included upgrades to the existing 50 mgd high service pumps to improve the priming system, discharge check valve, and automate the pump changeover procedures. Due to the success of the project, plans for additional energy savings measures have been prepared including the installation of an additional 800 HP pump, HVAC and lighting improvements, and system-wide SCADA integration.

Contact

(716) 827-8000 ext. 257
mmarino@nussclarke.com

Education

SUNY at Buffalo,
BS Civil Engineering, 1996

Licenses

Professional Engineer (PE)
2001 - New York (078995)
2015 - Pennsylvania (084169)

Experience

9 - Nussbaumer & Clarke, Inc.
28 - Total

Societies

American Water Works Association, (Past Chair, National Management & Leadership Division; Co-Chair, AWWA/ WEF 2008 Utility Management Conference Planning Committee; Former Trustee, AWWA Technical and Education Council; Member, PCC Pipe & Fittings Standards Committee)
New York Section American Water Works Association (Past-Chair, Board of Governors; Chair, Section Awards Committee Member, Program Committee)
Western New York Waterworks Conference (Secretary, Board of Governors; Co-Chair, Education Committee)

Disciplines

Municipal Engineering
Potable Water
Wastewater
Stormwater
Capital Planning

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS

- City of Buffalo - Colonel Ward Chlorination System Replacement - Project Manager responsible for the design of replacement chlorine equipment at the City's 160 mgd Water Treatment Plant. The project includes a new emergency system to shutdown the 1-ton cylinders, new automatic changeover system, evaporators, automatic gas feeders, educators, replacement piping and valves, instrumentation and SCADA control upgrades.
- Town of Tonawanda, Water Treatment Plant Pump Station Heating Upgrades – Project Manager for engineering report and analysis of the Water Treatment Plant regarding the condition and performance of the existing steam heat system for the Pumping Station. The report considered different options for future heating systems with performance; operation and maintenance data. A comparison of alternatives including cost estimates for repair or replacement of the pumping station heating system, potential incentive programs for new systems, life cycle costs and operation and maintenance requirements was considered. Prepared a recommendation regarding improvements to the Pumping Station heating system based on findings. The new system design included replacement of all existing water source unit heaters in the pump station with gas unit heaters, including all new gas lines. Nussbaumer provided general services during construction including construction review of quotes received, recommended award, and provided periodic inspection of the work during installation of the new heating system.
- City of Buffalo - Water Treatment Plant Filter, Gallery Rehabilitation - Project Manager during the construction of $20 million in improvements including: civil/structural rehabilitation; mechanical/piping upgrades; HVAC system addition; electrical modifications; and asbestos remediation. This project was financed via a NYS Environmental Facilities Corporation (EFC) Drinking Water State Resolving Fund (DWSRF) loan.
- Thousand Islands Bridge Authority (TIBA) - Water Treatment Plant Feasibility Evaluation - Project Manager evaluating the feasibility of establishing up to a 1-MGD facility to treat St. Lawrence River water to supply potable water to the surrounding communities. The evaluation encompassed permitting requirements, establishment of a subaqueous intake, low lift pump station, membrane filtration plant, chlorine disinfection, finished water storage, and high service pumping. As part of the evaluation, conceptual operations and maintenance costs and rate structures were developed.
- City of Buffalo - 60-inch Watermain Joint Sealing - Project Manager for design of repairs to one of the City's primary transmission mains. It was determined that due to advanced age, many joints within the transmission main began to leak. Based upon video inspection, it was determined that there were approximately 100 joints to be mechanically sealed over a 1,000-linear foot stretch from the water treatment plant and crossing railroad tracks and Interstate-190. The design included installation on internal joint seals and replacement three electric actuators on the City's primary transmission mains.
- City of Geneva - Membrane Filtration Project - Project Manager for the development of construction drawings for the City's Treatment Plant filtration improvements. The project involves the installation of two Membrane Filtration Units to replace existing diatomaceous earth (DE) filters in the plant's treatment building. The design of this system also included a hydraulic evaluation performed for a variety of flow conditions. This evaluation was used to determine if the existing vertical turbine pumps would supply sufficient pressure to the proposed membrane filters, without over-pressurizing the existing slow sand filtration process. Sequencing for taking the existing DE filters off-line after full build-out of the new Membrane Filtration units was considered. This project required correspondence with the New York State Department of Health to ensure compliance with their regulations for gaining the necessary approvals, as well as coordination with the City forces performing the construction work.
- City of Wheeling - Water Pollution Control Facility Improvements - Preparation of plans and specifications for Capital Improvements to the Wastewater Treatment Plant worth over $10 million. The design included a UV disinfection system, new headworks bars screens, two new centrifuges, and a sodium bisulfite dechlorination system.
- City of Lockport, Retained Engineer — Provided planning, design and general services during construction for numerous recreational space, sewer and water infrastructure projects. Provided grant writing and administration to support projects funded via CWSRF, WIIA, WQIP, GIGP, DASNY, ARPA, and BIL. Projects have included a kayak launch, design of a pavilion and comfort station improvements as part of a Canalway Grant, planning for an all-inclusive playground as part of a State Parks Grant and technical support with a Skate Park funded in part by grants from The Skatepark Project and the Ralph C. Wilson Foundation.
- Town of Tonawanda, Various Engineering Support Services—Provided engineering planning, design and general services during construction as requested by the office of the Town engineer. Also provided grant application and administration support services. The work performed has encompassed a wide array of recreation space projects including rehabilitation of the Town golf dome, conversion of the former Lincoln Ice Arena and field house, and technical assistance with the new ice rink, splash pad, pickle ball court and ruby pit at Brighton Park.

Craig Alexander, SE, PE, LEED AP

Vice President

Mr. Alexander has 28 years of experience working as a civil structural engineer. He has provided his engineering expertise on a variety of Municipal, Commercial, and Industrial projects responsible for design development, structural analysis and design, preparation of construction document, specifications, support throughout construction and performing quality assurance reviews for the structural engineering department.

Recent Experience

- Town of Tonawanda, Engineering Department - Project Manager for on-call engineering assistance with the building department for numerous projects. Projects include back-up/standby generators for numerous sites, trouble shooting equipment failures and recommendations, street lighting design, building evaluations, pool filtration system replacement, police building renovation, electrical service upgrades, solar system modifications for roof replacements, and fueling system replacements. Work also includes budget assistance to recommend upgrades for all systems.
- City of Buffalo, Massachusetts Ave. Pump Station Electrical Upgrades Project - Project Manager for electrical engineering and design documents for capital improvements and upgrades to the pumping station and substation with three (3) 23kV utility feeds. The electrical work included upgrading and replacement of the high voltage service equipment, transformers, 5kV distribution system, proposed back-up generator, automatic transfer system design, replacement of 240V equipment and distribution with a new 120/208V system, pump replacement of hydraulic valve actuator with electrical actuators, pump motor rehabilitation and new VFD's, and new control system. Project also included electrical construction estimate.
- ECWA, Contract NC-043, Newstead Water Tank Pump Station, Town of Newstead – Project Manager responsible for the design and drafting of a pump station at the Newstead Water Tank. The project involves the design of a pump station to fill the Newstead Water Tank to the levels required to efficiently operate the ECWA water system in the respective pressure zone.
- City of Buffalo, Department of Public Works, Capital Improvement Plan - Project Manager for structural analysis component of the ongoing comprehensive capital improvement plan for four facilities; Colonel Ward Pumping Station, Filtration Building, Massachusetts Avenue Pumping Station, and Grover Cleveland Tank.
- City of Buffalo, Department of Public Works, Structural Emergency Services - Project Manager for various tasks under the project including Colonel Ward Pumping Station Structural Analysis/Door Archway Shoring, Filter 22 Wall Repair, and Colonel Ward Pumping Station Wall Facade Repair.
- Village of Lewiston DPW—Facility Expansion Project - Project Manager responsible for the design of two (2) additions to the existing building, one on the south side and one on the east gate end, in addition to a new standalone "volunteers" building to the southeast of the existing building. Work included obtaining required bonds and insurance, permits and fees, excavation and clearing, installation of select structural fill, backfill, site drainage, grading, asphalt pavement, landscape restoration, 92'-0" by 40"-0" engineered metal building system including structural frame, uninsulated metal walls and insulated sloped roof.

Contact

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calexander@nussclarke.com

Education

State University of New York at Buffalo,
MS Structural Engineering,
BS Civil Engineering, 1996
Adjunct Professor—SUNY @ Buffalo

Licenses

Professional Engineer (PE)
2003—New York (080901)
Other States: IL, CT, DE, FL, GA, IA, KS, MA, MI, NC, OH, OK, SC, TN, TX, VA, WI
Structural Engineer (SE)
2013—Illinois (81007330)

Experience

2 - Nussbaumer & Clarke, Inc.
28 - Total

Certifications

LEED Accredited Professional
NCEES, Model Law—Structural Engineer
January 2013
NCEES, Council Record

Societies

American Institute of Steel Construction (AISC)

Disciplines

Structural Engineering
Transportation
Municipal
Industrial

Articles

Modern Steel Construction, July 2013, "Holding Down the Fort"
Modern Steel Construction, December 2013, "Gateway to Savannah"

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS

- Newfane - Wastewater Treatment Plant- Newfane, NY - Structural for the design of various plant improvements including new process building and grit filter structure.
- Buffalo Sewer Authority Term Agreement, Multiple Awards - Structural Engineer for treatment plant upgrades, energy efficiency, CSO modifications, interceptor sewer and green infrastructure.
- Onondaga County Wastewater Sludge Dryer facility, Syracuse, NY - Structural Engineer for project the design of a facility to house a new sludge dryer to significantly reduce operating costs for Onondaga County. The site conditions required a specialized system of very deep driven piles, grade beams and structured slabs.
- Strasburg Wastewater Treatment Plant, Design-Build Upgrade and Expansion - Strasburg, VA - Structural Engineer for the design of the wastewater treatment plant's primary pumping and treatment systems including a new 10 MGD pump station and enhanced nutrient removal system that consists of fine screens upstream of new suction lift pumps, conversion of the existing oxidation ditches to equalization basins, as well as design of a new grit collection and treatment system. Our design-build team was able to shave $14 Million from the previous consultant's construct ion estimate.
- Horseheads, Well No. 5 Filtration Project, Horseheads, NY - Structural Engineer for the FEMA funded project to construct a new water filtration plant and pump station. Four options to bring the water system within compliance of NYS Public Water System Part 5-1.30 were identified and evaluated; ensuring both capital and life cycle costs were considered to provide an economically sustainable solution.
- Iroquois and Broadway Sewage Pump Stations, Erie County, NY - Structural Engineer who provided engineering and design for the rehabilitation of the Iroquois and Broadway East Pumping Stations. The work included evaluating of the existing conditions of each of the pumping stations, providing recommendations for improvements including pump replacements, electrical modifications, and repairs to the dry and wet wells; and providing cost estimates for alternates.
- Village of Westfield, Upgrade of the Village Water Pollution Control Facility and Main Sewage Pump Station, Westfield, NY - Structural Engineer for preliminary engineering, grant assistance, detailed design, and construction services for an approximate $5,000,000 upgrade of the Village Water Pollution Control Facility and Main Sewage Pump Station.
- Washington County Sewer District EPC, Fort Edward, NY - Structural Engineer for the implementation of an energy performance contract that includes energy and operational efficiency improvements. The objective of the project is to identify and implement measures that would provide facility improvements and achieve the goal to reduce energy consumption.
- Seneca Buffalo Creek Casino and Hotel, Buffalo, NY - Structural Engineer for the design of a 10-story, 2,500 car parking garage, 3-story, 2,300 gaming position casino, and 25-story, 220 suite hotel, with site improvements including: park area, water features, public and private utility upgrades, roadway modifications and streetscaping surrounding the 10-acre site. After the economic downturn in 2008, the $333 million project was scaled back to $120 million including: a 4-story, 725 car parking garage and 67,000 sq. ft. casino with two restaurants and sports bar. Developed standards to reuse 540 tons of steel from the partially erected structure, which made up 95% of final structure and saved $600,000 in steel costs.
- Quapaw Downstream Casino and Hotel, Miami, OK - Structural Engineer for the design of a 175,000 square foot, 2000 gaming position casino, and 14 story, 200 room hotel.
- Remington Park Racino, Oklahoma City, OK- Structural Engineer for renovations of the existing racetrack facility to provide a new 55,000 sq. ft. casino and entertainment complex.
- Kiowa Resort and Casino, Randlett, OK - Structural Engineer for the construct ion of a new 60,000 sq. ft. gaming facility for the Kiowa Tribal community.
- Seneca Allegany Casino and Hotel, Phase 2 and 3, Allegany, NY - Structural Engineer for this new casino and resort including: an 8 story, 1,800 car parking structure, an 11 story, 200 room hotel, a 2-story spa/pool facility, and a 165,000 square feet casino addition.

James Zgoda

Electrical Project Manager

Mr. Zgoda has been actively engaged for the past 36 years in Power & Energy Electrical projects including transformers, generators, electric motors, high voltage engineering, and power electronics. Delivering both specialized and routine electrical enhancement projects in a variety of production settings, catering to the specific needs of our municipal clients.

His extensive project portfolio covers a wide range of activities, including the design of high and low voltage variable speed drives and pumps, substation design, replacement switchgear, control systems, power and lighting installations for pump stations, the installation of transfer switches, power distribution, energy management systems. Renovations to Water Treatment Plants including 800+ HP pumps, large capacity motors with variable speed drives, electrical distribution, new and upgraded SCADA systems with multiple facility and equipment controls .

In addition to project execution, Mr. Zgoda has also provided supplementary services such as preparing engineering reports, estimates, plans, specifications, and contract documents. His involvement extends to attending project meetings and providing general support during construction.

Recent Experience

- Town of Cheektowaga, Sewer Department Engineering – On-call engineering assistance with the sewer department for the main pumping station and numerous remote lift stations though out the Town. Work includes trouble shooting and designing repairs and improvements to electrical systems and controls systems, SCADA design, updates and modifications to the SCADA system, troubleshooting power quality problems and replacement or upgrade solutions for failing systems. Work also includes budget assistance to recommend upgrades for all systems.
- Erie County Water Authority, Sturgeon Point Water Treatment Plant - Upgrade of raw water pump station to a firm capacity of 90 mgd. Scope involved replacement of two pumps to increase the capacity and rehabilitation of all five pumps with new, premium-efficiency motors. The pump station was also converted from dual 5 KV feeds to dual 480 V feeds including new substations and main-tie-main switchgear. In addition, the motors on the pumps are controlled by variable frequency drives. Nussbaumer also evaluated cost effective measures to convert the pump station in operation from 4160 V to 480 Volt operation.
- Village of Alden, Broadway (Route 20) Streetscape Improvements Town of Tonawanda Water Treatment Plant - Electrical engineering and design for the Treatment Plant Electrical Substation and Pump Station Improvements Project to improve and update the existing facility to one that is more reliable, resilient, energy efficient, offers operational flexibility, and is easier and safer to maintain. To achieve this goal, the Project has been broken up into five main components including Low-Service Pump Improvements, High-Service Pump Improvements, Pump Station Valves & Actuator Improvements, Electrical Substation, back-up generator, distribution gear and infrastructure improvements, instrumentation and controls Improvements, and miscellaneous improvements. Project also included electrical construction estimate.

Contact

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jzgoda@nussclarke.com

Education

Rochester Institute of Technology
BS Electrical Engineering - 1989
SUNY College at Alfred
AAS Computing Graphics Technology—1984

Certifications

Electrical Safe Work Practices and Compliance with NFPA 70E (Arc Flash Training (OSHA 29 CFR 910.331-335) 2014
Confined Space Entry (2016-2018)
OSHA 29 CFR 1910.146

Experience

31 - Nussbaumer & Clarke, Inc.
36 - Total

Societies

Energy Conservation Citizens Advisory Committee, Town of Amherst

Disciplines

Power & Energy Engineering
Electrical Design
High Voltage Engineering
Power Electronics Design
Control System Design
SCADA

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS

- City of North Tonawanda, Water Treatment Plant – Electrical engineering and design for renovations to the electrical distribution at the Water Treatment Plant. Work included design of a new 480 volt, 750 kW, indoor diesel generator with remote exterior radiator, new above ground main storage tank, day tank, and fuel filtration system. The work also included new multiple transfer switches with coordinate with the two (2) electrical services and the Generator. The main electrical motor control center was also replaced.
- Chautauqua Utility District, Water Treatment Plant Improvements – Design and construction of modifications to raw water pump station and water filtration plant, resulting in no changes to exterior walls or height of buildings, primarily consisting of pump, process and piping improvements to increase permitted capacity from 0.75 MGD to 1.5 MGD and meet finished water quality requirements. Nussbaumer received a Platinum Engineering Excellence Award from the ACEC of New York for the project and design.
- City of Oswego Water Treatment Plant Expansion - Electrical/Mechanical design for a major water treatment plant expansion, high lift multi-level pumping station. The additional water treatment and pumping capacity will serve the major "out of district" user, Sithe Energy's 1042 Megawatt Cogeneration Plant in the Town of Scriba. Scope included the use of directional boring (54" diameter) for the 2,200 linear foot crossing under the Oswego River, New York State Canal, and existing marinas, 500 HP variable frequency drives for the high lift pumps, and the treatment plant expansion (16 mgd to 27 mgd capacity) while in continuous operation.
- Erie County Water Authority, Contract NC-30 - Sturgeon Point Water Treatment Plant, New 90MGD facility with (2) 2500KW stand-by generators, paralleling switchgear, and custom block and brick building to match existing buildings within the facility for housing all the generator and substation equipment, Design, Construction Administration, Start-up Services.
- Village of Little Valley, Rehabilitation of Wastewater Treatment Plant, Phase I - Electrical engineering and design documents for capital improvements and upgrades to the treatment plant and 9th Street Pump Station. The electrical work at the pump station included replacement of the existing electrical service, pump control panel, and submersible pumps. The electrical work at the water treatment plant included Blower building MCC replacement along with replacement of the three (3) blowers, replacement of the existing generator with a new 480 volt, 150 kW outdoor, enclosed, generator with a day tank under the generator, and electrical for a new UV system.
- Village of Little Valley, Rehabilitation of Wastewater Treatment Plant, Phase II – Electrical engineering and design documents for capital improvements and upgrades to the treatment plant. The electrical work at the water treatment plant included electrical power and lighting for a new pole barn over the existing clarifiers, replacement of the MCC at the sludge pump gallery with anew feed to proposed RBC #4, a double throw transfer switch and connection panel for availability to bring a portable generator onto the site and connect to the electrical service, replacement of the main MCC, electrical for headworks bar screen and washer/ compactor, grit screw replacement, replacement of headworks gas detection system, electrical for replacement of mudwell pumps, influent pumps, sludge pumps, and grit blowers, flocculation basin mixer and control replacement.
- City of Dunkirk, Wastewater Treatment Plant Expansion – Expansion of the City's Wastewater Treatment Plant. The City of Dunkirk determined a need for additional organic capacity at the WWTP in order to meet the requested needs of local industry and to comply with a NYSDEC Order on Consent. The expansion project included proposed aeration tanks with three 300 H.P. variable speed drives and secondary clarifiers located northeast of and adjacent to the existing tanks. The two proposed secondary clarifiers and aeration tanks will be the same physical size as their respective existing units. The new treatment units will be operated in a manner similar to the existing plant operations. The expansion also included several new flow control devices and controls for future plant automation.
- Hamilton Houston Lownie, Niagara Gateway Apartments – Scope included traffic study, mechanical, electrical and plumbing services for this reuse project to redevelop architectural significant buildings located at the southeast corner of Niagara Street and Massachusetts Avenue (885 Niagara Street) into a mixed-use.
- Seneca Nation of Indians Capital Improvements Authority – Electrical engineer for the following:
  - Cattaraugus Administration Complex – electrical services upgrades
  - Consulting for electrical operational issues at Allegany Wastewater Treatment Plant
- City of North Tonawanda, Wastewater Treatment Plant – Electrical engineer for the design of power system improvements at the plant. Improvements include two (2) new 5kV utility services, switchgear, transformers, standby emergency generators, transfer switches, and motor control centers. Services also include short-circuit analysis, protective device coordination, and arc-flash risk analysis.
- Seneca Nation of Indians, Steamburg Wastewater Treatment Facility – Electrical consulting for 630 square foot vacuum pump station building, 3,400 square foot

Andrew Basista

Electrical Engineer II

Mr. Basista has a focus in SCADA design and electrical power design in water and manufacturing plants, with an impressive background of 8 years in commercial and industrial electrical experience. Andrew has been instrumental in a variety of electrical projects, showcasing his versatility and commitment to excellence. His responsibilities span the entire project lifecycle, from the initial site visit and system specification to creating designs, site plans, and all necessary drawings. Andrew is responsible for electrical support in all our design development, drawings, and specifications. His proficiency extends to electrical grid and power generation, conventional power sources such as fossil fuels and alternative energies such as solar, hydroelectric, and geothermal power.

Contact

(716) 827-8000 ext. 267
abasista@nussclarke.com

Education

SUNY University at Buffalo,
BS Electrical Engineering, 2016

Experience

1 - Nussbaumer & Clarke, Inc.
8 - Total

Disciplines

Electrical Engineering
SCADA System Design
Solar Energy
Electrical Design

Recent Experience

- City of North Tonawanda, Water Treatment Plant—Electrical engineer assisted in the renovations to the electrical distribution at the Water Treatment Plant. Work included design of a new 480 volt, 750 kW, indoor diesel generator with remote exterior radiator, new above ground main storage tank, day tank, and fuel filtration system. The work also included new multiple transfer switches with coordinate with the two (2) electrical services and the Generator. The main electrical motor control center was also replaced.
- Town of Hamburg, Hamburg Water Storage Tank—Electrical Engineer tasked with coordinating with the contractor to support the design and construction of a new elevated water storage tank, including integration of a generator for backup power.
- City of Buffalo, Massachusetts Ave. Pump Station Electrical Upgrades Project - Electrical engineer assisted in the design documents for capital improvements and upgrades to the pumping station and substation with three (3) 23kV utility feeds. The electrical work included upgrading and replacement of the high voltage service equipment, transformers, 5kV distribution system, proposed back -up generator, automatic transfer system design, replacement of 240V equipment and distribution with a new 120/208V system, pump replacement of hydraulic valve actuator with electrical actuators, pump motor rehabilitation and new VFD's, and new control system. Project also included electrical construction estimate.
- City of Buffalo, Lincoln Park Arena Conversion—Electrical engineer responsible for design upgrades to the Ice Rink and Locker Room and conversion of new field house.
- Zeton U.S. Properties, Inc., Lockport, New York—Engineer responsible for providing electrical support services for the design for a new office/assembly building. Design included water service and backflow prevention for bathroom and kitchen area, and emergency shower. Work also included sanitary sewer and vent piping, and natural gas service and distribution piping. HVAC design included rooftop units, destratification fans and electric heaters.
- Town of Cheektowaga, Town Hall Generator Replacement—Engineer responsible for assisting in the design upgrades to the Town Hall buildings emergency backup power services and replacement of generator.
- City of Lockport, Pine Street Parking—Engineer responsible for the design of new lighting and electric vehicle charging stations.

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS

- Lockport Raw Water Pump Station, Generator Purchase Specifications—Electrical Engineer assisted the City is seeking a Water Infrastructure Improvement Act (WIIA) grant for the installation of an emergency power generator at the City's Raw Waste Pump Station (RWPS) located on River Road in North Tonawanda. Work included installation of MCC, Controls, and Feeder replacement for pump station.
- Town of Lewiston, Academy Park Pedestals—Engineer provided electrical support for service and multiple electrical pedestals for food trucks and events.
- Town of Pendleton, Pendleton Data Room—Engineer provided electrical support for the Town with moving server location and placing them in a dedicated lockable location.
- Bergmann Associates, Architects, Engineers, Landscape Architects & Surveyors, D.P.C., Building Assets —Engineer provided field mapping of all major load devices across MEP for building listed below electrical support for the Town with moving server location and placing them in a dedicated lockable location.
  - Erie County Department of Public Works Building
  - Erie County Board of Elections Building
  - Erie County Rath Building
- Town of Tonawanda, Paddock Golf Dome Repairs – Engineer responsible for performing photometrics and rededicated the existing lighting circuits to a new lighting contractor for increased lighting controls, lighting driving range with pro sports lighting and a bollard system for the putting areas.
- Town of Hamburg, Hamburg Hub—Electrical engineer responsible for design of parking lot and park upgrades including hydronic snow melt system and electric vehicle charge stations. Work also included the redesign of park electrical, including a bank hookup pedestal and a new dedicated service.
- Expeditionary Energy, DePaul Mosaic Apartments Solar System – Engineer responsible for designing roof mounted ballasted solar array for two building.

Individual Experience

- Rich Products Corp. (Buffalo, New York), Associate Automation Engineer— Associate Automation Engineer who played a crucial role in extensive SCADA development, specification, troubleshooting, field work, support and integration within the framework of an Ammonia Refrigeration Management program. This comprehensive initiative encompassed aspects of life safety, plant shutdown, and energy savings program for 18 Rich Products food production plants throughout the United States. Adhering to a stringent 99.9% uptime standard, the program featured 79 Windows Virtual Servers supporting 80,000 tags seamlessly operating across all plants and cloud services. This setup facilitated remote supervisory control of any plant through an internet connection. The systems included a two-stage historian database for efficient data retrieval and graphical trend representations. The system's backbone relied on an Allen Bradley PLC, and the Aveva Wonderware System Platform allowed for the utilization of multiple communication protocols such as Ethernet IP, Modbus, BACnet, and Serial. Below are referenced some components of the project, including Life Safety and Security items.

  Life Safety:
  - HMI Interface Alarming and Notifications.
  - Leak Detected Automatic Emergency Plant Shutdown Evacuation Alarming.
  - Manual Plant Shutdown and Evacuation Pushbuttons around the plant.
  - 911 Dialer and alarm interlocks to allow safe startup after a shutdown event.

  Security:
  - Integrated Windows Active directory for program access management.

- Rich Products Corp. (Buffalo, New York), Associate Automation Engineer—As an Associate Automation Engineer additional areas of expertise were:
  - Refrigeration and Energy Management Technical Lead/Project Manager.
  - Refrigeration and Ammonia Safety System Knowledge.
  - IS Networking Experience Involving PLCs, Sensors, HMIs, and Engine Room Equipment.

Daniel Ott, CPD

Engineer / CADD Specialist

Mr. Ott is a member of our Electrical/Mechanical/Plumbing (MEP) Department. He has been actively involved in Power & Energy Electrical projects including transformers, generators, electric motors, high voltage engineering, and power electronics. Experience includes design of SCADA systems, design of lightning systems, and evaluating buildings to ensure they meet the New York State Building, Mechanical, Plumbing, NEC and Fire Codes along with ADA compliance. He has been responsible for proposed upgrades and cost estimates for mechanical, electrical, fire alarm, and plumbing systems.

Contact

(716) 827-8000 ext. 211
dott@nussclarke.com

Education

SUNY Erie Community College
AAS Electrical Technology - 1986

Certifications

American Society of Plumbing Engineers - Certified in Plumbing Design (CPD) - 2016
Confined Space Entry (2016)
OSHA 29 CFR 1910.146

Experience

18 - Nussbaumer & Clarke, Inc.
38 - Total

Disciplines

Plumbing Design
Mechanical Design
Power & Energy Engineering
Electrical Design
High Voltage Engineering
Power Electronics Design
Control System Design
SCADA
CADD Specialist

Recent Experience

- City of Buffalo Water, Massachusetts Avenue Pump Station Electrical Upgrades - Electrical design assistance which included power distribution and SCADA. HVAC and boiler design modifications.
- Erie County Water Authority, Ball Pump Station—Electrical design assistance for substation upgrade, power distribution, instrumentation, controls and SCADA.
- Chautauqua Utility District, Wastewater Treatment Plant, Chautauqua Institute, New York – Design of power distribution, back-up power, and control wiring to new equipment in existing buildings and the site. Design assistance with instrumentation, controls and SCADA.
- Village of Ellicottville, Wastewater Treatment Plant, Ellicottville, New York – Design of power distribution, back-up power, control wiring, and lightning system to new equipment in existing buildings and the site. Designed lightning systems for 3 existing and 1 new building. Design assistance with instrumentation, controls and SCADA.
- Erie County Water Authority – Sturgeon Point – New Electrical Substation Design, Buffalo, New York – Design of a new 34.5KV to 4160V substation with automatic back-up power generation to feed the main water treatment and pumping station in Western New York.
- Erie County Water Authority – Contract NC-26B – Pump Station Improvements, Buffalo, New York – Included design of replacing existing water pump drives with new Variable Frequency Drives driven by PLC controls in the Van De Water raw water pumping station and the Ball Pumping Station. Also designed a new 4160V to 480V substation with automatic generator back-up at the Van de Water Station.
- Lake Erie Tobacco Fire Pump House, Killbuck New York – Design of power distribution and lighting to a new fire pump building. Design included power to the fire pumps, pump controllers, and relocated diesel generator.
- Barton, Hovey, Nardini, Tries, LLP – Electrical/mechanical support for various architectural projects. Services included building power, tenant power, site lighting, electrical service power, energy management systems, emergency lighting, standby power, fire alarm systems, and controls.
- Broadway Market, Buffalo, New York – Plumbing engineering and design of a kitchen area in the Broadway Market. Plumbing design included domestic water, sanitary sewer and vent, and natural gas design. Plumbing included a grease interceptor.

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS

- Niagara Refining, Depew, New York – Design of power distribution and control wiring to new equipment in an existing building renovated into a hydrometallurgy plant. This included plant power, grounding system, back-up power and control wiring to all devices.
- City Hall and City Court, Fire Alarm Upgrades, Buffalo, New York – Upgrades to an existing Simplex Addressable Fire Alarm System with voice evacuation at City Hall and a completely new addressable Fire Alarm System with voice evacuation at City Court Building. The two systems will be interconnected to provide a single two building system to provide a single central notification center.
- Niagara Refining, Depew, New York – Design of power distribution and control wiring to new equipment in an existing building renovated into a hydrometallurgy plant. This included plant power, grounding system, back-up power and control wiring to all devices.
- T.M. Montante - Sealing Devices, Lancaster, Photovoltaic (Solar) Installation Lancaster, New York – Electrical designer for a photovoltaic system on the roof of Sealing Devices. The photovoltaic system was designed in 2011 with a 50 kW system and in 2013 a separate 250kW system operating in parallel with the utility company and disconnecting photovoltaic power when the facility is operating under emergency back-up power. The system has 264 (2011) and 984 (2013) roof mounted DC solar panels in multiply arrays connected to inverters to provide AC power.
- T.M. Montante - Unifrax, Photovoltaic (Solar) Installation, Tonawanda, New York – Electrical designer for a photovoltaic system on the roof of Unifrax. The photovoltaic system is a 100 kW system operating in parallel with the utility company and disconnecting photovoltaic power when the facility is operating under emergency back-up power. The system has 400 roof mounted DC solar panels in multiply arrays connected to inverters to provide AC power.
- Wastewater Treatment Plant, Lockport, New York – Electrical design assistance for power and controls to a new ultraviolet system to treat waste water in an existing waste water treatment plant.
- Chautauqua Utility District, Wastewater Treatment Plant, Chautauqua Institute, New York – Design of power distribution, back-up power, and control wiring to new equipment in existing buildings and the site.
- Village of Ellicottville, Wastewater Treatment Plant, Ellicottville, New York – Design of power distribution, back-up power, control wiring, and lightning system to new equipment in existing buildings and the site. Designed lightning systems for 3 existing and 1 new building.
- Kenmore Community Center, Kenmore New York – Plumbing design modifications to existing building. Design included plumbing for new bathrooms, natural gas piping, and a reduced pressure zone.
- Stericycle, Plant Expansion, Dunkirk, New York – Mechanical and plumbing design for an approximately 12,000 square foot stand-alone structure.
- Moe's Southwest Grill– New restaurant, Ithaca, New York - Design and installation of electrical lighting, fire alarms and electrical power.
- PCB Piezotronics, Depew, New York—Mechanical Design Engineer – Acceleration Division. Design accelerometers according to sales instruction reports, work directly with sales to generate sales instruction reports, provide evaluation and failure analysis reports for customers, Communicate directly with customers, to evaluate customer problems, write assembly procedures for new sensors, work closely with technicians to assemble and test new designs, design for Manufacturability and Assembly certification, design sensors and reports for flight proof testing.
- PCB Piezotronics, Depew, New York—Lead Engineering Technician - Provided testing for acceleration, force and pressure sensors to the full specification, reviewed and signed off on new test procedures, evaluated new test equipment, worked closely with R&D engineers.
- PCB Piezotronics, Depew, New York—Calibration Technician - Responsible for calibrating acceleration, force and pressure sensors, reviewed and signed off on new test procedures, trained new technicians.
- West Valley Nuclear Services Company, Inc., Plant Systems Operator, West Valley, New York - Performed troubleshooting, performed procedures on transfer of fluids and filter replacements, wrote and performed procedures for a Cement Solidification System of nuclear waste, read piping and instrumentation diagrams.

APPENDIX B

Subconsultants Profiles

JM Davidson Engineering, D.P.C.

Firm Overview

JM Davidson Engineering, D.P.C. (JMD) was founded in 2015 by Jaime Davidson, PE to assist in filling the need for women-owned businesses in the civil engineering field. Since then, JMD has grown to include multiple professional engineers, scientists, and construction inspectors, offering a full range of civil engineering services, including water and wastewater, structural, transportation, water resources, and railroad design services. Our firm is headquartered in Western New York, giving us a strong local connection to our clients in the region.

We take great pride in our work. We strive to be selected, first and foremost, for our technical capabilities. Helping our clients meet their **Disadvantaged Business Enterprise (DBE) and Women Business Enterprise (WBE)** goals is an added benefit of working with our firm. Over the years, we have developed strong relationships with our teaming partners and our clients because our work is held to the highest standard. We seek to provide valuable contributions to all our projects, ensuring a successful project for everyone involved.

Our current certifications are:

- DBE, New York / Pennsylvania
- WBE, New York
- WBE, Erie County / City of Buffalo Joint Certification Committee
- WBE, Monroe County

Our Services

Water / Wastewater

- Collection System Design
- SSES and I/I Investigations
- Water Storage, Transmission, and Distribution System Design
- Sanitary System Smoke Testing
- Construction Administration & Inspection
- Wastewater Treatment Plant Improvement Projects

Water Resources

- Hydrologic / Hydraulic Modeling
- Storm Drain Design
- Stormwater Management
- Green Infrastructure Design
- Erosion and Sediment Control / Stormwater Pollution Prevention Plans
- Floodplain / Stream Restoration
- Environmental Permitting
- Wetland Delineation

Structures/Transportation

- Bridge / Culvert Design & Inspection
- Structural Design & Rehabilitation
- Highway Design
- Work Zone Traffic Control Plans
- Trail Designs
- Railroad Track Inspection & Design
- Railroad Public Project Coordination
- Construction Administration and Inspection

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Partnering With Clients and Communities To Provide Enduring Solutions

Joseph C. Lu Engineering, P.C.

Firm Overview

Now celebrating our 43rd year, Joseph C. Lu Engineering, P.C., (dba Lu Engineers) is a NYS-certified Minority and Disadvantaged Business Enterprise (M/DBE), and a Veteran solely owned Professional Corporation established in 1980. Our team includes over 85 professionals specializing in civil, site, environmental, and transportation engineering. Our extensive list of clients includes federal, state and local governments, public authorities, all levels of educational institutions, corporate/commercial, as well as those in private industry, developers, and others. The firm is headquartered in Rochester, NY, with additional offices in Buffalo, Albany, Binghamton, New York City, and Syracuse.

Civil/Site/Environmental Engineering

Since 1980, our firm has provided professional civil engineering services in conjunction with design and construction of both the physically and naturally developed environment. We employ a comprehensive approach to developing land by considering all local, state, and federal development regulations. Our team of engineers balances our client's goals together with their technical knowledge of issues ranging from soils, hydraulics, materials, natural systems, and other sciences to create safe and attractive environments. Our projects include those for university and institutional lands; transportation and utility authorities, residential subdivisions; office parks and commercial shopping centers; mixed-use, industrial and agricultural facilities and others. Our successful track record with municipalities includes transportation and roadway planning; water and wastewater system services; parks and recreation; grant writing and more.

Complementing our Civil Team is a highly qualified team of environmental scientists and specialists, geologists, engineers, and other technical professionals, all of whom possess the range of skills and breadth of experience needed to manage complex projects from conceptual design through to construction completion. Our Natural Resources Group experience includes Environmental Review Policy, including NEPA and SEQR; Stormwater/Erosion and Sediment Control; and Wetland Delineation and Permitting; in addition to extensive knowledge of State Historic Preservation Office guidelines and Stormwater Pollution Prevention Plans. While our Investigation / Remediation Group provides remedial investigations along with remedial design and construction, environmental site assessments, hazardous materials management, soils management and brownfield consulting services. The environmental team is rounded out by our Asbestos Group, providing asbestos surveys, abatement design, asbestos project/air monitoring, HUD lead surveys and abatement design and mold surveys and remediation.

Among Our Services

- Access Road & Parking Design
- Earthwork/Grading Design
- Environmental Investigation, Inventory, & Analysis
- Geophysical Investigations & GIS
- Hydrogeologic Modeling
- Master Planning
- Municipal Development Code Review
- Natural Resources
- NEPA/SEQR Review
- Permitting
- Phase I and II Site Assessments
- Remedial Investigations
- Sanitary Sewer Design
- Sanitary Sewage Treatment Systems for Residential and Commercial Sites
- Stormwater Management
- Storm Water Pollution Prevention Plans (SWPPP) & Inspections
- Sediment & Erosion Control Systems Design
- Water Supply Design

ADVANCED

Professional Engineering and Land Surveying, PC

NYS WBE & DBE Certified

(716) 754-2256
adg@adgengineers.com
761 Cayuga St., Lewiston, NY 14092

Overview

Advanced Design Group Professional Engineering and Land Surveying, P.C. (ADG) is a local full-service, multidisciplinary civil engineering firm providing planning, design and construction management services for residential, commercial and industrial subdivisions and site plans throughout the country. ADG is certified as a Woman-Owned Business Enterprise (WBE) in the State of New York and Erie County.

Founded in 2005, ADG has established a record of high-quality, on-time, cost-effective work. With over 50 years of combined experience, we are confident in our ability to provide quality, responsive and economically sound site- engineering services.

We also provide a wide variety of WBE and non WBE services such as Commercial, Municipal, and Residential Construction Field Site Inspection, Flow Monitoring & Meter Installation, Construction Field Representation, and Consulting Services.

ADG has extensive experience on the field as a sub-consultant for many projects. We provide timely and articulate daily and weekly inspection reports. ADG also reviews and proofreads all plans, codes, and submittals to ensure that all aspects of the project are completed effectively.

Staff

ADG currently employs one licensed engineer and two NYS EITs. Along with two certified field representatives.

DBE

NEW YORK STATE OF OPPORTUNITY. Certified Women-Owned Business Enterprise

KHEOPS Architecture, Engineering and Survey, DPC (KHEOPS) is an established professional services firm with 105 years of local experience, through our predecessor firms. KHEOPS is a New York State Licensed, minority-owned professional services firm. As a full-service architectural, engineering and survey firm, KHEOPS is experienced in delivering complete Architectural, Engineering & Land Surveying services beginning with conceptual planning, and proceeding through the design phase, and concluding with field construction contract administration.

What is in a Name?
Pronounced "Key-ops", KHEOPS built the Great Pyramid of Giza, one of the Seven Wonders of the Ancient World. His son, KHAFRA, constructed the second largest pyramid and the Sphinx.

The firm's has completed various representative projects in all the various public, private and commercial sectors of operation and further consisting of all types of Land Surveying and Engineering projects described as follows;

Topographic Field Surveys for Public/Private/Municipal sectors, used to aid in the design and planning of (streets and highways, public/private utility design and or replacement, future building construction, etc.)

Boundary/Right of Way determination, KHEOPS has vast experience for property boundary and Highway Right-Of-Way Surveys for both the Public and Private sectors.

YEAR ESTABLISHED:

In 2013, KHAFRA Engineering Consultants (KHAFRA) founded KHEOPS to provide professional services in the State of New York. In November of 2013, KHAFRA acquired TVGA Consultants, a recognized engineering firm in Buffalo, New York that was established in 1917. KHAFRA was founded in 1986 in Atlanta, Georgia.

STAFF SIZE:

LICENSED ENGINEERS:

KHEOPS currently employs 11 New York State licensed engineers, architects and surveyors:
- Structural- 2
- Civil Engineers- 4
- Architects- 2
- Land Surveyors- 6

CERTIFICATION STATUS:

- Certified Minority Business Enterprise with the Port Authority of NY and NJ
- Certified Minority Business Enterprise with Empire State Development
- Certified Disadvantaged Business with New York State Dept. of Transportation
- Certified Minority Business Enterprise with Erie County Division of Equal Employment Opportunity

ENCORUS GROUP

23 Mechanic Street
Springville, NY 14141

295 Main Street
West Seneca, NY 14224

encorus.com
716.592.3980

Encorus Group is a professional engineering, testing, and inspection firm. Founded in 1996, Encorus has a staff of 100 full-time employees working out of three Western New York offices as well as field staff working remotely. This includes licensed professional engineers in all major disciplines, registered architects, and field personnel to support our established and accredited civil materials testing laboratory. Additionally, Encorus Group is certified as a Service-Disabled Veteran-Owned Small Business (SDVOSB) at both the federal and New York State levels.

Encorus Group's design team includes multi-state licensed professional engineers, registered architects, associate engineers and architects, drafters, and administrative personnel. These personnel cover all major engineering disciplines including civil, structural, mechanical, electrical, fire protection, process, and automation, and allows us a breadth of experience typically found only in larger firms. The firm's civil materials testing group provides field inspection of concrete, masonry, soils, asphalt, structural steel, and other construction-related materials as well as the associated laboratory testing required to meet rigorous specifications and standards. Non-destructive testing services include weld inspections and ultrasonic, magnetic particle, liquid penetrant, and radiographic testing. Our field and laboratory technicians and inspectors are trained and certified to a variety of standards including ACI, CWI, and NICET. Encorus Group's mechanical integrity staff is certified in a variety of inspection procedures, including API 510 pressure vessel inspections, API 653 Storage Tank inspections, API 570 Process Piping inspections, and includes Certified Welding inspectors, Steel Tank Institute SP001 inspectors, and ASNT-TC-1A and NBIC qualified inspectors. In 2024, Encorus Group merged with Sienna Environmental Technologies, and can now perform a wide range of services associated with environmental, hazardous, and regulated building materials management and abatement.

FRANDINA ENGINEERING AND LAND SURVEYING, PC

CIVIL ENGINEERS AND LAND SURVEYORS

NYS Certified WBE and DBE Firm

1701 HERTEL AVENUE
BUFFALO, NEW YORK 14216
716.883.1299
www.FRANDINA.com

Firm Profile – FED ID: 26-2707036

Frandina Engineering and Land Surveying, PC is a wholly owned Women Business Enterprise (WBE) and is certified as a WBE and DBE with the following government entities:

- State of New York, and its agencies
- Dormitory Authority of New York
- County of Erie
- City of Buffalo
- Buffalo Board of Education
- Buffalo Sewer Authority
- Niagara Frontier Transportation Authority

Frandina Engineering and Land Surveying, PC provides:

- Land Surveying
- Boundary Surveys
- Topographic Surveys
- Construction Stake-Out
- As-Built Surveys
- Anchor Bolt location surveys
- Right of Way acquisitions
- Easement determinations
- Highway design surveys
- Airport Design surveys
- Oil Well plats
- GIS data collection

Frandina Engineering and Land Surveying, PC provides high quality land and construction surveying services throughout Western New York. In 2005, Rosanne Frandina, PE, LS, established Frandina Engineering and Land Surveying, PC as a wholly-owned Woman Business Enterprise (WBE). The firm is also a certified Disadvantaged Business Enterprise (DBE).

In 2011, Frandina Engineering and Land Surveying, PC acquired the records and hired the highly experienced and respected staff of Deborah A. Naybor, PLS, PC.

Our staff has significant experience working on the largest jobs in the Western New York region such as the Buffalo Niagara Airport, Niagara Falls International Airport, The Light Rail Rapid Transit System, The State University Construction Fund projects, University of Buffalo Medical School, Erie County Medical Center, the Buffalo Public Schools Project, Buffalo Waterfront and the Seneca Nation Buffalo Creek Casino in downtown Buffalo as well as projects funded by the NYS Department of Transportation. The firm brings unparalleled familiarity with government regulations and the ability to ensure your projects are fully in compliance with all the required government agencies.

Our experienced staff provides the skills necessary to keep your project on schedule and within budget. With two licensed land surveyors, we have intensive professional supervision of each survey, large or small. We provide electronic drawings in AutoCAD format and our experienced field crews use the latest in modern data collection to quickly and efficiently measure thousands of data points on the ground each day.

We provide the highest levels of service and technical expertise in the professional civil engineering and land surveying fields.

NIAGARA FALLS WATER BOARD RESOLUTION # 2024-03-008

ACCEPTING AECOM PROPOSAL FOR ENGINEERING SERVICES – WWTP CAPITAL PROJECTS

WHEREAS, in January 2024 the Niagara Falls Water Board issued a request for proposals for engineering services in connection with various planned capital projects, including for several capital improvement projects at the wastewater treatment plant; and

WHEREAS, the Water Board has been awarded grant funds under CWSRF Project No. 6603-16-00 that will partially offset the total cost of the wastewater treatment plant projects that are the subject of this resolution; and

WHEREAS, one or two proposals were received for each of the projects that are the subject of this resolution, and Water Board staff recommend acceptance of AECOM's proposal for the projects described below because that firm has proposed a reasonable fee, its proposed project team is qualified, and because awarding multiple projects to one engineering firm allows for administrative efficiencies and cost savings, including by facilitating bid packages with multiple projects and potential reductions in the cost of construction inspection; and

WHEREAS, AECOM's proposed engineering fees for the projects that are the subject of this resolution, set forth below, are inclusive of survey, design, bidding, construction administration, and construction inspection:

Capital Item	Project Description	AECOM Proposed Engineering Fee
WWTP 1.2	Influent Channel Leak Repair of Expansion Joints	$79,000
WWTP 3.2	Grit Pump Flow Meters	$100,000
WWTP 3.3	Rapid Mix Tank Cleaning	$66,000
WWTP 6.2	Carbon Bed Effluent Cleaning & Inspection	$80,000
WWTP 6.3	Carbon Filter Mud Valve Replacements	$58,000
WWTP 11.6	Removal and Replacement of Plant Water Piping	$173,000
	Total:	**$556,000**

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that on behalf of the Niagara Falls Water Board, its Chairperson hereby is authorized to execute an agreement to be negotiated with AECOM to perform engineering services for the wastewater treatment plant capital projects referred to as Capital Items WWTP 1.2, WWTP 3.2, WWTP 3.3, WWTP 6.2, WWTP 6.3, and WWTP 11.6, consistent with AECOM's February 19, 2024 proposal and for a total fee not to exceed $556,000.

Water Board Personnel Responsible for Implementation of this Resolution:

Executive Director
Director of Technical & Regulatory Services
General Counsel

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:

Capital Plan Items:	WWTP 1.2, WWTP 3.2, WWTP 3.3, WWTP 6.2, WWTP 6.3, and WWTP 11.6
Capital Items Provided by:	D. Williamson
Available Funds Confirmed:	B. Majchrowicz (Financing Plan: EFC/CWSRF)

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	Yes	**No**	**Abstain**	**Absent**
Board Member Asklar	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By:

Vote Witnessed By:

_____
Nicholas J. Forster, Chairman

_____
Sean W. Costello, Secretary to Board

Submitted to:
Niagara Falls Water Board
RFP 2024-01

February 19, 2024

AECOM

PROPOSAL FOR

Capital Projects Engineering Services

Delivering a better world

AECOM

1 John James Audubon
Suite 210
Amherst, NY 14228
716.923.1215
www.aecom.com

February 19, 2024

Mr. Douglas S. Williamson, PE
Acting Executive Director
Niagara Falls Water Board
5815 Buffalo Avenue
Niagara Falls, NY 14304

Proposal for Niagara Falls Water Board Capital Projects Engineering Services - RFP No. 2024-01

Dear Mr. Eagler:

The Niagara Falls Water Board (NFWB) is continually executing multiple capital improvement projects on its wastewater treatment plant (WWTP) and other infrastructure to deliver high-quality services to its customers. AECOM has a unique familiarity with many of the NFWB WWTP unit processes that present opportunities for efficiency and comprehensive evaluations/rehabilitations. Since 2017, AECOM has been evaluating process operations, providing technical support to improve treatment performance, and most recently providing design/construction services. Our experience has allowed us to understand processes within the WWTP and how those processes are interdependent. We look forward to using this expertise as we work with you and your team to provide the engineering support and delivery of the 11 WWTP and one sewer collection system capital projects outlined in your request for proposal (RFP).

In addition to our local knowledge of the facilities and expertise, we have access to several subject matter experts, relevant resources, and multiple projects with comparable challenges and successful outcomes. AECOM's team and approach provides the NFWB with the following advantages:

- **Experience and Continuity.** Our experience will allow us to immediately leverage institutional knowledge of the WWTP operations and maintenance. Our understanding of the WWTP includes the way the NFWB currently operates the sedimentation basins, carbon filters, and manages waste solids. Understanding the past operations and current improvements of the WWTP will reduce the initial learning curve for all the WWTP projects, assist with defining the full scope of each project, and develop project sequencing and likely project packages that will result in cost efficiencies.
- **Past Performance.** We are proud of our history of delivering high quality projects for the NFWB. Past projects range from treatment chemical optimization, full-scale operation review and assistance, bench-scale and pilot-scale testing to full-scale designs for the effluent disinfection system and sedimentation basin upgrades. These and other projects were delivered to provide the NFWB with evaluations and system designs that improve the WWTP performance with system operation, maintenance, and safety at the forefront. Lastly, our relationships within your organization will allow us to develop and implement improvements that will meet NFWB's expectations.
- **Professional Qualifications.** As outlined in this proposal, our project team has extensive relevant experience. This experience, combined with our understanding of the WWTP, its operations, and personnel will allow us to effectively evaluate, design, and implement the multiple WWTP capital projects. John Goeddertz, who will serve as our Client Liaison, is well known to the NFWB staff and has been providing operational support and capital project review for the past several years. Jeff Tudini has provided process engineering, system analysis, design, and project management support for multiple projects, current and past, with NFWB and will serve as the Project Manager for the projects selected. The proposed project team will be supported by nationally recognized Technical Advisors, Jeff Reade and Jim McQuarrie, that will provide technical project oversight, Quality Assurance and Quality Control (QA/QC), and general project guidance.
- **Geographic Location and Depth of Resources.** AECOM offers highly qualified individuals in our Buffalo, New York office with approximately 100 individuals offering a wide range of expertise. AECOM has over 1,500+ professional staff located in Northeast offices to support the NFWB.

AECOM is fully committed to support the NFWB on these capital projects and we look forward to discussing our proposal and approach. Please contact Jeff Tudini at 716-868-4306 or jeffrey.tudini@aecom.com if you have any questions or need additional information. Thank you for your consideration.

Sincerely,

AECOM USA, Inc.

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Capital Projects
Request for Proposals
Niagara Falls Water Board

Wastewater Treatment Facility

Location: 1200 Buffalo Avenue, Niagara Falls NY 14304

Projects – refer to attachment A, 2021 Sewer Engineering Report	Submitting On Project, YES or NO
WWTP-12 Roof Repairs	YES
WWTP-16 Standby Generator	YES

Projects – refer to attachment B, 2022 Sewer Engineering Report	Submitting On Project, YES or NO
WWTP-1.2 Influent Channel Leak Repair of Expansion Joints	YES
WWTP-1.3 Sediment Basin #5 Treatment of Backwash	YES
WWTP-3.2 Grit Pump Flow Meters	YES
WWTP-3.3 Rapid Mix Tank Cleaning	YES
WWTP-5.5 New PA and Fire Alarm System	YES
WWTP-5.6 Carbon Area Lighting, Switchyard Improvements	YES
WWTP-6.2 Carbon Bed Effluent Cleaning & Inspection	YES
WWTP-6.3 Carbon Filter Mud Valve Replacements	YES
WWTP-11.6 Removal and Replacement of Plant Water Piping	YES

Sewer Collection System

Location: Calumet Avenue, Niagara Falls, NY

Projects – refer to attachment C, 2023 Sewer Engineering Report	Submitting On Project, YES or NO
Calumet Avenue 48 inch brick sewer rehabilitation	YES

Water Treatment Plant

Location: 5815 Buffalo Avenue, Niagara Falls NY 14304

Projects – refer to attachment D, 2021 Water Engineering Report	Submitting On Project, YES or NO
WTP-2.1 - SCADA Control System Upgrades	NO
WTP-6.1 - Chlorine System Upgrades	NO

Capital Projects
Request for Proposals
Niagara Falls Water Board

Water Distribution System

Location: various throughout City of Niagara Falls NY

Projects – refer to attachment D, 2021 Water Engineering Report	Submitting On Project, YES or NO
W2 - 20 inch main from Beech Avenue Storage Tank to Ontario Street	NO
W9 - 10th Street & Michigan Ave - Lockport St to Ontario St & 10th St to 11th St	NO
W17 - Laughlin Drive Main - 82nd Street to Bollier Avenue	NO
W21 - Ontario Avenue Main - 13th Street to Main Street	NO
W25 - Van Rensselaer Avenue - 900 Block	NO
W29 - Witkop Avenue and 85th Street Loop	NO

Projects – refer to attachment E, 2023 Water Engineering Report	Submitting On Project, YES or NO
Alternative 2H - Install New Ground Storage Tank and Pre-Packaged Pumping Station at Beech Avenue	NO
W13 - 81st Street watermain - Frontier Avenue to Niagara Falls Boulevard	NO
W15 - College Terrace watermain - Madison to College Avenue	NO
W24 - Rivershore Drive watermain - S. 86th Street to 91st Street	NO

AECOM

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Project Understanding

1. Project Understanding

Per the NFWB solicitation 2024-01, AECOM is submitting this proposal for the projects identified in Table 1. As shown in Table 1, AECOM is submitting this proposal to be selected and provide engineering evaluation, design, bid phase services, and construction administration and inspection services for all the WWTP and collection system projects. Given our past and current history with providing similar services for other capital improvement projects at the NFWB WWTP and having background with all the projects included in this RFP, AECOM is well positioned and ready to work with the NFWB team to deliver these projects. Being involved with multiple capital projects that have been designed and installed successfully in the past and currently involved with day-to-day operations and improvements at the WWTP provides a unique opportunity to gain efficiencies with each of the selected projects associated with experience and institutional knowledge. We look to leverage these benefits to find cost and schedule improvements when delivering the selected projects. Furthermore, AECOM will maintain a 'big-picture' mindset with the delivery of these projects understanding that the NFWB WWTP continues the momentum for the potential conversion to a biological treatment process. Understanding this and working with the NFWB project team will help us prioritize the implementation of these projects relative to if/when a future treatment conversion happens.

Table 1. Projects AECOM is submitting on

Project	Submitting on Project
WWTP-12 Roof Repairs	YES
WWTP-16 Standby Generator	YES
WWTP-1.2 Influent Channel Leak Repair of Expansion Joints	YES
WWTP-1.3 Sediment Basin #5 Treatment of Backwash	YES
WWTP-3.2 Grit Pump Flow Meters	YES
WWTP-3.3 Rapid Mix Tank Cleaning	YES
WWTP-5.5 New PA and Fire Alarm System	YES
WWTP-5.6 Carbon Area Lighting, Switchyard Improvements	YES
WWTP-6.2 Carbon Bed Effluent Cleaning & Inspection	YES
WWTP-6.3 Carbon Filter Mud Valve Replacements	YES
WWTP-11.6 Removal and Replacement of Plant Water Piping	YES
Calumet Avenue 48 inch brick sewer rehabilitation	YES

Project Understanding

WWTP-12 Roof Repairs

Project Description: This project includes the replacement of the last five roofs at the WWTP that were not replaced during the 2014/2015 roof replacement project that was engineered and managed by AECOM. These roofs are covered with modified bituminous membrane roofing material and based on the RFP information are showing signs of needing replacement. The remaining roofs include the following:

- Carbon Filter Building Roof (South End Roofs 14, 15 and 16)
- Rapid Mix Tank (Roof 19)
- Sludge Building Loading Dock (Roof 30)

These roofs were not replaced at that time due to lack of funds and a determination that replacement of these five roofs were not critical to the operation of the WWTP. This decision was based upon the fact that these five roofs were over unconditioned spaces (no heat or AC) and the belief that not fixing them would not result in deterioration of the underlying concrete structures.

Need for Project: These five roofs are original construction (1978) and are now 45 years old. Per the most recent roof survey performed in 2021, a number of deficiencies were identified. These deficiencies can allow water to penetrate the roof surface that will eventually result in deterioration of the underlying concrete structure. In order to prevent this deterioration of the underlying concrete structure, roof replacement is recommended.

Criticality of Project: Although not critical to the current operation of the WWTP, failure of any of these underlying structures would result in significant additional cost to repair the structures. For this reason, further delay in the project is not recommended.

Other Considerations: The prior roof replacement engineering work included an asbestos survey and condition assessment, engineering design, bid phase and construction management and inspection. We performed the prior asbestos survey and are intimately familiar with the work to be performed. AECOM can pick up this project where we left off in 2014.

WWTP-16 Standby Generator

Project Description: This project includes providing a standby power system capable of powering the entire WWTP in the event of a power failure. The WWTP currently has an existing emergency generator at the facility which only powers one of the five power centers, and then only includes one main pump and a handful of emergency circuits (lighting, control systems, etc.). The proposed system would be sized to power the entire WWTP and prevent untreated or partially treated wastewater from being discharged in case of power loss.

Need for Project: Ten States Standards for WWTP's requires WWTP's to have one of the following:

- Independent power feeders from separate substations, or
- Internal combustion engine emergency backup power system.

Although the WWTP has two power feeders and it is AECOM's understanding that they are from separate substations, loss of power in the past has resulted in significant damage to existing equipment and discharges of partially treated or untreated wastewater. Based on AECOM's past experience, the two feeders likely share a single point of failure somewhere in the system. This project is necessary to protect the assets in place at the WWTP as well as maintain permit compliance.

NFWB's current emergency generator is not capable of powering the entire facility.

As noted in the RFP, the need for a concept evaluation should be considered for this project to evaluate different standby power options. Given that there are two separate power feeds, one option could be to confirm with the utility that there is not a single point of failure upstream in the power distribution network and that the power system can be switched to the backup power feed quickly, reliably, and safely during an emergency. Modifications to allow for the transfer to the backup power feed may be significantly less expensive than adding a standby power system large enough for the entire facility. If a standby power system is required, an option would be for a new standby power system to be located at the 13.8 KV level and feed the existing switchgear. Alternatively, individual standby power systems could be located at each of the five power centers or a centralized standby power system could be designed at the 480V system. At this time, AECOM believes that placing the standby power system at the 13.8 KV level will be most advantageous as it provides more flexibility as it can be shared between any of the power centers and will minimize O&M effort. AECOM's evaluation will look at each of these options and consider advantages, disadvantages, and costs of each.

AECOM Differentiator

AECOM has a design center in the Northeast (Massachusetts) dedicated to water/wastewater multi disciplinary design. The electrical department, led by Yasser Rizk has provided electrical evaluations and design support at treatment facilities ranging from 1 MGD to 1,200 MGD including backup power supply and medium voltage distribution.

Criticality of Project: The extent of backup power systems and/or improvements or upgrades will be further evaluated as part of the concept development phase of this project; however AECOM's experience suggests that standby power generators will more than likely be necessary to protect the WWTP's assets and the environment.

Other Considerations: Should a standby power system be needed, each of the options considered will require modifications to the main 13.8 KV switchgear and/or power centers to add in automatic transfer switches, load banks, and other appurtenances. Given the size of the WWTP, its current electrical loads, the potential future loads after the bio-conversion, and the sizing limitations of standby generators, AECOM's evaluation will consider whether it would be beneficial to have a single large generator or multiple smaller generators that have the ability to be synchronized and potentially with room to expand when the bio-conversion takes place. Standby generators are available up to 3 MW but having multiple smaller generators provide additional redundancy and provide more flexibility. Additionally, standby generators generally do not operate well when under-loaded, so care will need to be taken to design a system that does not result in premature failure of the generator due to inefficient operation. Any standby power option

will require a significant investment by the NFWB. Based on a number of our recent projects, equipment costs for diesel standby generators are approximately $1M per MW of capacity, without installation costs, appurtenances, and modifications to the existing switchgear.

AECOM's evaluation will also consider diesel or natural gas as the fuel source for the standby power system. Generally, diesel standby generators cost substantially less and are smaller than natural gas systems, so it is likely that a diesel system will be preferred.

WWTP-1.2 Influent Channel Leak Repair of Expansion Joints

Project Description: The influent channel at the WWTP is an approximately 500-foot-long concrete channel that lies within the structure referred to as the spine. At its lowest elevation the spine houses the pump gallery that contains piping and pumps to deliver sludge and grit that is collected in the sedimentation basins to subsequent processing facilities. The pump gallery is regularly occupied by plant operators and maintenance staff while tending to the operation and maintenance of the equipment located therein. Located above the pump gallery is the influent channel. The influent channel conveys all flow from the Main Pumps and the Gorge Pumping Staton to the sedimentation basins. Flows in the influent channel range from 20 to 85 mgd. The influent channel itself is approximately 11 feet wide by 6 feet high. Within the spine there are expansion joints located at column lines A53 and A29. Column line A53 is located just west of the rapid mix tanks and A29 is located at the stair tower just west of the sludge building. These expansion joints encompass all levels of the spine (pump gallery, influent channel, and the finished walkway that connects the filter building to the sludge building). Currently the expansion joint at column line A53 leaks water from the influent channel into the pump gallery. The leakage has been ongoing for at least the last 5 years, is fairly minor and gets worse in winter when the spine is in a contracted condition due to cold temperatures. Observed expansion/contraction within the spine is on the order of ¾ to 1 inch in length from summer to winter. The expansion joint in the influent channel at column line A29 is not currently leaking.

In order to inspect and repair the expansion joints from within the channel, flow in the influent channel needs to be stopped and the influent channel dewatered to facilitate the work. To access the column A53 expansion joint, all flow from the Main Pumps (up to 65 mgd) and the Gorge Pumping Station (up to 19.5 mgd) must be bypass pumped around the screens and rapid mix tanks and delivered directly to the sedimentation basins. While the influent channel is bypassed, it is recommended that the influent channel be cleaned and inspected to determine if any additional issues are present. This is recommended because the influent channel has never been drained and inspected. Alternatively, there are methods to stop the expansion joint leak or collect and route the leaking water away from the overhead area in the pump gallery. These methods could be implemented from within the pump gallery and not require the isolation and bypass pumping of the influent channel. These include:

- Install De Neef Dry Oakum soaked in De Neef Pure Polyurethan grout.
- Install a Sikadur Combiflex SG system.
- It may be possible to capture the leakage and direct it to a floor drain that discharges to the head of plant so that the water does not reach the floor. This could be done by installing a leak collection pan or liner at the ceiling level in the pump gallery.

These repairs can be implemented from within the pump gallery and should be extended up the side wall expansion joints, as well. These repairs may not be as good as sealing the joint from within the channel, but a plant shut down and bypass pumping will not be necessary. If a shut down becomes available implementing the two joint repair options noted above can be used within the channel, as well.

Need for Project: The current rate of leakage from the influent channel at the A53 expansion joint is fairly minor and results in a constant wet spot on the floor of the pump gallery. As noted previously the leakage is worse in winter but even at its worse still only results in a wet spot on the floor in the pump gallery. The leakage does not cause any significant issues in the pump gallery. While this repair may not present an immediate need given the small leak, if the condition of the A53 expansion joint gets worse and unplanned isolation of the influent channel with bypass pumping and emergency repair is required, the coordination, cost, and potential impacts to the equipment in the pump gallery and associated operations can be significant.

Criticality of Project: This work is not considered critical at this time and nuisance conditions (wet floor) could be managed using other means at considerable cost savings.

Other Considerations: While this project does not present an immediate need for execution, the combination of this project with Project WWTP–3.3, Rapid Mix Tank Cleaning, may present some opportunities to address both issues and find some economy of scale. Cleaning of the rapid mix tanks does not necessarily require the isolation or bypassing of the influent channel; however, coordinating these projects and completing at the same time or consecutively, may provide some economies with increasing the number

of potential bidders, reducing mobilization and WWTP coordination efforts, and provide for a more thorough cleaning and assessment of the influent channel and rapid mix tanks. Furthermore, if this project is not implemented soon, there are potential repairs that could be implemented from within the lower pipe gallery area without having to isolate and bypass the influent channel until/if a shutdown becomes available. These options are detailed above and should be considered before influent channel isolation and repair from within the channel is conducted.

WWTP-1.3 Sediment Basin #5 Treatment of Backwash Water

Project Description: As part of the December 2019 Consent Order related to the dark water incident, the NFWB was required to evaluate and optimize the operation of the existing WWTP. One of the items studied at that time was optimizing the treatment of carbon filter backwash water. At that time filter backwash water was directed to Sedimentation Basin 5 and treated separately (with primary polymer only) from the rest of the influent wastewater. The water exiting Sedimentation Basin 5 was then discharged directly to the chlorine contact tank for effluent disinfection and discharge, thereby bypassing treatment via the carbon filters. Treatment provided in Sedimentation Basin 5 was less than ideal. No chemical coagulant was added, and only primary polymer was added to the flow. Little to no treatment was being provided in Sedimentation Basin 5. As part of the requirement to optimize treatment, AECOM preliminarily looked at chemical treatment of the backwash water to see if improved treatment could be provided by using different chemical coagulants, along with a different flocculent (polymer). It was determined that improved treatment could be provided by using alternative treatment chemicals. To implement these alternative treatment chemicals in the full-scale plant operation, new chemical storage and feed systems would need to be constructed. Alum based coagulants for example would require a new chemical bulk storage tank system, complete with secondary containment, truck loading area, pumps, pipes, etc. to be constructed along with a new polymer makeup and feed system. Because of the need for a significant capital investment, along with the developments cited below, this capital investment was not undertaken.

AECOM recommends a discussion with NFWB on the need for this project considering optimized plant operation has resulted in 5+ consecutive years of discharging spent backwashing water to the head of the treatment train.

AECOM's assistance in testing different coagulants improved backwash treatment and provided alternatives for treating the backwash wastewater in Sedimentation Basin #5

At about the same time that these studies were being conducted plant operations were in the process of being modified and improved such that the number and frequency of filter backwashes was reduced to approximately 30 to 45 backwashes per day compared to well over 100 backwashes per day previously. With reduced backwash frequency, the filter backwash water volume was reduced such that it was capable of being returned to the head of the plant where it could be retreated through all processes (chemical treatment, carbon filtration, effluent disinfection). This practice has been successfully practiced since some time in 2018.

Need for Project: As far as the required Consent Order objective of optimizing treatment is concerned, the NYSDEC is of the opinion that the Consent Order objective has been met. Therefore, so long as backwash volumes do not increase to the point that the flows cannot be sent to the head of the plant, no additional treatment of the filter backwash water is required. Considering that this practice of sending backwash flows to the head of the plant has been successfully practiced for 5 years now, this project may be considered a lower priority for implementation with the potential for the concept development and planning phases to be advanced before any significant design efforts are started.

Other Considerations: If in the future backwash numbers and volumes increase as a result of changed conditions such that backwash flows cannot be managed by the head-of-plant method currently practiced, then this project should be reconsidered at that time. The last consideration is that the conversion of the WWTP to a biological treatment facility would eliminate the need for this treatment system because filter backwash water would not be generated in the converted facility. The philosophy with the ongoing plant upgrades has been to minimize capital upgrades that would not be necessary if/when the WWTP is converted to a biological treatment facility.

WWTP-3.2 Grit Pump Flow Meters

Project Description: The WWTP features grit removal and retention facilities in that the sedimentation tank grit compartments and the rapid mix tanks are deep and have highly sloped sides that allow for excellent grit removal capabilities. Many other local WWTPs have difficulties removing grit and that grit accumulates in downstream treatment facilities such as aeration tanks, thickeners, and digesters, causing serious operating issues in these processes as the volume of the tank is gradually consumed by the buildup of heavy grit material. The NFWB does not experience these issues and generally is able to remove the grit in their existing facilities. Currently plant operators manage grit processing from five sedimentation basins and two rapid mix tanks by pumping the grit through two parallel processes consisting of a hydrodynamic cyclone followed by a grit classifier. Typically, the five sedimentation basins are rotated through one of the cyclone/classifiers and the two rapid mix tanks are rotated through the other cyclone/classifier.

When grit is being pumped, flush water is also typically applied at multiple points in the pipe system to keep the grit from plugging the pipeline. At present there are pressure gauges on the grit pump discharge piping but most of the gauges are inoperable. Without flow meters and a lack of functional pressure gauges, there is little information available to the operator to tell whether they are actually pumping grit or just flowing flush water. The grit system is operated intermittently with periods when grit is not being pumped (approximately 8-hour/day). When the grit removal operations are not being conducted eventually the system becomes plugged and/or grit accumulates in the grit screw to the point that the screw trips out. In order to assist the plant operators with the proper operation of the grit system it is recommended that flow meters be installed in the grit piping system so that grit flow can be monitored to verify proper operation of the grit removal system.

In the current system there are ten pumps that move grit from the five sedimentation basins. Each basin has a dedicated grit pump and a spare pump that can be used for grit or sludge service. Each of the two rapid mix tanks has its own dedicated grit pump but there are also provisions to use either grit pump to pull from either rapid mix tank: thereby providing redundancy. Therefore, there are twelve pumps that can be used to move grit. The grit system is typically operated with large volumes of flush water that can be added before the grit pump or to any number of pipe locations downstream of the pumps.

Need for Project: The operations staff is unable to determine if they are processing grit from the sedimentation basins and rapid mix tanks with the current system. Magnetic flow meters and operational pressure gauges would allow operations staff to monitor and control this process.

Criticality of Project: The worst-case scenario at the NFWB WWTP is that grit accumulates excessively in the grit compartment of the sedimentation basins and requires manual removal using a vacuum truck. This occurs when a grit pump is not removing grit even though it is operating, and the operators think it is moving grit.

Existing grit pumps and piping in pump gallery to locate spaces for implementing flow meters.

So, while the WWTP has operated its grit facilities as described for the past 45 years without any significant negative consequences (other than an occasional manual cleaning of a plugged grit compartment), the addition of properly engineered flow meters would assist the WWTP in better operating these systems and may reduce the need for an occasional manual grit cleaning operation. Further the cost of this work is not that much relative to the potential benefit provided.

Other Considerations: The optimal means of deploying grit flow meters would be in a location where it is measuring the flow of grit and water exiting the tank exclusive of any flushing water subsequently added to maintain the grit in suspension. Another factor to consider is the number of flow meters required. If a flowmeter is installed on each pump, it would require twelve flow meters, versus a flow meter installed on the tank outlet would only require seven flow meters (one on each sedimentation basin and one on each rapid mix tank). Alternatively, modifications to the sedimentation basin sludge/grit piping system could be made so that the grit pump and the spare pump are combined before the placement of a flow meter so that one meter could monitor the output from either the grit pump or the spare pump. Doing this however would require piping modifications in the pump gallery.

Additionally, a meter installed at each of the grit cyclone/classifier trains would allow measurement of all flow which would include the flush water being added to the piping along the way. Another factor that must be considered is that the grit being conveyed can be abrasive and the selected flow meter must be able to withstand this abrasiveness without damage. All these factors will be considered by AECOM to arrive at an effective yet cost sensitive solution for meeting the needs of this project.

WWTP-3.3 Rapid Mix Tank Cleaning

Project Description: It is believed that at least one of the two rapid mix tanks is plugged solid with grit. A rapid mix tank that is plugged with grit no longer will remove grit and will also provide minimal residence time during the mixing of ferric chloride with the influent wastewater. Reduced mixing time will make the chemical coagulation process less efficient and therefore make it a less effective treatment process. Therefore, maintaining these tanks free of accumulated grit is critical to the overall process.

Fortunately, the plant was designed with a system of manual stop gates that can be moved to isolate the two rapid mix tanks and allow their emptying and cleaning. Once the isolation gates are installed at the rapid mix tanks' inlet and outlet, all flow in the influent channel then bypasses the rapid mix tanks, the tanks can be pumped empty and then cleaned using a vacuum truck.

Need for Project: This work could be performed by plant maintenance and operations staff with assistance from outside sewer staff to operate the vacuum truck or included as part of a construction contract if it is NFWB's desire to have it performed by outside contractors. In addition, AECOM could assist with developing a standard operating procedure with detailed instructions, pictures, and sequencing details to assist the NFWB operations and maintenance staff with executing this work.

If this is determined to not be feasible then a contractor such as National Vacuum should be utilized to do the work after the tanks are isolated by NFWB maintenance staff. The need for outside engineering assistance is expected to be limited for this project.

Criticality of Project: This project is critical and should be performed as it impacts the WWTP operating efficiency.

Other Considerations: Both the east and west rapid mix tanks have a high-pressure flush water line that directs a large volume of water at the tank outlet to keep it from plugging. One of the two pipes is not functional, and AECOM recommends that when the tank cleaning work is performed the pipes be inspected and returned to operational status. Furthermore, given the close proximity to the leaking influent channel expansion joint (project WWTP-1.2) and similar work activities of these two projects with isolations, cleaning, and inspection, it maybe useful to combine these projects to potentially find efficiencies with timing, operations and contractor coordination, and cost.

WWTP-5.5 New Public Address (PA) and Fire Alarm System

Project Description: The WWTP does not have a functioning PA system and has never had a fire alarm system. The lack of a public address system is managed via the use of two-way radios that are available to plant operations and maintenance staff or via the use of personal or NFWB provided cell phones. Currently the Chief Operator and the Maintenance Supervisor have NFWB provided cell phones. All employees have personal cell phones. It is expected that this project will include an evaluation of the existing PA system, an evaluation of the code requirements, and a survey of the buildings and facilities that will require PA and fire alarm systems. These evaluations will be used to develop a conceptual design of both the PA and fire alarm systems which will be used as the basis of design for the implementation of the new PA and fire alarm system.

Need for Project: The current public address system is not functional and is required for the effective operation of the WWTP and for the safety of the WWTP employees. Similarly, there is no fire alarm system and the NFWB desires to add one for the safety of the WWTP staff and protection of its assets.

Criticality of Project: The use of two-way radios and cell phones has proven not to be ideal as there are dead spots within the facility and although a PA system is not required by code, it is important for operations of the WWTP and for employee safety. Similarly, while adding a fire alarm system to an existing building that is not undergoing a major renovation is not required by code, it is prudent to do so for protection of the WWTP's assets and safety of its employees.

Other Considerations: AECOM will evaluate the extent to which the current PA system is corroded to determine if it is possible to re-use the existing conduit and wires, which will greatly reduce the cost of replacing the system. AECOM will work with NFWB to determine the requirements for the replacement system, however it should be noted that there are currently only a small number of manufacturers for these types of systems which may limit available options. It may be more economical to equip all staff with two-way radios and install repeaters and signal enhancers where needed to provide full coverage, particularly if new conduit and

wire is necessary. While using wifi for the PA system could be considered and evaluated, AECOM does not typically recommend it for these systems because our experience is that wifi coverage is too spotty in tunnels, galleries, and other process spaces.

Installing a fire alarm system in the WWTP's buildings will be a significant effort and will require the involvement and input from the Fire Department and Building Official. Adding this system will also more than likely trigger the need to add sprinkler systems where required by code. It is also AECOM's experience that Fire Department's and Building Officials will require the addition of emergency lighting, exit signs, and other safety measures at the same time if these are already not in place. Typical components for fire alarm systems include smoke detectors, heat detectors, pull boxes, horns, strobes, duct smoke detectors, control panels, and a means to interface with the Fire Department or third-party security service through a dedicated communication link such as a phone line or antenna. One approach AECOM has employed in the past to streamline this process and would propose to use on this project is to coordinate allowable design criteria with the Fire Department and Building Official, provide these criteria to the Contractor in the Bid Documents, and delegate the detailed design as well as construction of the fire alarm system to the Contractor.

AECOM Differentiator

AECOM has designed hundreds of water and wastewater treatment facilities with fire alarm systems and, as a result, is very familiar with the code requirements for these systems at these critical facilities. Our experience in specifying and designing these types of systems means that we already know which design criteria and other information will need to be included in our delegated design specifications.

WWTP-5.6 Carbon Area Lighting, Switchyard Improvements

Project Description: The existing carbon filter lighting is largely non-operational making observations within the carbon filter beds nearly impossible without an external light source. Plant maintenance staff report that new lighting fixtures are required throughout the filter building as the existing fixtures are not serviceable. Assuming the conduits and conductors serving the lighting within the filter area are in good condition, this work amounts to changing approximately 126 light fixtures with new LED fixtures of the same voltage. The light fixtures should be entirely sealed as the filter bays tend to be a moist area and can experience low levels of hydrogen sulfide which can lead to corrosion of exposed copper and brass. The fixtures should meet the NFPA requirements for the filter area designation which has previously been identified as a Hazardous area. Alternatively, this project may include the need for new conductors and controls assuming the existing electrical conduits are suitable for reuse. The worst-case scenario would include new conduits in addition to lighting fixtures, conductors, and controls. Given the uncertainty of the condition of the conduits, wires, conductors, etc. and the need to meet the requirements for the NFPA area designation, AECOM recommends that the existing systems be inspected to determine which portions can be reused and which need to be replaced.

With regard to switchyard improvements, it is AECOM's understanding that all switchyard improvements identified in Project 5 have been or are currently being addressed using IDIQ contractor Ferguson and therefore would not have to be addressed as part of this project.

Need for Project: At present it is difficult to observe a filter's operation because most of the light fixtures within the filter areas are inoperable. It is recommended that the lighting be restored so that proper operation and maintenance of the filters can be performed until such time as the plant will be converted to a biological treatment facility. In the event the biological conversion is implemented these light fixtures would still be necessary to operate the biological aeration tanks that are proposed to be located in the current carbon filters.

Criticality of Project: This project is considered a high priority in order to maintain existing operations and for personnel safety.

Other Considerations: New light fixtures should be energy efficient LED fixtures that are completely sealed to provide protection against moisture and corrosion; and have the appropriate rating for the filter area (current designation is Hazardous). The current version of NFPA 820 classifies carbon filters as having a "significant hazard from combustible carbon material" thus requiring an explosion proof lighting fixture. Lastly, AECOM has assisted clients with applying for and receiving energy efficiency rebates from utility providers for the implementation of more energy efficient lighting. AECOM will work with the NFWB to identify potential energy efficiency rebate opportunities associated with this project and provide the information needed to apply for the rebates.

WWTP-6.2 Carbon Bed Effluent Cleaning & Inspection

Project Description: This project includes the draining, cleaning, and inspection of carbon bed effluent (CBE) wet wells. There are two CBE wet wells, the east wet well serves the A-train filters (i.e., Filters 1 through 14) and the west wet well serves the B-train filters (i.e., Filters 15 – 28). The wet well serves as a water storage tank from which the backwash pumps pull water that is used to backwash the carbon filters. The plant water pumps also pull water from the CBE wet wells. Water exiting the CBE wet wells flows over a weir into a 72-inch diameter pipe that flows by gravity to the chlorine contact tank.

Need for Project: These wet wells have never been entered and inspected after their construction in the early 1980's under Contract 9. There are several concerns:

- There may be accumulated activated carbon in the wet wells as a result of the initial failure of the carbon filter underdrain system or other operations over the years.
- The wet wells consist of reinforced concrete tanks including the ceiling which serves as the floor of the odor control building. Sulfide is routinely present in the wet well contents (carbon filter effluent), and it is possible that sulfide corrosion of wet well ceiling has been occurring over the approximately 40-years the wet wells have been in operation.

The CBE wet wells are one of only a few remaining areas in the WWTP that have never been inspected.

Criticality of Project: Because this is one area that has not been inspected and the potential for ceiling corrosion could cause a structural collapse of the Odor Control Building floor and this is a critical work item.

Other Considerations: In order to enter and inspect a wet well, all filters on that side (A Train or B Train) must be taken offline. That will stop the flow of water into that wet well. The plant water pump system must be isolated so that the wet well to be inspected is disconnected from the plant water pumps. Lastly a submersible pump needs to be lowered through the access hatch and the wet well pumped out. Entry for inspection would follow confined space entry procedures. Any accumulated materials would be pumped out using a vacuum truck. Lastly the tank walls and ceiling should be washed down, and the tank walls, floor and ceiling thoroughly inspected. This work will require a specialty contractor to conduct confined space entry with retrieval systems and implement proper cleaning of the wet wells and removal of debris to allow for thorough inspection.

This project could potentially be combined with the influent channel leak repair (WWTP-1.2) and rapid mix tank cleaning (WWTP-3.3) given the potential need for a specialty contractor with confined space and inspection training for each of these projects.

WWTP-6.3 Carbon Filter Mud Valve Replacements

Project Description: Each of the 28 carbon filters have a 6-inch gate valve that can be opened to drain the filter via the underdrain. Recently operations personnel attempted to operate each valve and determined many of them do not turn. It was recommended at that time that each of the 28 6-inch gate valves be replaced.

Need for Project: Proper operation and maintenance of the filters requires a functional mud valve to drain a carbon filter for maintenance or other work. The existing valves are approximately 45-years old and are in poor condition and/or non-operational.

Criticality of Project: Replacement of non-functioning valves is considered to be a high priority.

Other Considerations: Each mud valve is exposed and is readily accessible in the filter gallery. Given the location of these valves at the bottom of the filter beds, there may be some accumulation of solids and sediment around these valves and in the upstream and downstream piping. The need for cleaning and flushing the upstream and downstream piping may be necessary when replacing these valves.

Existing mud valve with accessibility to replace.

WWTP-11.6 Removal and Replacement of Plant Water Piping

Project Description: Project 11.6 was originally part of the list of capital projects (Project 9) under the Consolidated Funding Engineering Report application for which a $20 million construction grant was obtained. The Project 9 piping evaluation looked at piping throughout the WWTP and ultimately resulted in the following work being done:

- Replacement of plant water (treated effluent) piping in the pump gallery,
- Replacement of sodium hypochlorite piping to the scum building,
- Replacement of sludge pipeline between the Sludge Building and the Thickened Sludge Pump Building.

These projects were determined to be the highest priority piping projects and were addressed with Project 11. Since that time the WWTP has determined that the available water pressure for the belt filter presses is insufficient to properly operate three belt filter presses simultaneously. As a result, this portion of Project 11.6 will focus on upgrades to the process water piping that delivers water to the Sludge Building. Process water is defined as potable water piping that is downstream of a back flow preventer.

The three existing belt filter presses use wash water to keep the dewatering belts clean which improves the dewaterability of the sludge and increases the throughput capacity of the belt filter press. The belt presses are specified to require 88 gallons per minute of water at 110 pounds per square inch (psi) pressure in order to properly clean the belts. There are three existing belt filter presses and potentially a fourth belt filter press may be provided if and when the biological conversion is implemented. Therefore, future water requirements for the belt filter presses will be as high as 320 gallons per minute at 110 psi pressure. In addition to the water requirements of the belt filter presses there are three other areas in the Sludge Building where water pressure/volume requirements need to be addressed. These include:

- The four new polymer makeup systems that were recently installed will be provided with an upgraded water connection capable of delivering the necessary flow and pressure without the need for the booster pump that was installed. This system is specified to operate at 100 gallons per minute at 70 psi.
- Process water will be supplied to the polymer motive water at a regulated water pressure so that operators do not have to continuously monitor and adjust the plant water motive water pressure that is currently used. This system is specified to operate at 30 gallons per minute at 25 psi.
- The thickened sludge pumps utilize process water for their seal water requirements. This piping system will be tied into the upgraded process water piping and a pressure regulator will be provided for accurate control of seal water pressure to the thickened sludge pumps. This system is specified to operate at 1 to 5 gallons per minute at approximately 25 to 40 psi.
- Wash down water hose bibs will be supplied in the belt filter press area in multiple locations to allow proper cleaning of the belt filter presses. This system is specified to operate at 100 gallons per minute at 100 psi.

This project design will require a hydraulic evaluation of the existing and proposed process water piping along with the design of system upgrades including multiple booster pumps capable of supplying a wide range of flows at varying pressure requirements, upsized process water piping, pressure regulating systems, pressure gauges, and controls. The system will be designed to meet current and future flow and pressure requirements.

Need for Project: Upgraded process water pumps and piping in the Sludge Building is critical for the performance of the belt filter presses. Currently only two belt filter presses can be operated and there are times where three belt filter presses are required due to the incoming solids loading. Additionally, if three belt presses can be operated simultaneously it is likely that the need for a second shift belt filter press operator can be eliminated thereby saving considerable cost. At the same time that the belt filter press needs are addressed the project will also correct a number of additional process water requirements in the Sludge Building as identified above.

Criticality of Project: This project is a critical project and should proceed with high priority since process water at the required flow rates and pressures are required for the operations within the Sludge Building.

Other Considerations: The potential conversion of the WWTP to a biological treatment system may produce an effluent quality that is more aimable for use with belt filter press washing. This approach will significantly reduce the reliance and use of potable water and cost for this process. While the timing of the WWTP conversion maybe outside the schedule for when this project will be implemented, there might be considerations to implement in this upgrade keeping the 'big picture' biological conversion changes in the forefront.

Calumet Avenue 48-inch brick sewer rehabilitation

Project Description: There is an existing 48-inch diameter brick sewer on Calumet Avenue that is experiencing invert erosion to the point that settlement of the overlying street is becoming a concern. The Engineering Report completed by the NFWB (July 2023) indicates that the sewer in question is a 300-foot section, but manhole to manhole (between 13th Street and Highland Avenue) scales to approximately 575-feet. AECOM generally recommends that repairs such as these be performed manhole to manhole, particularly if slip lining is the selected technology.

AECOM will review the CCTV footage of the section of sewer in question and will evaluate the following alternatives:

- Concrete invert repairs and cementitious coating to balance of the pipe.
- Slip lining with cured in place resin set liner,
- Slip lining with Hobas pipe,
- Slip lining with HDPE pipe

An engineering evaluation will be provided before a decision is reached on the selected technology. The alternatives analysis will include a cost evaluation along with pros and cons of each method. Other considerations will include the need for bypass pumping, traffic disruption and control, restoration costs, ease of implementation, and degree of uncertainty associated with the technology.

Need for Project: Based on the information provided, AECOM agrees that repair of the sewer is needed. As a value added task, AECOM will evaluate the best repair method as part of the final design scope of work.

Criticality of Project: Although it's not clear that this sewer is at risk of imminent failure, it is important that this work proceed to minimize groundwater intrusion into the system and prevent further settlement of Calumet Ave.

Other Considerations: AECOM served as the project engineer for the replacement of the Iroquois Avenue sewer project in 2014. This work involved the replacement of approximately 1,500 feet of 54-inch brick sewer along with a 300-foot rock lined tunnel section. The sewer and manholes were in extremely poor condition and allowed significant amounts of groundwater to infiltrate. The work was ultimately performed though a combination of slip lining with Hobas pipe and open-cut sewer installation. AECOM performed engineering evaluations along with design, bid and construction phase services for the project. The project serves as an excellent go-by for the current project.

Scope of Work

To accomplish the objectives of this project, AECOM provides a discussion of the proposed scope of work following the tasks listed in the Request for Proposal.

Task 1 – Survey

AECOM will employ the services of a subcontracted survey firm to perform basic survey services related to the execution of the following projects:

- Calumet Avenue 48-inch Brick Sewer Rehabilitation

None of the other wastewater related projects that AECOM is proposing on require a survey to be performed. Under Task 1 the survey work performed will include:

- Conduct horizontal and vertical survey of the following items:
  - Right-of-way to right-of-way survey of: sidewalks, grass, driveways (including composition), curbs, roadway centerline, utilities (poles, guy wires, manholes, catch basins, valves, vaults, etc.), trees, etc.
  - Sanitary sewer centerline (manhole to manhole) and inverts of all pipes in each manhole.
  - Storm sewer centerline (catch basin and manholes) including inverts of all pipes in each manhole and catch basin.
  - Establish baseline control and benchmarks for use by the contractor during construction.
  - Survey work will be performed at prevailing wage rates as required by New York Municipal law.

Task 1 Assumptions:

- Site surveying will be conducted by a WBE partner consultant, Frandina Engineering and Land Surveying.
- Based on the information provided in the RFP, the site survey length with be approximately 575-feet.

Task 2 – Conceptual Design

As requested in the RFP, the following capital projects will require the preparation of a Conceptual Design Report that will document further investigations that were conducted in order to develop a detailed scope-of-work:

- WWTP-1.3 Sediment Basin #5 Treatment of Backwash
- WWTP-5.5 New PA and Fire Alarm System
- WWTP-5.6 Carbon Area Lighting, Switchyard Improvements
- WWTP-16 Standby Generator

As part of this task AECOM will coordinate with the NFWB as necessary to examine existing equipment, evaluate alternatives as applicable, determine project requirements, and develop a list of recommended improvements along with an estimate of probable cost. The document will be submitted as a draft and a review meeting will be scheduled. Once finalized the Conceptual Design document will serve as the starting point for the preparation of Design Documents (i.e. Task 3). Insight into each of the Conceptual Design Reports is provided below:

WWTP-1.3 Sediment Basin #5 Treatment of Backwash The Conceptual Design report will include a review of alternatives for handling the carbon bed backwash wastewater. The advantages and disadvantages will be developed for the current operation of returning the backwash wastewater for retreatment and for options to treat it in the Sedimentation Basin 5. If it is determined that this operating scenario provides improved treatment and operating flexibility, then this evaluation will be advanced with jar testing of filter backwash water that will be conducted by AECOM with various chemical coagulants and flocculants. Jar test log sheets will be completed for each test and included in appendices along with photographs taken during the jar testing. Limited analytical testing will be performed during the testing and will primarily consist of pH, turbidity and TSS; and those results will also be provided in an appendix. Based upon the optimal test results, AECOM will provide recommendations for the basis of design for the selected chemical feed system including:

- Coagulant selected,
- Polymer selected,
- Size and location of chemical bulk storage facilities,
- Selection of polymer makeup, storage and feed system,
- Site Plan and Process Flow Diagram,
- Equipment cut sheets for major system components, and
- Construction cost estimate.

WWTP-1.3 Assumptions

- Laboratory testing will be conducted with equipment onsite and available at the NFWB laboratory. If 3rd party laboratory testing is required, this will be coordinated and contracted through NFWB existing contracts with outside laboratories.
- Up to 12 jar tests will be conducted to determine optimal chemical combinations and doses.

WWTP-5.5 New PA and Fire Alarm System A Concept Evaluation will be conducted to assess the existing PA system, an evaluation of the code requirements, and a survey will be conducted of the buildings and facilities that will require PA and fire alarm systems. These evaluations will be used to develop a conceptual design of both the PA and fire alarm systems which will be used as the basis of design for the implementation of the new PA and fire alarm system. A site visit from AECOM's electrical inspector and/or electrical engineer will be conducted to review the existing system and document the conditions/needs. As part of this site visit, AECOM would coordinate a potential meeting with the local fire department to discuss the type of system, extent of system, and communication methods needed for the facility. Alternatives will be developed including the engineering opinion of probable costs so that a system and preferred option can be selected. The Conceptual Design document will include a description of the type and scale of systems selected for PA and fire alarm systems including:

- Alternatives evaluation including cost estimates
- Site plans,
- Equipment cut sheets

WWTP-5.5 Assumptions

- A 2-day site visit will be conducted, and the AECOM project manager, project engineer, and electrical engineer will be in attendance. During this site visit, the AECOM project team will review the existing PA system conditions, review facility layout, meet with NFWB staff to discuss these systems, and plan to coordinate a meeting with the local fire department, if possible.
- AECOM will develop a performance-based delegated design specification for the fire alarm system for bidding purposes. The Contractor will be responsible for the detailed design and construction of the fire alarm system

WWTP-5.6 Carbon Area Lighting, Switchyard Improvements As stated in the project approach it is AECOM's understanding that all switchyard improvements have been or are currently being implemented by the NFWB's IDIQ contractor Ferguson Electric and there is no remaining work to be performed at the main WWTP substation. The Conceptual Design document for WWTP-5.6 will focus on the carbon filter lighting efforts and will include the results of field investigations that will determine whether existing conduit, conductor and controls can be reused as part of the carbon filter lighting system replacement. The document will also provide cut sheets for the selected lighting fixtures and a construction cost estimate.

WWTP-5.6 Assumptions:

- Visual assessments of the carbon filter lighting system including conduit, fixtures, and panels will be conducted by AECOM's electrical engineer. Assessments will not include electrical testing.
- NFWB personnel will be available during the site visit to answer questions, open electrical panels, and access equipment to be assessed.
- Switch yard improvements will not be assessed as part of this project.
- No changes or additions to the lighting electrical panels will be necessary.

WWTP-16 Standby Generator A concept evaluation will be conducted for this project to review the need for new standby power system(s) and the alternatives for protecting the WWTP assets and mitigating the potential for discharges of untreated or partially treated wastewater. One option would be for a new standby power system to be located at the 13.8 KV level and feed the existing switchgear. Alternatively, individual standby power systems could be located at each of the five power centers, or a centralized standby power system could be designed at the 480V system. The Conceptual Design document will include a design basis for alternatives developed based on a review of the existing systems. If a generator system is determined necessary, the selection of a generator (generator sizing) and connections will be detailed based upon an evaluation of the existing power distribution system at the WWTP. Also provided will be a site plan, one -line drawing, and generator cut sheets.

WWTP-16 Assumptions:

- Visual assessments of the existing power supply, switch gear, distribution systems, and generator will be conducted by AECOM's electrical engineer and/or partner consultant, Pathfinder. Assessments will not include electrical testing.
- NFWB personnel will be available during the site visit to answer questions, open electrical panels, and access equipment to be assessed.

Task 3 – Design Documents

Depending on the projects that are awarded to AECOM, we will look to combine projects that have similar design and implementation disciplines, approaches, and/or present opportunities for efficiency given the interconnection with systems, isolation, implementation, and sequencing. Once this is identified, AECOM will combine the appropriate project design bid packages with the objective of finding potential cost savings.

Preliminary Design will include but not be limited to preparation of the Preliminary Design Approval Document that identifies, assesses, and selects a feasible design alternative. The evaluation will consider cost, environmental factors, project sequencing and constraints, permitting, and coordination with existing utilities. Following approval of the Preliminary Design Document by the NFWB, AECOM will prepare a detailed design consisting of plans and specifications suitable for bidding the work by the NFWB. The plans and specifications will include standard NFWB documents, forms, etc. along with New York State Environmental Facilities Corporation (NYSEFC) grant required documents and forms. The Final Design will include but not be limited to: development of final plans and specifications, construction cost estimates, regulatory agency coordination and approval, and required certifications for the project. Bid documents will be submitted to the NFWB for review at end of preliminary and final design document preparation.

Task 3 Assumptions:

- The Preliminary Design Document will include summary tables as necessary to present information. Potential summary tables include preliminary list of equipment, preliminary list of drawings, specification TOC, list of potential contractors, etc.
- Existing facility instrumentation and control system information is available.
- No design review/coordination meetings with the NYSDEC are required.

Task 4 – NYSEFC Reporting

AECOM will assist the NFWB with complying with the various NYSEFC reporting requirements that are associated with construction projects funded by the NYSEFC through grants or loans. AECOM will do this, both as a contracted consultant by preparing the necessary reports covering the design and engineering portion of the work, and also monitor the respective Contractor's compliance and reporting during the construction portion of the work. AECOM will perform the following as a consultant under contract to the NFWB:

- Review the terms and conditions of the grant/funding contract signed and agreed to by the NFWB/NYSEFC for the projects undertaken.
- Obtain the latest NYSEFC forms for use in reporting.
- Prepare a disadvantaged business enterprise (DBE) Utilization Plan.
- Prepare Monthly DBE Contractor Compliance Reports.
- Submit relevant forms to the NFWB for submission to the NYSDEC and NYSEFC as appropriate.

AECOM will perform the following as the engineer overseeing the Contractor during the construction project:

- Review Contractor prepared DBE Utilization Plan.
- Review Contractor prepared Waiver Plans (if any).
- Review Contractor prepared Monthly DBE Contractor Compliance Report.
- Submit relevant forms to the NFWB for submission to the NYSDEC and NYSEFC as appropriate including "document collection" efforts near the end of construction such as:
  - Pay applications, inspection reports, MWBE reports, American Iron and Steel certificates, wage rate interviews, change orders, meeting minutes, completed Document Collection Form questionnaires, etc.

Task 5 – Bidding Assistance

As noted for Task 3, Design Documents, we will work with the NFWB depending on the projects that are awarded to AECOM, to determine design bid packages that make sense to issue together and the schedule for issuing them. Again, the objective is to find efficiencies with bidding projects that make sense to group together with an effort to reduce design and bid services costs. AECOM will provide bid phase services to the NFWB to assist in bidding the work to contractors as we have done in the past. Our services will include:

- Courtesy copies of design documents will be provided to the NFWB, NYS DEC and NYS EFC for review and project administrative purposes.
- Hard copy bid documents will be available for review at AECOM's office and at the office of the NFWB Engineer.
- Bid Documents will be distributed in an electronic format (PDF and TIF) on a single CD-ROM or thumb drive to prospective bidders. AECOM will maintain and update a bidder list. If desired, AECOM can work with the NFWB to setup an electronic Plan Room that will manage the storage and distribution of the design documents. Contractors will be able access electronic documents from the Plan Room and mitigate potential logistical and time-consuming efforts to acquire the documents. The Plan Room will track the contractors that acquire the electronic documents and provide that information, as needed.
- AECOM will prepare for and conduct one (1) non-mandatory pre-bid conference at the project site and answer technical questions. Following the pre-bid meeting AECOM will prepare meeting minutes to be issued as an addendum.
- AECOM will receive and review bidder inquiries, perform any necessary work to address, and issue addenda to bidders electronically. Addenda will be issued promptly and sufficiently prior to bid opening.
- AECOM will determine compliance with bidding requirements including evaluation of bidder equipment and material substitutions identified in the bid package.
- Following receipt of the bids, AECOM will review and tabulate the bids and will issue a written recommendation to the NFWB for award of the contract. The bid tabulation will be attached to the recommendation letter. If necessary, reference checks will be performed to verify the work experience and performance of contractors.
- Upon the NFWB acceptance of the low bid(s), AECOM will prepare three (3) sets of conformed contract documents including agreements for execution by the Contractor and the NFWB. Upon signature and return of the contract documents with bonding and insurance certificates, we will deliver the documents to the NFWB for review and signature.
- AECOM will conduct a post bid/preconstruction meeting at the WWTP with low bidder(s) to review the contracting and construction processes.
- A Notice to Proceed for each contract will be prepared by AECOM and issued to the Contractor.

In addition to these services identified in the RFP AECOM also proposes to provide the following enhanced services, which we have found can result in an increased number of prospective bidders:

- Notify contractors who specialize in the type of work of the anticipated bid advertisement date. We find that this pre-notification generates interest in the project, helps to generate additional bidders, and ultimately generates more competitive pricing. We have successfully used this approach on other NFWB projects.
- Prepare and submit an advertisement for bidders for publication in the local paper of record. AECOM assumes that the NFWB will pay the cost of the advertisement directly to the publication as has been done in the past.
- Provide a set of plans and specs to the local office of the Construction Exchange for use by contractors, vendors, and material suppliers.

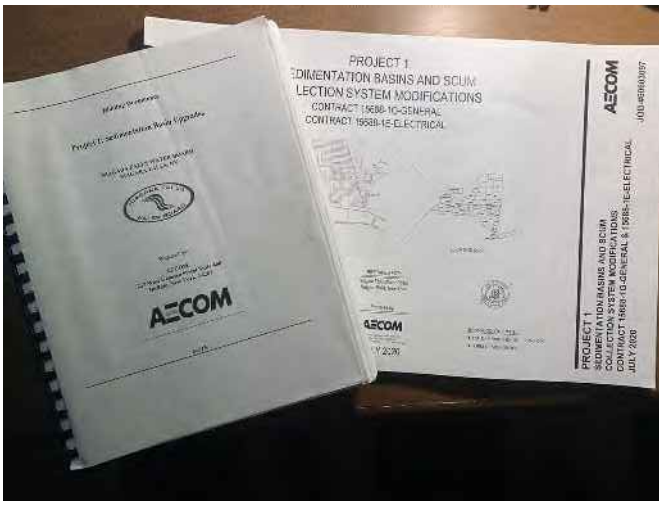
Task 6 Assumptions:

- Up to two addenda will be prepared.

Task 6 – Construction Administration

AECOM will provide construction design and administration services from the Notice to Proceed until final acceptance of the Work, as limited by the anticipated maximum length of contract(s) of 500 days. It should be noted that depending on the projects awarded and construction contract durations set by those contracts, AECOM will work with the NFWB to coordinate these duration with other work ongoing at the WWTP. Tasks associated with this phase include the following services:

- Review construction progress against the contract requirements,
- Perform routine Contractor correspondence,
- Conduct routine progress meetings at the job site,
- Coordinate the Contractor's activities at the facility so that his operations do not interfere with or obstruct on-going NFWB operations,
- Review and approval of monthly payment applications appropriate for the construction duration of the projects AECOM will be supporting.
- Maintain a Request for Information (RFI), Field Order and Change Order Log.
- Respond to RFIs submitted by the Contractor(s) and issue field clarifications as required.
- Maintain a shop drawing log.
- Review and take action (Approve, Reject, Approved as Corrected) on shop drawings required for the Construction contracts.
- Review and take action (Approve, Reject, Approved as Corrected, Revise and Resubmit) on submitted schedule of values and construction schedules.
- Review and negotiate change order requests.
- Review and approve contract closeout paperwork.
- Conduct and attend bi-weekly construction progress meetings on site with the Contractor(s) and NFWB staff to maintain the projected project schedule and open communication with WWTP personnel. AECOM will prepare agendas and meeting minutes and distribute meeting minutes.
- AECOM will turn over a complete set of construction photos (digital copy, only) along with the field office copy of project submittals; to the NFWB upon project completion.



Bidding documents AECOM has created for another NFWB project.

Task 7 – Construction Inspection

AECOM proposes to utilize a project engineer that was involved with the project design to observe construction activities on a fulltime or part time basis depending on the nature of the work. The resident engineer will make sure that the project is constructed in accordance with the contract documents. The assumed level of construction inspection effort is identified in the cost proposal and includes:

- Construction inspection hours were estimated based upon an assumed project duration and the need for full-time or part time inspection. Estimated construction inspection hours for each project are listed in the cost table provided in Table 2. There will be a realized cost savings if multiple projects are combined to reduce the overall number of projects and leverage one resident engineer to be able to cover the combined project package.

During this phase AECOM will:

- Conduct on-site inspections of work in progress to determine whether the work is proceeding in general compliance with the Contract Documents.
- Report whenever inspector believes that any work is unsatisfactory, faulty or defective, or does not conform to the Contract Documents, has been damaged, or does not meet the requirements of any inspection, test or approval required to be made.
- Check that tests, equipment and systems startups, and operating and maintenance training are conducted in the presence of appropriate personnel, and that Contractor maintains adequate records thereof. Observe, record, and report to NFWB appropriate details relative to the test procedures and startups.

- Observe materials and supplies to be incorporated into the project by the contractor and recommend acceptance or rejection of these materials based on the approved submittals.
- Notify the Owner of obvious unsafe work practices used by contractor.
- Accompany visiting inspectors representing public or other agencies having jurisdiction over the project and record the results of these inspections and report to NFWB.
- Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions of original Contract Documents including Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Construction Contract, clarifications and interpretations of the Contract Documents, and progress reports.
- Keep a diary or logbook, recording Contractors' hours on the job site, weather conditions, data relative to questions concerning Change Orders or changed conditions, list of job site visitors, daily activities, decisions, general observations, and specific, more detailed observations as in the case of test procedures.
- Record names, addresses and telephone numbers of all Contractors, subcontractors and major suppliers of materials and equipment.
- Document the contractor's work production including:
  - Maintaining a field notebook,
  - Photographing the work progress,
  - Preparing daily inspection reports documenting work activities, crew size, and material quantities,
  - Maintain records of item quantities for payment purposes,
  - Coordinate work with the Owner's operations including any planned shutdowns, outages, pipe breaks, or any other possible disruption of the Owner's operations.
  - Maintain a set of red-lined construction documents for use in preparing record drawings.
  - Coordinate work with the Owner's operations including any planned shutdowns, outages, pipe breaks, or any other possible disruption of the Owner's operations.
  - Maintain a set of red-lined construction documents for use in preparing record drawings.

NFWB Cost Proposal

As noted in this proposal and stated in the NFWB RFP, there are potential opportunities to gain efficiencies with grouping projects together to reduce the number of bid packages. This approach will potentially reduce the level of effort and take advantage of the economy of scale relative to the construction services for multiple projects organized as a single or reduced number of projects. Furthermore, AECOM is proposing on all the WWTP projects and single collection system project to take advantage of our background with the WWTP systems and reduce the overall oversight from the NFWB with having to manage multiple consulting firms delivering projects at the WWTP. This approach will provide the NFWB with a single consulting firm and project team providing design and construction management services for the 12 projects associated with the WWTP and collection system upgrades.

As requested by the NFWB, AECOM has developed a cost proposal for the selected projects and reviewed options for cost savings opportunities with a combined project delivery approach. Table 2 shows the proposed cost for delivering the selected projects as individual projects and the cost with potential savings if the selected projects were awarded and completed as a single package. This approach could potentially provide a cost savings of approximately $280,000 with economies of scale gained from such things as reducing the number of bid packages and meetings, completing project reporting and reviews more effectively as a single package, and being able to provide construction administration and inspection with a local project team and inspector(s) that can serve as the single point of contact for multiple projects.

Table 2. Cost Proposal for Individual Projects and Packaged WWTP Projects

Project		Cost		
ID #	Name	Individual Bid Packages	Single Bid Package	Potential Savings
WWTP-12	Roof Repairs	$216,000	$1,430,000	$280,000
WWTP-16	Standby Generator*	$69,000		
WWTP-1.2	Influent Channel Leak Repair of Expansion Joints	$79,000		
WWTP-1.3	Sedimentation Basin #5 Treatment of Backwash	$258,000		
WWTP-3.2	Grit Pump Flow Meters	$100,000		
WWTP-3.3	Rapid Mix Tank Cleaning	$66,000		
WWTP-5.5	New PA and Fire Alarm System	$320,000		
WWTP-5.6	Carbon Area Lighting, Switchyard Improvements	$142,000		
WWTP-6.2	Carbon Bed Effluent Cleaning & Inspection	$80,000		
WWTP-6.3	Carbon Filter Mud Valve Replacements	$58,000		
WWTP-11.6	Removal and Replacement of Plant Water Piping	$173,000		
Collection Syst.	Calumet Avenue 48-inch Brick Sewer Rehab.	$145,000		
	Total	**$1,710,000**		

*Project only includes concept evaluation. Design phase scope and fee will depend on outcome of evaluation

Furthermore, there could be additional approaches for how best to package these projects with considerations associated with sequencing and WWTP operating schedules, the overall priority of projects and urgency to complete, and grouping of similar projects. Based on AECOM's understanding of these projects and background with the development of the capital improvement projects, we also propose two additional project grouping approaches as showing in Tables 3 and 4. Table 3 presents the project delivery approach based on our understanding of the project priority and/or urgency for completing them. This would reduce the project packages from 12 individual projects to 3 discrete packages based on a relative degree of project priority (i.e., higher, medium, lower).

Table 3. Cost Proposal for WWTP Projects with Priority Grouping

	Project		Cost	
Priority	**ID #**	**Name**	**Three Bid Packages**	**Potential Savings**
Higher	WWTP-11.6	Removal and Replacement of Plant Water Piping	$259,000	$14,000
	WWTP-3.2	Grit Pump Flow Meters		
Medium	WWTP-12	Roof Repairs	$441,000	$62,000
	WWTP-1.2	Influent Channel Leak Repair of Expansion Joints		
	WWTP-3.3	Rapid Mix Tank Cleaning		
	WWTP-5.6	Carbon Area Lighting, Switchyard Improvements		
Lower	WWTP-16	Standby Generator*	$870,000	$60,000
	WWTP-1.3	Sedimentation Basin #5 Treatment of Backwash		
	WWTP-5.5	New PA and Fire Alarm System		
	WWTP-6.2	Carbon Bed Effluent Cleaning & Inspection		
	WWTP-6.3	Carbon Filter Mud Valve Replacements		
	Collection Syst.	Calumet Avenue 48-inch Brick Sewer Rehab.		
		Total	**$1,570,000**	**$136,000**

*Project only includes concept evaluation. Design phase scope and fee will depend on outcome of evaluation

Table 4 presents the project delivery approach based on grouping projects with similar system upgrades, those that require similar evaluations, inspection, and/or design aspects, and will potentially open the market to more construction bidders for the respective packages. Again, these potential project groupings are based on AECOM's initial review, and this would be further developed and finalized with the NFWB.

Table 4. Cost Proposal for WWTP Projects with Similar Project Aspects

	Project		Cost	
Reason for grouping	**ID #**	**Name**	**Three Bid Packages**	**Potential Savings**
Outside WWTP	Collection Syst.	Calumet Avenue 48-inch Brick Sewer Rehab.	$145,000	$0
Electrical System Upgrades	WWTP-16	Standby Generator*	$497,000	$34,000
	WWTP-5.5	New PA and Fire Alarm System		
	WWTP-5.6	Carbon Area Lighting, Switchyard Improvements		
WWTP Upgrades, process cleanning, confined space inspections, piping and process upgrades	WWTP-1.2	Influent Channel Leak Repair of Expansion Joints	$876,000	$154,000
	WWTP-3.3	Rapid Mix Tank Cleaning		
	WWTP-6.2	Carbon Bed Effluent Cleaning & Inspection		
	WWTP-3.2	Grit Pump Flow Meters		
	WWTP-6.3	Carbon Filter Mud Valve Replacements		
	WWTP-11.6	Removal and Replacement of Plant Water Piping		
	WWTP-1.3	Sedimentation Basin #5 Treatment of Backwash		
	WWTP-12	Roof Repairs		
		Total	**$1,518,000**	**$188,000**

*Project only includes concept evaluation. Design phase scope and fee will depend on outcome of evaluation

The grouping and delivery of these projects presents potential cost savings of approximately $140,000 to $200,000. These potential savings will depend on the final agreed upon grouping and packaging of projects and AECOM reserves the right to negotiate the project budget(s) once the final groupings are determined. Furthermore, some of these projects require concept evaluations and/or alternatives evaluations as part of the initial design phases (i.e., 30 percent basis of design) that may change the overall project and design scope. The proposed budgets presented are based on the information provided as part of this RFP and AECOM proposes to revisit the respective project budgets and scope following the initial evaluation phases. The assumptions used to develop these proposed project cost include:

- Concept design project hours.
  - WWTP-16 Standby Generator: 460-hours
  - WWTP-1.3 Sedimentation Basin #5 Treatment of Backwash: 200-hours
  - WWTP- 5.5 New PA and Fire Alarm System: 460-hours
  - WWTP-5.6 Carbon Area Lighting, Switchyard Improvements: 100-hours
- WWTP-5.5 New PA and Fire Alarm System:
  - Fire Alarm system:
    - The Fire Alarm system will be specified via a performance based delegated design specification and riser diagram acceptable to building official and fire department.
    - AECOM will develop a report and/or drawings to delineate areas that require fire alarm.
    - Any interconnection with HVAC systems does not require revisions to HVAC system controls.
    - Sprinkler system design is not included.
  - PA system
    - Record drawings will be used as the basis and drawing backgrounds for updates.
    - The existing conduit can be reused.
    - Upgrades will only include the replacement of existing components and there will be no expansion needed.
- The WWTP-16 Standby Generator project only includes hours and cost for conducting the concept evaluation phase. As discussed in the Project Understanding section, there could be multiple outcomes from the initial evaluation phase with varying degrees of design required. The design and construction phase services scope and fee will be developed following the completion of the concept evaluation phase when the necessary improvements or upgrades are better defined.
- The WWTP-1.2 Influent Channel Leak Repair of Expansion Joint project will implement repairs and/or mitigating measures at the observed leak in the lower pump gallery. Influent channel isolation and bypass pumping is not included as part of this project scope and fee.
- Parttime hours have been included in this level of effort for resident inspection under the assumption that final resident inspection coverage will be negotiated as part of the final contract execution.

2

Project Team

2. Project Team

AECOM provides a blend of global reach, local knowledge, innovation and technical excellence in delivering customized and creative solutions that meet the needs of our clients' projects.

About AECOM

As a Fortune 500 firm, AECOM is a leader in all of the key markets that it serves, including water, wastewater, transportation, facilities, environmental, energy, oil and gas, high-rise buildings and government. AECOM's wastewater practice is the culmination of more than 110 years of experience and technical leadership. AECOM has significant national and local experience providing planning, design, construction and permitting services to a variety of clients facing environmental, regulatory and financial challenges associated with wastewater management.

Strong Local Presence

AECOM USA, Inc. is licensed to do business in the State of New York and holds the appropriate licenses for engineering and architecture. Our wastewater practice is particularly strong in the Northeast, with over 1,500 engineering professionals in our multiple offices in New York as well as our Chelmsford, Massachusetts Design Center—including AECOM's electrical, mechanical, architectural, and structural design disciplines. From our long-standing relationships with many area clients, we fully understand the importance of being responsive and flexible to address all project challenges. All of our disciplines have multiple staff members available for each assignment. Because of our depth in relevant disciplines, AECOM can address your concerns quickly and accurately.

Our Experience Working with Niagara Falls Water Board

AECOM is thoroughly familiar with the facilities, operations and needs of the Wastewater Treatment Facility having worked recently on the following on-site projects:

- **Consent Order Assistance Services:** Multiple Consent Order tasks have been successfully completed by AECOM. Consent Order projects that have been completed to improve the WWTP operations include: effluent disinfection evaluation, improved Sedimentation Basin No. 5 treatment options via chemical addition, carbon filter oxidation evaluation and pilot study, and biological treatability pilot.
- **Sedimentation Basin and Scum Removal System Improvement Project:** $10 million project to upgrade Sedimentation Basins No. 2 through 5 including new sludge and grit screws. The project also involved improvements to the Scum Building, including new pumps, scum screens, piping and controls.
- **Effluent Disinfection System:** This design was developed based on the preliminary design work completed as a Consent Order project. The effluent disinfection design was developed to allow the WWTP to maintain a consistent final effluent total residual chlorine (TRC) concentration near 1.0 mg/L. The existing system presents challenges with maintaining a consistent effluent TRC concentration resulting in variability and excessive use of sodium hypochlorite.
- **Biological Treatability Pilot Study:** AECOM assisted the NFWB with setting up, operating, and testing two (2) biological treatment technologies to evaluate the efficiency of treating their wastewater using a biological-based process. This evaluation was conducted as part of a Consent Order.
- **Granular Activated Carbon and Carbon Filter Gravel Replacement Project:** $1.27 million project to remove, dispose of, and replace the existing Granular Activated Carbon filter materials and underlying gravel bed.

Experience of Key Project Professionals

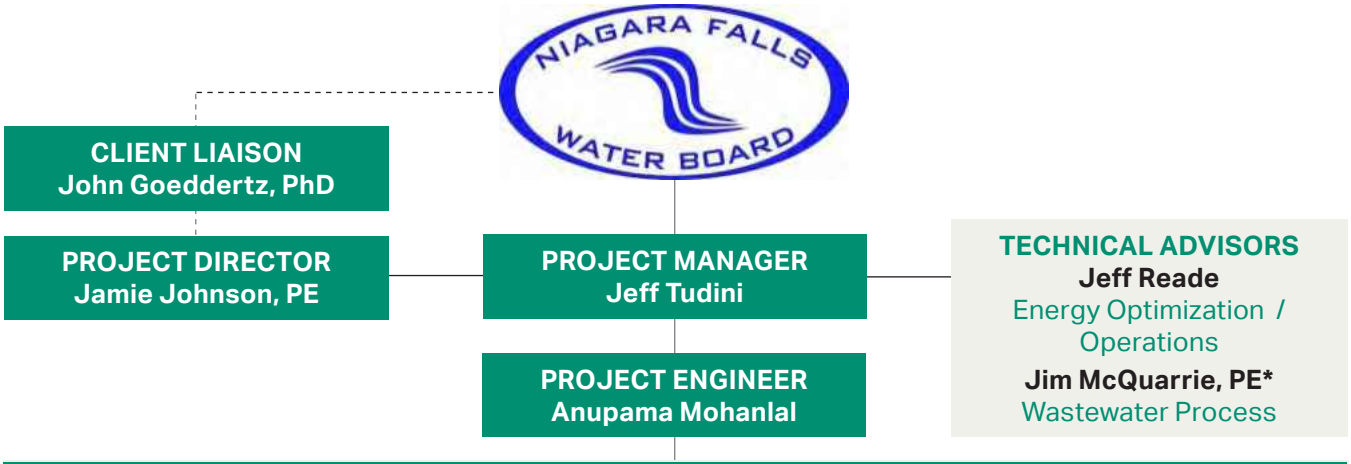
AECOM's organizational chart below presents our key staff for this project. Our team is structured with dedicated water/wastewater practitioners who have demonstrated experience working on various capital improvement projects.

Team Introduction

Our team will be led by **Jeff Tudini** as Project Manager, who brings significant recent experience and working knowledge of NFWB's WWTPs. AECOM's team also includes technical advisors **Jeff Reade** and **Jim McQuarrie**. Jeff has over 3 decades of experience with the operation and optimization of wastewater treatment facilties and will support this team by providing insight from his years of knowledge. Jim has nearly 30 years of experience with wastewater process innovation and has used this experience across the nation to advise teams on various water projects.

Supporting our project management team will be AECOM's Northeast Design Center in Chelmsford, Massachusetts. With 150+ water and wastewater engineers and architects—many who have been with the company for 25+ years—this center has significant planning and design resources, including HVAC and plumbing resources, and regularly provides world-class design for major projects. This seasoned engineering team will provide the NFWB with a fully staffed design center specializing in engineering assessment and design production for water and wastewater projects.

On the following pages are brief biographies of our key staff and subcontractors. Detailed resumes showing education, credentials and additional projects are provided in **Appendix A.**



* PE registration in state other than NY

S Partner Consultant

Brief Biographies of our Team Members

▶ JAMIE JOHNSON, PE, LEED AP — Project Director

18 years of experience

BS
LEED AP
NY PE

10% available

Jamie is experienced in planning, process design, and permitting for wastewater treatment and collection systems, energy performance, construction management, and project management. She has served as a QA/QC lead on multiple multi-discipline WWTP and pumping system upgrade projects throughout New York State. Jamie is involved in the NY Water Environment Association serving on the statewide Programming Committee, Diversity, Equity, and Inclusion (DE&I) Committee, and is an elected board member of the Western Chapter of NYWEA.

▶ JEFFREY TUDINI — Project Manager

17 years of experience

MS, BS

50% available

As the project manager, Jeff will lead the day to day activities of the proposed team throughout this assignment. Jeff has 15 years of experience as a consultant in industrial and municipal wastewater treatment including serving as the lead engineer for the NFWB biological treatment pilot and capital improvement design Project 1 (Sedimentation Basin and Scum Collection Modifications).

▶ JOHN GOEDDERTZ, PhD — Client Liaison

36 years of experience

Phd, MS, BS

25% available

Dr. Goeddertz will bring his knowledge and experience of NFWB's facilities, including multiple evaluations and designs for the WWTP, to provide senior technical guidance. Dr. Goeddertz is a wastewater and stormwater process evaluation and NPDES permitting expert. He has worked extensively in the evaluation, concept design, detailed design, permitting, construction, operations, and troubleshooting of municipal and industrial treatment facilities.

▶ JEFF READE — Technical Advisor

34 years of experience

MS, BS

25% available

Jeff is a wastewater treatment process specialist with 30 years of combined design, commissioning, and operating experience at both municipal and industrial facilities. He has a proven track record with the integration of treatment plant processes and energy recovery/generation systems and with the application of control systems for optimization and energy management.

▶ JIM MCQUARRIE, PE — Technical Advisor

30 years of experience

BS

25% available

Jim has over 25 years of practical experience in the municipal wastewater industry evenly split between public and private sector roles. On this project he will support the team with his experience in in wastewater process innovation, and large utility operations management.

▶ ANUPAMA MOHANLAL — Project Engineer

8 years of experience

MS, BT

50% available

Anupama is a civil engineer with knowledge and professional experience in water and wastewater design work. Her experience includes wastewater treatment plants, water mains, water towers, ground storage tanks, water treatment processes, sewers, and pump stations.

▶ DAN CASPER — Staff Engineer

1 year of experience

BS

50% available

Dan is a project engineer with professional experience in municipal capital improvement project work. His experience includes municipal facilities, water supply/ distribution, sewerage works, and wastewater solutions.

EMILY BLANCHARD — Staff Engineer

1 year of experience

MS, BS

50% available

Emily is a civil/environmental engineer for the water/wastewater group in the Buffalo office. Her experience includes water resources and wastewater solutions. Her responsibilities in various projects include data analysis, shop drawing and submittal review, assisting in site visits, and CAD work.

KAREN BETTENCOURT, PE — Mechanical Process Engineer

23 years of experience

BS

20% available

Karen is an engineer with experience in water and wastewater treatment engineering, design, and drafting. She has designed mechanical process systems for water and wastewater treatment systems and other environmental treatment facilities.

JERRY OTTERSON, RA — Architecture

50 years of experience

MS, MBA, BA

20% available

Jerry is a senior Architectural manager in the Chelmsford office. His areas of expertise include Architectural discipline management, design project management and quality control, construction project management. His project experience includes industrial, water treatment and wastewater treatment facilities, and Department of Defense projects.

MICHAEL MALENFANT, PE — Structural Engineer

24 years of experience

MS, BS, NYPE

20% available

Michael is a senior structural design engineer with experience in all aspects of structural engineering design, engineering computer analysis, construction services, and structural condition assessments throughout the world. He has extensive experience in the analysis, design, field investigation, condition assessment, and retrofit of reinforced concrete structures for water and wastewater treatment facilities and ancillary structures, including pumping facilities.

YASSER RIZK, PE — Electrical Engineer

33 years of experience

BS

20% available

Yasser is a senior electrical engineer in AECOM's Northeast Design Center in Chelmsford, MA, and is the electrical and control systems department manager. He is specialized in electrical engineering and control systems design for wastewater collection, pumping, treatment, and disposal systems. Yasser is highly skilled in electrical system assessment and design and coordination of mechanical process, HVAC, and control systems for environmental treatment facilities.

SARAH PAPAZIAN — I&C Engineer

15 years of experience

BS

20% available

Sarah is a technical specialist with experience in the design of instrumentation and control systems for a variety of environmental treatment systems including water and wastewater. She is a member of the International Society of Automation and is a Past President of the Boston Section.

CHARLIE TRIPP, PE — Pipeline Condition & Rehabilitation

19 years of experience

MS, BS

50% available

Charlie is a project manager with over 16 years of experience specializing in the design, management, and oversight of municipal infrastructure rehabilitation and construction projects. His portfolio of experience incsludes a variety of disciplines involving wastewater and stormwater collection systems, water resources, wastewater treatment, and site-civil design.

RYAN DELAMERE — Construction Inspection

12 years of experience

BS

100% available

Ryan is an Engineer-In-Training (EIT) with 12 years of project engineering experience with municipal capital improvement project work, including municipal facilities, water supply/distribution, and sewerage works. His responsibilities have included resident project representation, testing certification, submittal review, quantity measurement and progress documentation.

Brief Biographies of our Partner Consultants

The AECOM team shares the NFWB's commitment to providing meaningful growth opportunities for M/D/WBE firms on your assignments. We are committed to providing significant subcontracting opportunities for diverse suppliers and often helps further the growth of our M/D/WBE partners.

When selecting subconsultant team members we not only looked for local firms that brought the right credentials, we specifically looked for firms that have successfully worked with AECOM and NFWB. We wanted firms who bring keen insight into the project area, knowledge of NFWB's systems, as well as the design intent of the proposed work to be completed under these services.

JM Davidson Engineer, DPC

JM Davidson Engineering, D.P.C. (JMD) is a consulting firm located in Western New York that offers a full range of civil engineering services, including structural, transportation, water and wastewater, water resources, and railroad design services. In addition, JMD is a woman owned business enterprise (WBE) firm with extensive experience locally in the water and wastewater industries.

Frandina Engineering and Land Surveying, PC

Frandina Engineering and Land Surveying, PC provides high quality land and construction surveying services throughout Western New York. In 2005, Rosanne Frandina, PE, LS, established Frandina Engineering and Land Surveying, PC as a wholly-owned Woman Business Enterprise (WBE). The firm is also a certified Disadvantaged Business Enterprise (DBE).

Their staff has significant experience working on the largest jobs in the Western New York region such as the Buffalo Niagara Airport, Niagara Falls International Airport, The Light Rail Rapid Transit System, The State University Construction Fund projects, University of Buffalo Medical School, Erie County Medical Center, the Buffalo Public Schools Project, Buffalo Waterfront and the Seneca Nation Buffalo Creek Casino in downtown Buffalo as well as projects funded by the NYS Department of Transportation. The firm brings unparalleled familiarity with government regulations and the ability to ensure your projects are fully in compliance with all the required government agencies.

Pathfinder Engineers & Architects

Pathfinder Engineers & Architects LLP, a Woman-owned Business Enterprise founded in 1998, is a recognized leader in the delivery of sustainable solutions, supporting public and private sector clients in a broad range of markets. They work with their clients to incorporate sustainable practices that can reduce life-time project and operations costs, while maintaining or enhancing the environment and occupant comfort and health. They have implemented "green" standards for its projects. Pathfinder strives to identify and implement cost-effective energy efficiency measures in its designs for new and existing facilities.

Watts Architects & Engineers

Watts Architects & Engineers is a professional design services, minority-owned, architecture and engineering firm with over 80 employees. They are a team of architects, engineers, and community builders. They work hand in hand with each of our clients to realize enduring designs and plan trustworthy foundations—to create space for what matters. As project partners, they are interpreters and amplifiers of your vision, transforming ideas into action and putting principles into practice to help reach your objectives. And that includes proactively managing both budgets and timelines throughout the course of every project—until the job is done. Many of their strongest partnerships have spanned decades, because they earn every opportunity and then, through collaborative success, earn the next one (and the next one). Founded in 1986 as a sole-proprietorship, environmental engineering firm by Edward O. Watts, PE, the firm has since evolved into a professional architecture and engineering design firm, with interconnected office locations in Buffalo, Rochester, Syracuse, and New York City.

AECOM

3

Relevant Experience

3. Relevant Experience

Demonstrated Experience on Similar Projects

AECOM's Water Practice is the culmination of more than 100 years of experience, technical leadership, and visionary thinking. Specializing in water, wastewater, and civil site services that incorporate sustainable solutions, AECOM offers comprehensive engineering services to local and state agencies and municipalities. Clients count on us for everything from initial planning and compliance studies to detailed design, turnkey construction, and assistance with facility operations and maintenance. They trust us to provide cost-effective engineering solutions that work for them in today's complex regulatory, institutional and public policy settings. With our in-house capabilities, AECOM will be able to address in a timely, cost-effective manner, the issues associated with this contract.

AECOM Experience

Our projects have involved all components of wastewater planning, collection and treatment, including sewers, pump stations, infiltration/inflow (I/I) and sewer system evaluation survey (SSES) studies, treatment plants, hydraulic modelling, energy evaluations and New York State Energy Research and Development Authority (NYSERDA) studies, overflow retention facilities, and outfalls. AECOM has been responsible for facilities planning and conceptual design studies, design, construction management, and operation & maintenance (O&M) for wastewater collection and treatment systems.

Our full-service Buffalo office, with assistance from our northeast along with our other nationwide offices, offers the following services to provide a "one-stop shop" for all of NFWB's needs:

- Structural Engineering
- Mechanical Engineering
- Electrical Engineering
- Environmental Permitting
- Asbestos / Lead Abatement
- Environmental Remediation
- Energy Audits
- Architecture
- 3D Renderings
- Construction Inspection Services
- Survey
- Fire Protection Engineering
- Health & Safety Audits & Training
- Geotechnical Engineering
- Underground Storage Tank Design & Remediation
- GIS

This variety of services offered allows AECOM to assist NFWB on almost any project.

We have a long history of successfully completed projects for NFWB, where we have repeatedly demonstrated our commitment to quality and our ability to respond to the needs of each project.

Representative examples of our past project work on projects for NFWB and other representative projects that include members of our proposed staff follow.

AECOM has completed many roof replacements on various water treatment plants. Below is a partial list of where we have done this in the Northeast besides NFWB:

- **Ashley Water Treatment Plant Roof Replacement**
- **Amelia Earhart Dam – Personnel and Shelter Buildings**
- **Salem-Beverly Water Supply board WTP Lab Roof**
- **Portsmouth NH Peirce Island WWTP Upgrade**
- **Newport, RI WWTP Upgrade Roof Replacement**
- **Newcastle County, DE WWTP Upgrade**

Wastewater Treatment Plant Professional Engineering Services Project Summaries

Niagara Falls Water Board, Buffalo, NY

AECOM is and has been contracted to provide professional engineering consulting services to the Niagara Falls Water Board (NFWB) on a variety of critical engineering projects at the NFWB wastewater treatment plant (WWTP).

A sample of the projects assigned and executed include:

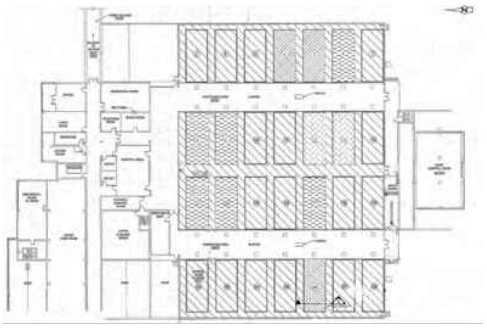
Sedimentation Basin & Scum Removal System Improvements

The project involves comprehensive upgrades to the sedimentation basins, including the replacement of the traveling bridge scum collector, upgrading mechanical drives, extending effluent weirs for compliance, modifying the chain and flight system, upgrading the submersible pumping system, and enhancing the Scum Building with new pumps, screens, heaters, piping, and controls. These improvements aim to eliminate excessive maintenance, ensure compliance with standards, and enhance the overall operation of the NFWB WWTP.

Effluent Disinfection System Upgrades

The project involves design and construction of a complex effluent disinfection system, addressing unique challenges such as elevated sulfide and reduced iron concentrations. The implemented system, operational since 2021, features four chemical feed pumps with variable frequency drives, six Total Residual Chlorine (TRC) analyzers for process control, and a sophisticated automated control algorithm, resulting in improved effluent TRC values and a more favorable effluent color.

GAC and Carbon Filter Gravel Replacement



The project encompasses tasks such as preparing an engineer's report and contract documents, providing bid services, construction inspection, management, and record drawing preparation, focusing on the removal, disposal, and replacement of GAC and filter support gravel, as well as inspecting and cleaning the carbon filter interior.

Client Reference

Niagara Falls Water Board
Doug Williamson, PE
Director of Technical and Regulatory Services
5815 Buffalo Avenue
Niagara Falls, NY 14302
(716) 283-9770

Project Cost

Sedimentation Basin & Scum Removal System Improvements – 2020
Construction Cost:
$8,316,110

Effluent Disinfection System Upgrades -2021
Authorized Amount:
$1,600,000

GAC and Carbon Filter Gravel Replacement- 2020
Authorized Amount:
$1,273,500

Pilot Studies (Bio and ClO2) - 2021
Authorized Amount:
$1,300,000

Consent Order Assistance Projects
Authorized Amount
$350,000

NaOCl Improvement Project (current)
Authorized Amount:
$200,000

Onsite Environmental Monitoring (current)
Authorized Amount:
$400,000

Project Personnel

John Goeddertz, PhD
Jeff Tudini
Jamie Johnson, PE
Dan Casper
Ryan Delamere

Project Personnel

JM Davidson Engineering

Wastewater Treatment Plant Professional Engineering Services Project Summaries *cont.*

Niagara Falls Water Board, Buffalo, NY

Biological Treatability & Chlorine Dioxide Pilot Study

The biological treatability study included conducting an 8-month pilot study evaluating the effectiveness of two biological treatment technologies, namely an activated sludge process with a membrane biological reactor (MBR) and an attached growth system using moving bed biological reactors (MBBR). The study aimed to demonstrate the treatability of wastewater, assessed seasonal impacts, and provided design parameters for potential future use of biological treatment processes at the NFWB wastewater treatment plant.

The chlorine dioxide study involved assessing chlorine dioxide as an oxidizer for addition to the NFWB carbon filter influent, aiming to reduce or prevent sulfide formation. Various testing parameters were collected to compare the effects of two oxidants, sodium hypochlorite and chlorine dioxide, on the carbon filter, with the goal of determining whether there is an improvement in meeting effluent chlorine demand requirements.

Consent Order Assistance Services

Multiple Consent Order items have been successfully completed by AECOM. Consent Order projects that have been completed to improve the WWTP operations include an effluent disinfection evaluation, improving Sedimentation Basin 5 treatment options via chemical addition, a carbon filter oxidation evaluation, and treatability pilots.

Sodium Hypochlorite Improvements

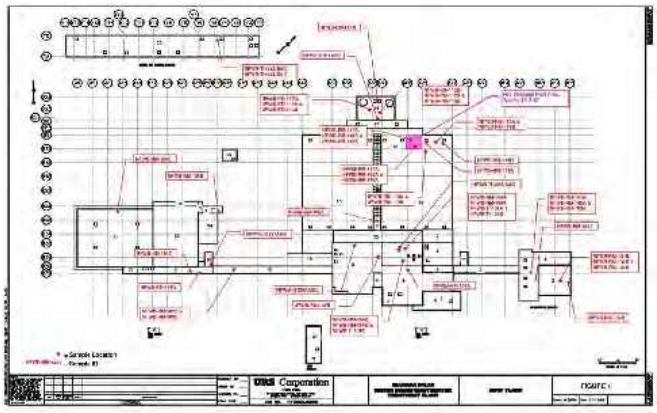
This project involves providing engineering design and construction phase services for NFWB WWTP improvements including the replacement of Sodium Hypochlorite Storage Tank 216 with provisions for secondary containment as per regulations. Additionally, the project includes the installation of two new sodium hypochlorite addition pumps for carbon filter backwash water and related improvements in the Odor Control Building to support these enhancements.

Onsite Environmental Monitoring

AECOM, serving as the designated environmental monitor, has played a crucial role in providing oversight, recommendations, and guidance for the NFWB WWTP's operations and maintenance, contributing to enhancements in various aspects of the treatment process.

Wastewater Treatment Plant Roof Replacement Project

Niagara Falls Water Board, Buffalo, NY



AECOM evaluated, designed, and provide construction phase services for the replacement of the majority of the roof surfaces at the NFWB WWTP. AECOM's scope included the following major tasks:

Task 1 – Field Investigation and Preliminary Design Report to include infrared roof survey and asbestos survey of all 38 roof surfaces along with recommended scope of construction and cost estimate.

Task 2 – Detailed Design to include plans and specifications suitable for competitive bidding

Task 3 – Bid Phase Services

Task 4 – Construction Admnistration

Task 5 – Construction Inspection

This work included the evaluation and design of replacement for the WWTP's 35 year old original roof surfaces. The work included evaluation, design, and construction for the replacement of 33 of the facilities identified 38 roof surfaces. Due to budget constraints five (5) roofs were not replaced at that time (filters, rapid mix, and roof overhang at maintenance shop entrance). AECOM performed both daily on-site construction inspection and all work associated with management of the work and the contractor. The work was successfully performed on-time and on-budget with no significant change orders. AECOM also provided asbestos Project Management services as required by New York State Department of Labor requirements.

Client Reference

Niagara Falls Water Board
Doug Williamson, PE
Director of Technical and Regulatory Services
5815 Buffalo Avenue
Niagara Falls, NY 14302
(716) 283-9770

Project Cost

Engineer's Estimate: $2.48 million
Bid: $2.25 million
Completed Construction: $2.39 million

Completion

Design: 2012 - 2013
Bid Phase: 2013
Construction: 2013 – 2014

Project Personnel

John Goeddertz, PhD

Front Street Interceptor Rehabilitation

Capital Region Water, Harrisburg, PA

AECOM performed an evaluation and design phase services for the rehabilitation of a 107-year-old cast-in-place sewer that runs along a park near the Susquehanna River. The Front Street Sewer Interceptor is a major sewer line built in 1911 that carries upwards of 3 million gallons daily of wastewater and stormwater from half the City of Harrisburg and the Susquehanna Township to Capital Region Water's pump station on Front Street. The concrete pipe of the sewer was severely compromised with visible defects prior to rehabilitation.

The Front Street Interceptor Phase II project comprised the cured-in-place pipe (CIPP) rehabilitation of approximately 15,043 linear feet of reinforced concrete pipe that varied in size from 750 mm x 750 mm to as large as 1050 mm x 1050 mm. A variety of rehabilitation technologies were evaluated including CIPP, segmental GRP, spiral-wound PVC, spray-on polymers, and lay-up CFRP composites. CIPP with a reinforced composite was selected as the preferred alternative to proceed to detailed design. Preliminary design was completed in the summer of 2020, detailed design was completed in 2022, with construction taking place between April – September 2023.

The liners were installed in 28 unique shots from April through September 2023. The post-construction assessment was carried out to ascertain compliance of the installed CIPP with the design objectives for the project. The assessment included review of all post-installation closed-circuit television (CCTV) inspection videos, CIPP fabrication wet out reports, CIPP cure installation and monitoring logs, independent third-party laboratory testing of liner segment specific samples cured onsite during installation, and structural assessment of the installed liners versus the site-specific loading.

A design reconciliation review process was conducted as part of this project as a QA/QC for the installed CIPP. This was conducted to confirm the pipe repair would meet the short term and long-term design objectives relative to the structural integrity and overall quality of installation.

Client Reference

Capital Region Water
Jeffrey Bowra, PE, PMP
Vice President of Engineering
3003 North Front Street
Harrisburg, PA 17110
(717) 216-5255

Project Cost

$18.4M

Completion

Design: 2020 - 2022
Construction: 2023

Project Personnel

Charlie Tripp, PE

Riverside Pump Station Generator

Greater Lawrence Sanitary District, North Andover, MA

The Greater Lawrence Sanitary District (GLSD) owns and operates a regional WWTF designed for 52 MGD (average) to treat wastewater generated from the communities of Lawrence, Methuen, Andover, North Andover, Dracut MA and Salem, NH. The WWTF is comprised of preliminary treatment, primary sedimentation, secondary biological treatment, secondary sedimentation, disinfection and dechlorination. Biosolids produced by the treatment process are thickened, anaerobically digested, dewatered and thermally dried.

In 2019, the Massachusetts Department of Environmental Protection (MassDEP) issued an Administrative Consent Order to GLSD to install a permanent standby generator at their Riverside Pump Station (RSPS). The ACO required that the standby generator be installed and operational in only 7 months. Due to the aggressive schedule, there was not enough time to design, bid and install a new standby generator. As a result, AECOM assisted GLSD with the purchase of a used 3MW, 4,160V Caterpillar Model C175-16 diesel generator from Milton CAT. AECOM was also able to fast-track the design and construction of this project including all environmental, air and noise permitting approvals and the project was successfully constructed and brought online to meet the consent order requirements.

Client Reference

Greater Lawrence Sanitary District
Cheri Cousens
Executive Director
240 Charles St
North Andover, MA 01845
978-685-1612

Project Cost

$18.4M

Completion

Design: 2016 - 2021

Project Personnel

Yasser Rizk
Jeff Reade
Michael Malenfant

AECOM

4

Organization Qualifications

4. Organization Qualifications

Required Information

1. **Any other names under which proposer has done business in the past 10 years:**
   URS Corporation became part of AECOM in 2014. URS Corporation has worked for The City of Niagara Falls and the Niagara Falls Water Board since 1995.
2. **List all subsidiary and parent companies:**
   AECOM Technical Services, Inc. owns AECOM USA, Inc. at 100%. AECOM USA, Inc. is a direct wholly-owned subsidiary of AECOM Technical Services, Inc. and an indirect wholly-owned subsidiary of AECOM (parent) company.

   Subsidiaries:
   AECOM Architects & Engineers (NJ), Inc.
   AECOM INGENIERIA S.A. de C.V.
   AECOM Libya Housing and Infrastructure, Inc.
   AECOM Pacific, Inc.
   AECOM Recovery
   AECOM USA of Massachusetts, Inc.
   AECOM USA of Michigan, Inc.
   ATC Architecture, Inc.
   Consoer Townsend Envirodyne Engineers of Indiana, Inc
   DIT-Harris, S.A.
   DMJM Aviation, Inc.
   DMJM, Inc.
   DMJM+HARRIS CANADA INC.
   Egis-Semaly, Inc.
   Envirodyne Engineers, Inc.
   Envirodyne Engineers, Inc.
   Envirodyne Engineers, Inc.
   ESCY Consultants Limited
   Frederic R. Harris, Inc.
   Lim & Nascimento Engineering Corporation
   Material Testing Services, Inc.
   Maunsell Harris Consulting Engineers Pvt. Ltd.
   Metcalf & Eddy de Panama, S.A.
   Metcalf & Eddy of New York, Inc.
   Metcalf & Eddy of Ohio, Inc.
   P&D Consultants, Inc.
   Planeacion de Recursos Cientificos S.A. DE C.V.
   The Ellerbe Becket Company, LLC
   Urbitran Architectural/Engineering Group, Inc.
   Urbitran Architectural/Engineering Group, PLLC
3. **State whether proposer ever has been:**
   - **Debarred or suspended by any government entity from entering contracts with it:** No
   - **Found not responsible by any government entity:** No
   - **Declared in default or terminated for cause from any contract, or had any contract cancelled for cause:**
     AECOM USA, Inc. ("AECOM") performs thousands of contracts each year. From time to time, occasions arise when AECOM does not complete the performance of an awarded contract. These situations include (i) where a client terminates the contract for its convenience; e.g. where the client is unable to secure continued funding for the underlying project and, as a result, terminates the associated contract, (ii) where AECOM ceases performance under the contract in accordance with the applicable terms of the contract in response to the client's nonpayment or other breach, and the contract is ultimately terminated; and (iii) where one of the contracting parties terminates the contract for default.

     Upon knowledge and belief, formed after reasonable inquiry, during the past five years, AECOM (i) has not failed to complete a contract where the other party to such contract was not in breach unless the contract afforded AECOM that right and (ii) AECOM has not had a contract terminated by a client wherein that termination was ultimately determined to be other than for convenience.

   - **Required to pay liquidated damages on a contract:** No
4. **State whether proposer has filed for bankruptcy or been the subject of an involuntary bankruptcy proceeding:** No
5. **State whether proposer has been a party to any legal action or government investigation related to proposer's business practices, or alleging that any of proposer's agents or employees committed:**
   On June 3, 2020, a whistleblower qui tam suit against various AECOM entities, related to AECOM's work for FEMA after Hurricane Katrina, was unsealed, and DOJ filed a notice indicating their intent to intervene in the case under the False Claims Act. DOJ filed their complaint against AECOM alleging violations of the False Claims Act on July 28, 2020. The allegations in the complaint primarily focus on the conduct of one AECOM employee who was terminated by AECOM in 2010 and focus on conduct largely, although not exclusively, between 2009 and 2011. We do not believe these allegations reflect on our present responsibility as a contractor. Please contact Howard Cohen, Vice President, Assistant General Counsel, Ethics & Compliance, howard.cohen@aecom.com, for additional details or questions. If proposer, any of proposer's principals, or any of proposer's agents has pleaded guilty or entered into a consent order in connection with respect to any of these, provide details.

AECOM

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Resumes

Delivering a better world

Jamie Johnson, PE, LEED AP

Project Director

Jamie is an environmental engineer, project manager and QA/QC advisor and reviewer with the water/wastewater design group of AECOM. She is experienced in planning, process design, and permitting for wastewater treatment and collection systems, energy performance contracting, construction management, and project management. She has served as the project manager and technical lead on multiple multi-discipline wastewater treatment plant upgrade projects throughout New York State. Jamie is also involved in the NY Water Environment Association serving on the statewide Programming Committee, Diversity, Equity, and Inclusion Committee, and is an elected board member of the Western Chapter of NYWEA.

Years of Experience

Total: 19
With AECOM: 3

Education

BS, Civil/Environmental Engineering, Purdue University, 2005

Licenses/Certifications

Professional Engineer, NY, MI, TX

LEED Accredited Professional

Professional Affiliations

New York Water Environment Association

Water Environment Federation

Project Experience

Erie County Department of Environment and Planning (ECDEP), Lackawanna Water Resource Recovery Facility Solids Handling Rehabilitation, Lackawanna, NY. Wastewater Design Engineer. Currently providing guidance to the team from 30% basis of design stage through to 60% and 90% detailed design deliverables. Specific tasks include oversight and quality control for detailed drawing and technical specification development, as well as assisting the project manager with project management tasks as necessary.

Buffalo Sewer Authority (BSA), Bird Island Treatment Facility Secondary System Rehabilitation, Buffalo, NY. Project Manager/Client Manager. Responsible for cost and resource management to support the construction of upgrades to and rehabilitation of the secondary system for the Bird Island treatment facility.

Niagara Falls Water Board (NFWB), Interior and Exterior Piping Improvements, Niagara Falls, NY. Project Manager. Responsible for various interior and exterior piping-related improvements at the WWTP, including plant water piping, city water piping, spent carbon transport piping, sedimentation basins drain line, and sodium hypochlorite yard piping.

Dormitory Authority of the State of New York (DASNY), Mid-Hudson Forensic Psychiatric Center Rehabilitation, Buffalo, NY. Project Manager/ Technical Lead. Responsible for preliminary design and evaluation of a new sewer pump station to convey sanitary flow from the Mid-Hudson Forensic Psychiatric Center to the City of Middletown Wastewater treatment plant, roughly 18,000 linear feet away with over 120-feet of elevation change along the alignment. The evaluation included preliminary construction costs for the entire utility package, including the sewer route, a water main extension, and a sewer pumping station.

City of Auburn, NYSERDA FlexTech and Energy Performance Contract, Auburn, NY. Technical Lead. Responsible for an energy performance contract to implement energy efficiency improvements, resulting in operation and maintenance savings. Specific improvements included the replacement-in-kind of an existing grit classifier system, installation of a new septage receiving station, as well as aeration tank feed pump upgrades designed to address the wide range of influent flows at the plant while simultaneously eliminating inefficient double-pumping.

Jamie Johnson, PE, LEED AP - Project Director

Erie County Division of Sewerage Management (Erie County DSM), Iroquois Pumping Station Rehabilitation, Lancaster, NY. Project Manager/ Technical Lead. Responsible for the final design of improvements to the Iroquois pumping station located in DEP's Northern Region. The work included construction of a new concrete drywell, replacement of all internal discharge piping including valves and fittings, installation of two new solids handling influent pumps, complete upgrade of the electrical and control systems, and a new bypass piping arrangement.

Fresenius Kabi, Wastewater Treatment Facility Expansion Project, Grand Island, NY. Project Manager. Responsible for this complex project consisting of an expansion of the wastewater treatment facility to accommodate additional flows related to an increase in product production. The work included the installation of a new continuous flow sequencing batch reactor treatment process, new influent pumping station, a new plant-wide SCADA system, and miscellaneous mechanical, structure and architectural modifications throughout the facility.

City of Dunkirk, Dunkirk WPCP Improvements (Phase 2), Dunkirk, NY. Project Manager/Technical Lead. Responsible for the alternative's analysis, preliminary engineering, grant assistance, and detailed design for the complete replacement of the WPCP's solids handling processes. The work includes decommissioning of an existing lime silo, demolition of existing conditioning tanks, transfer pumps, piping and appurtenances; installation of two new belt filter presses, installation of a new lime silo to facilitate post-dewatering stabilization, new conveyance system to move sludge throughout the process, new solids handling pumps, piping, valves and appurtenances. The work also included a major overhaul of the electrical and control systems associated with this process.

Village of Fredonia, Fredonia WWTP Upgrades, Fredonia, NY. Project Manager/Technical Lead. Responsible for the detailed design, grant application/ administration, and construction phase services for diffused aeration upgrades, complete filter system replacement, backwash pumping improvements, and comprehensive dewatering system replacement including major piping, pumping, polymer and conveyance upgrades; and miscellaneous mechanical, structural and electrical improvements.

Onondaga County Department of Water and Environmental Protection (OCDWEP), NYSERDA FlexTech Study and Energy Performance Contract, Syracuse, NY. Technical Lead. Responsible for an energy performance contract to implement energy efficiency improvements resulting in operation and maintenance savings. Specific improvements included post aeration system improvements, replacement of surface aerators, replacement of RAS pumps, replacement of existing centrifugal blowers with new turbo blowers, and associated electrical upgrades, SCADA integration and controls.

Washington Co. Sewer District, NYSERDA FlexTech and Energy Performance Contract, Fort Edwards, NY. Technical Lead. Responsible for an energy performance contract to implement energy efficiency improvements, resulting in operation and maintenance savings. Specific improvements included replacement of two centrifugal blowers with two new turbo blowers, replacement of existing coarse bubble diffusers with new ultra-fine bubble diffusers, as well as comprehensive dewatering system upgrades including the replacement of two existing belt presses with two new belt presses, new cake conveyors, polymer system improvements and associated SCADA integration and controls.

Detroit Water and Sewer Department (DWSD), Detroit Long Term CSO Control Plan Update, Detroit, MI. Project Engineer. Responsible for the treatment efficiency work group responsible for evaluating treatment technology alternatives for screening and disinfection of CSOs

Jeffrey Tudini

Project Manager

Jeffrey is an environmental engineer and project manager with the water/wastewater design group of AECOM. He has extensive experience working on projects at Niagara Falls WWTP. The wide range of projects that he has managed has given him a solid foundation for various consulting projects including, but not limited to, system designs and alternatives evaluations, and system startup/commissioning and operation.

Years of Experience
Total: 16
With AECOM: 5

Education
MS, Civil/Environmental Engineering, SUNY at Buffalo, 2007

BS, Civil/Environmental Engineering, SUNY at Buffalo, 2005

Licenses/Certifications
N/A

Professional Affiliations
N/A

Project Experience

Niagara Falls Water Board, Wastewater Treatment Plant Sedimentation Basin and Scum Removal Upgrades, Niagara Falls, NY. Lead process engineer and assistant project manager for the design of the capital improvement project to upgrade the WWTP primary treatment system and scum removal process. The design includes multiple unit upgrades with major systems including: increased basin weir length with the addition of effluent finger weir troughs, chain and flight sludge scrapper units, and full upgrade of the scum removal system including the use of fine screen scum separation units.

Niagara Falls Water Board, Wastewater Treatment Plant Effluent Disinfection Upgrades, Niagara Falls, NY. Process engineer for the design of the capital improvement project to upgrade the WWTP effluent disinfection system. The design was developed to improve the WWTP control and monitoring of the WWTP effluent disinfection process using sodium hypochlorite. This system presents multiple design considerations given the plants variability of chlorine demand from sulfide generation in their secondary treatment process. This system is designed with a robust control and monitoring system to allow for consistent effluent disinfection.

Niagara Falls Water Board, Wastewater Treatment Plant Optimization, Niagara Falls, NY. Lead process engineer to develop physical/chemical treatment system alternative evaluations to improve the performance of the existing WWTP. Evaluations include: improvements to the effluent disinfection process; physical/chemical treatment optimization (i.e., treatment chemicals); and chemical use (i.e., oxidant) at the GAC filters. As lead process engineer, develop test plans and treatment systems to evaluate optimization conditions and provide Engineering Repots and recommendations for improved system operations.

Niagara Falls Water Board, Wastewater Treatment Plant Biological Treatment Evaluation, Niagara Falls, NY. Lead process engineer to develop and test pilot-scale biological treatment systems to evaluate if a future conversion of the existing WWTP is an alternative. The technologies tested included a membrane biological reactor (MBR) system and an attached growth moving bed biological reactor (MBBR) system. Pilot testing was conducted over an 8-month period to evaluated multiple test conditions and evaluated the wastewater treatability using different biological systems.

Erie County Department of Environmental Planning, Lackawanna Wastewater Treatment Plant, Erie County, NY. Lead process engineer and assistant project manager for the evaluation of the Lackawanna WWTP solids handling systems including the gravity thickener, digesters, and the dewatering

Jeffrey Tudini - Project Manager

process. This evaluation assessed the primary and secondary solid wasting processes, digester operation along with inspections, and overall system conditions. Multiple alternatives were developed to improve the current solids handling process including different digester covers (i.e., fixed, floating, gas holding, and membrane), digester sizes, digester mixing systems, and process monitoring and redundancy equipment.

Buffalo Sewer Authority, Wastewater Treatment Plant Co-Digestion Alternatives Evaluation, Buffalo, NY. Lead process engineer and assistant project manager for the concept design for accepting high strength waste (i.e., food waste) at the Buffalo Sewer Authority's Bird Island WWTP. Conducted a holistic evaluation for incremental acceptance ranging from 100,000 to 400,000 lbs. VSS/day of high strength food waste for treatment and co-digestion at the WWTP. ystem evaluation included multiple alternatives including traffic modifications to improve the hauled waste program, unit process upgrades for the receiving station, digestion process, dewatering process, and digestion gas facilities. Ultimately, this evaluation provides the basis for accepting high strength food waste at the WWTP and the road map for capital improvements that align with the incremental acceptance of the high strength waste stream.

Southern Company, Wastewater Treatment System, GA. Project manager and lead process engineer for a low-volume wastewater treatment system alternatives evaluation and treatment system design. Developed treatment system concept designs for temporary and permanent systems with critical compliance deadlines upcoming. Successfully delivered project scope on time to maintain system compliance and meet future design demands.

Textile Client, Treatment Evaluation, SC. Project manager and process engineer for an antimony treatment evaluation project. Perform an alternatives evaluation to review options to modify the facility's existing WWTP to improve treatment for antimony, while reducing chemical costs, and improving sludge management. Assisted the client with reviewing antimony treatment alternatives, provided conceptual designs and cost estimates for the alternatives, and worked with the client to conduct bench-scale testing and confirm the performance of the selected treatment process.

Effluent Disinfection Evaluation, GA. Served as project manager and process engineer for an effluent disinfection evaluation project. Perform an alternatives evaluation to review options to comply with new residual chlorine limits, while remaining in compliance with the existing pathogen permit requirements. Assisted the client with reviewing effluent disinfection alternatives, provided conceptual designs and cost estimates for the alternatives, and worked with the client and the selected technology vendors to review the treatment performance.

Columbus Water Works, Industrial Discharge Limits, Columbus, GA. Project manager and lead process engineer to develop local limits for industrial discharges to the South Columbus Water Reclamation Facility (SCWRF). This evaluation was conducted using water quality analytical data and information provided by CWW. The overall objective is to define the maximum loads available for the current industrial users discharging to the SCWRF and serve as a basis to determine if/what limits need to be set on the industrial sources and/or what improvements or adjustments should be made to the SCWRF to maintain effluent compliance.

EPRI and TVA Kingston, Treatment Evaluation/Pilot, TN. Project manager for a full-scale FGD wastewater treatment evaluation to optimize physical/chemical treatment performance. This full-scale pilot includes the evaluation of multiple treatment conditions using common physical/chemical treatment chemicals (flocculant and coagulants) to assist EPRI with developing an FGD wastewater treatment operations manual.

Textile Client, Multiple Wastewater Treatment Plant Projects, GA. Project manager and process engineer for a wide range of projects. Initial scope of work was to evaluate the capacity and operation of existing WWTP as well as mimic with bench scale operations with range of influent sources. Following successful evaluation, Mr. Tudini served as the Client's engineer for a range of projects. Projects/tasks include toxicity identification/ reduction evaluations, WWTP operator training, solids management evaluations, permit renewal, antidegradation study, and conceptual effluent filtration study that has progressed to a full-scale design that was successfully constructed and started up in March 2014.

John Goeddertz, PhD

Client Liaison

Dr. Goeddertz is a wastewater and stormwater process evaluation and NPDES permitting expert who brings many years of experience working on Niagara Falls WWTP. He has worked extensively in the evaluation, design, permitting, construction, operation, and troubleshooting of stormwater/wastewater management and treatment facilities for both municipal and industrial clients.

Years of Experience

Total: 36
With AECOM: 19

Education

PhD, Civil Engineering, State University of New York at Buffalo, 1990

MS, Civil Engineering, State University of New York at Buffalo, 1986,

BS, Civil Engineering, State University of New York at Buffalo, 1984

Licenses/Certifications

N/A

Professional Affiliations

N/A

Project Experience

Niagara Falls Water Board, Wastewater Treatment Plant Sedimentation Basin and Scum Removal Upgrades, Niagara Falls, NY. Project Manager for the design of the capital improvement project to upgrade the WWTP primary treatment system and scum removal process. The design includes multiple unit upgrades with major systems including: increased basin weir length with the addition of effluent finger weir troughs, chain and flight sludge scrapper units, and full upgrade of the scum removal system including the use of fine screen scum separation units.

Niagara Falls Water Board, Wastewater Treatment Plant Effluent Disinfection Upgrades, Niagara Falls, NY. Project manager for the design of the capital improvement project to upgrade the WWTP effluent disinfection system. The design was developed to improve the WWTP control and monitoring of the WWTP effluent disinfection process using sodium hypochlorite. This system presents multiple design considerations given the plants variability of chlorine demand from sulfide generation in their secondary treatment process. This system is designed with a robust control and monitoring system to allow for consistent effluent disinfection.

Niagara Falls Water Board, Wastewater Treatment Plant Biological Treatment Evaluation, Niagara Falls, NY. Project manager responsible to develop and test pilot-scale biological treatment systems to evaluate if a future conversion of the existing WWTP is an alternative. The technologies tested included a membrane biological reactor (MBR) system and an attached growth moving bed biological reactor (MBBR) system. Pilot testing was conducted over an 8-month period to evaluated multiple test conditions and evaluated the wastewater treatability using different biological systems.

Niagara Falls Water Board, Wastewater Treatment Plant Capital Improvements Program Management, Niagara Falls, NY. Served as program manager for implementation $7 million worth of capital upgrades to the Niagara Falls WWTP. Work included project scoping and preparation of engineering RFPs for bidding by consulting firms. An important aspect was preparation of accurate cost estimates that would determine how much work could be performed and stay within the allotted budget. Reviewed engineering proposals and recommended award. Responsible for review of project deliverables during desgn.

Niagara Falls Water Board, Wastewater Treatment Plant Optimization, Niagara Falls, NY. Project manager responsible to develop physical/chemical treatment system alternative evaluations to improve the performance of the existing WWTP. Evaluations include: improvements to the effluent disinfection process; physical/chemical treatment optimization (i.e., treatment chemicals); and chemical use (i.e., oxidant) at the GAC filters.

John Goeddertz, PhD - Client Liaison

Buffalo Sewer Authority (BSA),Secondary System Rehabilitation and Upgrades, Buffalo, NY. Project manager. Provided engineering design services to replace the existing fine bubble diffuser aeration system with a more energy efficient aeration system. Rehabilitated the existing secondary treatment system including various valves and flow meters, the return activated sludge system, waste activated sludge system, and installation of stop logs in effluent channels and Chlorine Contact Tank.

Town of Amherst, Scum System Improvements, Amherst, NY. Project manager. Evaluated and implemented improvements to the facility's primary, secondary, and tertiary clarifiers scum removal systems (3 separate systems), including replacement of existing inoperable pneumatic injectors with 3 duplex chopper pump centrifugal pump systems. Design improvements included combining both primary clarifiers scum systems into one common system thereby eliminating the need for separate primary scum systems. Provided detailed design and construction phase services.

Town of Amherst, Gate Actuator Replacement with Hydraulic Actuators, Amherst, NY. Project manager. Evaluated and implemented improvements to the facility's influent pumping station (Building 1) isolation gates to switch from electric motor actuators to hydraulic cylinder based systems to eliminate having electrical components located in an area that routinely flooded. The work included 9 separate actuators, of which 5 were vertical gates, and 4 were ¼ turn butterfly gates. All 9 gates were powered from a common hydraulic power pack located in the dry well that was not subjected to flooding. Provided detailed design and construction phase services.

North Chautauqua Lake Sewer District, Wastewater Treatment Plant Upgrades, Mayville, NY. Project manager. Evaluated the existing condition of the NCLSD WWTP and prepared an engineering report for recommended capital improvements. After acceptance of the Engineering Report by the NYSDEC, tasked with preparing the detailed design and managing the bidding process. The work consisted of replacing the facilities RBCs with new RBCs and replacement of the influent screw pumps and controls. During construction provided resident inspection and construction administration services. The project was completed under budget. As a follow-on project, provided complete engineering services to assist the NCLSD with replacement of the roof on the administration building. Work included asbestos survey, design, bidding, and construction inspection and administration.

Town of Amherst, Dewatering Polymer Make Up System Replacement, Amherst, NY. Project manager: Evaluated and implemented improvements to the facility's dewatering polymer make-up and feed systems. Work included a new bulk bag feeder/makeup system that eliminated the need for operators to handle numerous 50 pound bags and the resulting fugitive dust conditions. Design improvements resulted in reduced polymer consumption as a result of improved makeup and aging; along with a reduced unit price for polymer in switching to the larger super sack units. The system also included new polymer feed pumps with VFDs that were integrated into the facility's existing centrifuge controls via the plant's SCADA system. Provided detailed design and construction phase services.

Town of Chautauqua, Phosphorous Reduction Engineering Evaluation, Chautauqua Heights Sewer District, Chautauqua, NY. Project manager. In response to the issuance of a phosphorous total maximum daily load TMDL) the Town of Chautauqua Chautauqua Heights Sewer District (CHSD) was tasked with evaluating and implementing WWTP upgrades that would reduce their phosphorous loading to Chautauqua Lake by approximately 80%. Interim removal limits were also established at 1 mg/l. AECOM evaluated compliance options and determined that significant upgrades to the small plant would be required in order to meet the approximately 0.3 mg/l effluent limitation. Alternatively, options to eliminate the WWTP and instead pump the plant's influent wastewater to the NCLSD WWTP in Mayville were also considered. This option was evaluated as a stand-alone option or implemented in conjunction with an overall "sewer the lake" alternative that would provide sewer service around the entire Chautauqua Lake. Ultimately the option to close the plant and instead convert it into a pumping station that would pump the wastewater to the NCLSD was selected. Grant applications were prepared and submitted to the NYSEFC.

City of Salamanca Board of Public Utilities, Treatment Plant Upgrades, NY. Technical Lead. Evaluated effect of proposed casino facilities on existing treatment plant and recommended upgrades to treatment plant to enable processing of casino flows and loadings. Designed and installed upgrades to aeration facilities (fine bubble diffused air with DO control) and solids handling facilities (thickening, dewatering, and pumping). Novel thickening process was implemented to thicken aerobic digester contents so that additional thickener volume was not necessary.

Jeff Reade

Technical Advisor - Energy Optimization / Operations

Jeff is a wastewater treatment process specialist with 20 years of combined design, commissioning, and operating experience at both municipal and industrial facilities. His areas of expertise include both aerobic and anaerobic biological processes, treatment plant and conveyance system hydraulics, process automation, and oxygen transfer. Mr. Reade has a proven track record with the integration of treatment plant processes and energy recovery/generation systems and with the application of control systems for optimization and energy management. His process optimization work is informed by his experience as the director of 70 operations and process control staff at Boston's 1,270-mgd Deer Island treatment plant.

Years of Experience
Total: 34
With AECOM: 18

Education
MS, Environmental/ Environmental Health Engineering, Worcester Polytechnic Institute, 1997

BS, Chemical Engineering, Northeastern University, 1986

Licenses/Certifications
N/A

Professional Affiliations
N/A

Project Experience

District Water and Sewer Authority, Blue Plains Wastewater Treatment Plant Program Management, Washington, DC. Provided technical review and process engineering support for several biological nutrient removal/enhanced nutrient removal projects, including the evaluation of ENR alternatives for the Blue Plains wastewater treatment plant. Performed preliminary design of energy recovery systems, including greenhouse gas emissions analyses, in the evaluation of a variety of biosolids processing and energy recovery options. Conducted process evaluations including preliminary design and modeling of a variety of suspended growth, fixed film, and hybrid (IFAS) treatment options.

Philadelphia Water Department, Digester-Gas-Fueled Cogeneration System Design, Philadelphia, PA. Process lead for the concept and preliminary design of a digester-gas-fueled cogeneration system for the 150-mgd Northeast water pollution control plant which will produce 5 megawatts of green energy and satisfy more than 80 percent of the facility's heating requirements.

City of Palo Alto, Aeration System Study, Palo Alto, CA. Task team leader for aeration system energy/operations and maintenance optimization at the regional water pollution control plant. Responsible for complete review of energy optimization opportunities to include aeration system retrofit, modeling of energy-saving biological process modifications, hydraulic analysis, and dissolved oxygen control strategies.

Philadelphia Water Department, Northeast Water Pollution Control Plant Digester Gas Piping Replacement, Philadelphia, PA. Process lead on the concept and preliminary design of a digester gas fueled cogeneration system for the 150-mgd water pollution control plant. The project is in design and anticipated to produce 5 megawatts of green energy and will satisfy over 80 percent of the facility's heating requirements.

Massachusetts Water Resources Authority, Deer Island Treatment Plant, Winthrop, MA. Technical lead and project manager for a variety of energy optimization programs at the Deer Island treatment plant to include optimization of operating strategies for a pure oxygen supply system to a large (710-mgd) secondary treatment process, as well as optimization of system hydraulics for a variety of pumping systems throughout the plant.

Jeff Reade - Technical Advisor - Energy Optimization / Operations

Massachusetts Water Resources Authority, Deer Island Treatment Plant, Winthrop, MA. Provided program management oversight for a variety of programs to leverage value of on-site generation systems at the treatment plant. Participation in renewable energy and high demand peak shaving programs resulted in revenue and/or avoided costs over $1 million annually.

West Walton Sewage Treatment Works, Activated Sludge Process Design, Construction, and Commissioning, Wisbech, England. Managed process design, mechanical design/construction, and commissioning at a 10-mgd high-rate activated sludge project. The project incorporated a variety of energy-savings measures including automated dissolved oxygen control of multi-stage centrifugal compressors, and state-of-the-art motor managers on all large horsepower rotating equipment.

Massachusetts Water Resources Authority, Deer Island Treatment Plant Optimization, Winthrop, MA. Directed plant optimization improvements at the wastewater treatment plant, including cryogenic oxygen control, digester gas utilization, and secondary reactor operation strategies, which led to savings of more than $2.3 million annually. Led participation in energy and renewable resource programs, generating an additional $1.6 million in annual non-rate revenue and plant performance, and meeting eligibility requirements for the Association of Metropolitan Sewerage Agencies' awards for NPDES permit compliance. Had responsibility for program management oversight of the preliminary design of wind power and photovoltaic facilities.

City of East Windsor, Moving Bed Biofilm Reactor System, East Windsor, NJ. Process lead for the development of a hybrid (MBBR) biological system for the treatment of a high-strength complex industrial waste to include physical/chemical pretreatment and conditioning.

City of East Providence, Biological Nutrient Removal Treatments, East Providence, RI. Provided process engineering support in the development of a variety of BNR treatment schemes to include the application of IFAS in an MLE or Bardebpho configuration for the 10-mgd water pollution control facility.

City of Cranston, Biological Nutrient Removal Treatment Alternatives Study, Cranston, RI. Provided process and operations evaluations for the contract operator to evaluate the capacity of the city's 14-mgd water pollution control facility and the impact of various treatment schemes on BNR performance. Provided recommendations that have since been implemented to improve the capacity and stability of the BNR treatment process.

City of Meriden, Nutrient Removal Plant Expansion, Meriden, CT. Process lead for the city's nutrient removal plant expansion. Responsible for the optimization of the biological process to balance biological oxygen demand, total nitrogen, and total phosphorus removal requirements with a combined strategy of biological and physical/chemical treatment to minimize chemical and utility costs. Assist plant operations and maintenance staff in the development of O&M strategies to ensure continuity of operation during construction.

Various Clients, On-Call Operation and Maintenance Support, Various Locations. Providing on-call process/operations and maintenance support to a variety of small- to medium-sized industrial and municipal wastewater treatment facilities, as a subcontractor to an international provider of wastewater treatment systems.

City of Calgary, Bonnybrook Wastewater Treatment Plant Feasibility Study, Calgary, Alberta. Provided technical review and oversight for a biogas utilization feasibility study for the 130-mgd wastewater treatment plant that evaluated a variety of options including internal combustion engines and gas purification for use with fleet vehicles. Codigestion of fats, oils, and grease was also evaluated in terms of its potential to increase gas output and quality.

Massachusetts Water Resources Authority, Deer Island Treatment Plant, Winthrop, MA. Deputy director of wastewater operations at the treatment plant, which provides wastewater treatment services to more than 40 cities in the metropolitan Boston area. Was also senior program manager for plant optimization. Responsible for oversight of enhancement of all process systems to reduce chemical and utility costs without sacrifice to permit compliance, including process design, definition, and prioritization of most major capital projects and prioritization of corrective maintenance activities. Managed the multidisciplinary technical staff supporting the plant's 25,000-tag distributed control system.

Jim McQuarrie, PE

Technical Advisor - Wastewater Process

Jim has over 25 years of practical experience in the municipal wastewater industry evenly split between public and private sector roles. On this master planning project he will support the team with his experience in in wastewater process innovation, and large utility operations management.

Years of Experience
Total: 30
With AECOM: 1

Education
BS, Rutgers University
MSCE, Colorado State University

Licenses/Certifications
Professional Engineer, CO

Professional Affiliations
N/A

Project Experience

Gloucester Water Pollution Control Facility, WPCF Upgrade and Improvements Project, City of Gloucester, MA. Served as Senior Technical Advisor on the front-end project definition phase of a $200M upgrade and improvements project for the 15 mgd WPCF. This project upgrades the primary only WPCF to secondary treatment and includes a complete replacement of the sludge management, dewatering, and loadout facilities. Currently, the WPCF hauls dewatered primary sludge that are restricted to landfill disposal and do not meet 503 biosolids quality requirements. The new upgraded facilities will produce dewatered cake that meets Class B requirements plus the site layout of the upgraded facilities include design and site provisions to accept installation of an indirect heat dryer for future positioning on overall sludge hauling and disposal economics and improved biosolids end-use opportunities including Class A options to maximize portfolio option flexibility for the City.

Utah Division of Water Quality, State-wide Nutrient Removal Cost Impact Study, UT. Senior Technical Advisor on project team to support the Utah Division of Water Quality with a Statewide Nutrient Removal Cost Impact Study to evaluate the economic impact and environment benefit of nutrient removal requirements for all of Utah's publicly owned treatment works (POTWs). The study estimated economic, financial, and environmental impacts associated with a range of potential nutrient discharge standards for every discharging POTW in the state. Through use of process and cost models, the study quantified the local and aggregate economic impacts that would result from implementation of statewide nutrient discharge standards for treated wastewater across the state and considered sensitivity of cost associated with different tiers of regulatory standards. The study deliverables were also set up and consisted of local area workshops to inform POTWs about how new effluent nutrient discharge limits might be addressed at their facilities, along with the associated capital and operation and maintenance (O&M).

Metro Water Recovery, Biosolids Dewatering Optimization, Denver CO. Senior director and technical advisor to project team tasked with addressing and improving the dewatering performance and economics for land use application of 85 dry tons per day of anaerobically digested sludge. Biosolids management is one of the largest cost centers for Metro, and costs are influenced by many factors. The team evaluated the factors that influence biosolids management logistics, dewaterability, and plant available nitrogen and phosphorus uptake limitations and associated costs associated with crop types (winter wheat and corn) on biosolids land application sites.

Jim McQuarrie, PE - Technical Advisor - Wastewater Process

Metro Water Recovery, Robert W. Hite Treatment Facility - Thermal Hydrolysis Pretreatment Engineering Evaluation, Denver CO. Senior advisor on program to conduct a detailed in-depth assessment of the potential for thermal hydrolysis pretreatment (THP) as a means of increasing the anaerobic stabilization capacity of the existing twelve digester complex and whether there were any economic or end-use benefits associated with production of a Class A product. The in-depth evaluation compared the feasibility and lifecycle cost-benefit of THP to increase digestion capacity at the 220 mgd facility versus additional pancake digesters or conversion to silo-digesters. The evaluation included 18 months of operation of a THP/digester system to characterizes volumetric loadings, ammonia toxicity, sludge rheology and pre- and post-dewatering properties influencing polymer consumption and cake solids dryness.

Hampton Roads Sanitation District, Advanced Nutrient Removal Improvements, Suffolk, VA. Lead Process Engineer. Lead process engineer for the design of a $260M nutrient removal and capacity expansion project. The project increases the capacity of the Nansemond Treatment Plant from 30 mgd to 50 mgd to meet HRSD's Sustainable Water initiative for Tomorrow (SWIFT) influent water quality management objectives. Expansion includes primary treatment, primary effluent equalization, 5-stage biological nutrient removal expansion, disinfection, gravity thickeners with integrated fermentation, primary solids screening, dewatering centrifuges, and odor control. Biological improvements design included provisions for implementation of mainstream anammox (Partial Denitrification Annamox (PdNA)) for compact, low-energy and carbon efficient nutrient removal.

Anupama Mohanlal

Project Engineer

Anupama is a civil engineer with knowledge and professional experience in water and wastewater design work. Her experience includes wastewater treatment plants, water mains, water towers, ground storage tanks, water treatment processes, sewers, and pump stations.

Years of Experience
Total: 8
With AECOM: 1

Education
MS, Environmental Engineering, University of Illinois, 2018

BT, Civil Engineering, National Institute of Technology, 2016

Licenses/Certifications
N/A

Professional Affiliations
N/A

Project Experience

Erie County Department of Environmental Protection, East Aurora Sand Filtration System Evaluation, East Aurora, NY. Served as Deputy Project Manager, major tasks encompassed budget oversight, analysis of present and projected flows at the WWTP, assessment of TSS removal efficiency and the state of existing sand filters, examination of alternative filtration technologies like disk filters (cloth media), conducting hydraulic analyses of current and alternative disk filters to gauge available head for gravity flow, prepare layouts for disk filter alternatives in CAD, drafting technical memoranda and cost estimates, and participating in client meetings.

Chastain and Associates LLC, Decatur, IL. Engineer, Water/Wastewater. Design water treatment plant, water mains, water towers, ground storage tanks, deep wells, waste treatment processes, sewers, pump stations for public entities. Compose project reports, IEPA loan and permit applications, disbursement requests, change orders, scope and budget proposals, review shop drawings, perform engineering calculations and oversee and guide construction activities. Prepare Safe Routes to School (SRTS), Lead Service Line Inventory (LSLI), Community Project Funding (CPF) grant applications and help communities secure funding for infrastructure improvement projects. Assist with lead inventory, obtain consent easements and initiate lead service replacement projects. Draft construction drawings using Civil3D. Actively participate in municipal meeting and regularly interact with clients to identify assess and solve their infrastructure related problems. Embrace team work and enjoy working closely with project team to identify and resolve complex engineering problems.

Engineering Enterprises, Inc., Sugar Grove, IL. Project Engineer, Water/Wastewater. Created CMOM plan, analyzed inflow and infiltration monitoring data, sanitary manhole inspection, smoke testing, and sewer televising data for several municipalities per NASSCO codes. Prepared NPDES permit reports and conducted sewer rate study for municipalities. Performed pollutant local limit evaluation calculations for WWTPs. Conducted risk assessments and prepared emergency response plans for community water infrastructure per America's Water Infrastructure Act. Developed client interaction skills including participation in municipal meetings and prepare and conduct presentations.

Illinois State Water Survey (ISWS), Champaign, IL. Field Assistant, Air Quality Research. Operated and troubleshooted field equipment such as continuous air quality monitors, meteorological equipment etc. Deployed and retrieved air samples, documented readings and maintained bookkeeping. Sampled and tested local ground and surface water samples to check for quality issues.

Karen Bettencourt, PE

Mechanical Process Engineer

Karen is an engineer with experience in water and wastewater treatment engineering, design, and drafting. She has designed mechanical process systems for water and wastewater treatment systems and other environmental treatment facilities.

Years of Experience
Total: 23
With AECOM: 22

Education
BS, Civil Engineering, Northeastern University, 2003

Licenses/Certifications
Professional Engineer, NY, CT, NH

Professional Affiliations
Hydraulic Institute

Project Experience

New York City Department of Environmental Protection, Croton Water Treatment Plant, Pump Stations, and Residuals Facility Design, New York, NY. Providedassistance to lead mechanical process engineer for the design of the 290-mgd water filtration plant.

New York City Department of Environmental Protection, Wards Island Water Pollution Control Plant Upgrade and Battery E Demonstration Project, New York, NY. Mechanical Process engineer for the upgrade and retrofit of the 25-mgd battery of aeration and final settling tanks at the 290-mgd Wards Island water pollution control plant. Performed calculations, wrote specifications, and provided mechanical equipment selection. Construction services included in duties.

New York City Department of Environmental Protection, Jamaica Water Pollution Control Plant Study, Design, and Construction, New York, NY. Provided mechanical process design as part of design and construction services for improvements to the 150-mgd Jamaica water pollution control plant. Facility is located next to Kennedy International Airport in Queens and treats wastewater from a combined sewer service area of more than 25,000 acres. Construction services included in duties.

City of Meriden, Water Pollution Control Facility Upgrade, Meriden, CT. Designed mechanical process systems for upgrades and improvements to the 11.6-mgd water pollution control facility to address facility improvements that were identified in a wastewater facilities plan prepared by AECOM and approved by the Connecticut Department of Environmental Protection. Performed calculations, wrote specifications, provided mechanical equipment selection, and interacted with equipment manufacturers. Also provided shop drawing review and answered requests for information from contractors.

City of Portsmouth, Peirce Island Wastewater Treatment Facility Upgrade, Portsmouth, NH. Served as the Mechanical Process Engineer for the design and construction of the $92 million upgrade of the existing Peirce Island WWTF from advanced primary to a 6.1 mgd secondary treatment with nitrogen removal using a two stage biological aerated filter (BAF). Design was implemented in two phases and included a new headworks, aerated grit removal, a secondary influent pump station, two stage BAF with integral mudwells, rehabilitation of the disinfection system, gravity thickener; aerated sludge holding, and dewatering with two rotary

Karen Bettencourt, PE - Mechanical Process Engineer

screw presses, new electrical system and stand by generator. Due to site constraints a very compact site layout was required, and developed suggested sequence of operations specification and requirements for temporary electrical distribution system.

Hartford Metropolitan District Commission, Reservoir #6 Water Treatment Plant Filter Evaluation, Pilot Study, Design Improvements, and Construction Services, Bloomfield, CT. Designed mechanical process systems for improvements to the filtration system 27 MGD Reservoir #6 water treatment plant which was using 30 inches of sand monomedia and was experiencing peak demands during the summer. Performed calculations, wrote specifications, provided mechanical equipment selection, and interacted with equipment manufacturers. Also provided shop drawing review and answered requests for information from contractors.

City of Newport, Lawton Valley Water Treatment Facility, Portsmouth, RI. Provided mechanical design services for the design-build new 7.0 MGD water treatment facility. Evaluated alternative processes during the proposal stage, as well as provided preliminary equipment selections, compiled specifications and preliminary calculations. After award, responsible for the entire mechanical process design, including but not limited to final calculations, equipment sizing, equipment selection and specifications. During construction, responsible for shop drawing review and equipment testing and startup.

City of Newport, Station One Water Treatment Facility, Newport, RI. Provided mechanical process design services for the design-build retrofit upgrade for the 9.0 MGD water treatment facility. Evaluated alternative processes during the proposal stage, as well as provided preliminary equipment selections, and compiled specifications and preliminary calculations. After award, responsible for the entire mechanical process design, including but not limited to final calculations, equipment sizing, equipment selection, and specifications. During construction, responsible for shop drawing review and equipment testing and startup.

City of Newburyport, Bartlett Road Water Pump Station, Newburyport, MA. Provided mechanical process design services for the design and construction of the 1 MGD Bartlett Pond pump station. Performed calculations, wrote specifications, provided equipment selection, and interacted with equipment manufacturers. Also provided shop drawing review and answered contractors' requests for information.

Town of Cheshire, Cheshire Water Pollution Control Plant, Cheshire, CT. Provided mechanical process design for the addition of a biological denitrification filter system for the wastewater treatment plant. Provided plans and specifications for the influent pumps, strainers, denitrification filters, methanol storage and feed systems, backwash pumps, and blowers.

Mashantucket Pequot Tribal Nation, Foxwoods Casino Lot 9 Expansion Utility Upgrades, Ledyard, CT. Provided mechanical process design as part of design and construction services for improvements to the water and wastewater infrastructure serving the Foxwoods Casino complex in support of the new hotel and casino facilities being developed at the site's Lot 9 parking area. Performed calculations, wrote specifications, provided mechanical equipment selection, and interacted with equipment manufacturers for the project. Also provided shop drawing review and answered requests for information from contractors.

Tri-Town Regional Water Treatment Plant, Braintree, MA. Lead Mechanical Process Engineer for the design of the new 12.5 MGD Water Treatment Facility. Process design included raw water screening and pumping, finished water and backwash pumping station, dissolved air flotation (DAF) technology, granular activated carbon (GAC) filtration, chemical feed systems and residuals pumping and storage.'

Water Treatment Plant Piloting and Design, Whitinsville Water Company, Whitinsville, MA. Provided mechanical process design for the Sutton wellfield. Provided review of construction submittals during the construction phase.

Tewksbury Water Treatment Facility, Tewksbury, MA. Lead Mechanical Engineer for the design and improvement of the existing 7 MGD water plant. System upgrades to the various equipment within the plant including finished water pumps, vacuum pumps, raw water pump station and chemical feed system.

City of Gloucester Commercial Street Pumping Station, Gloucester, MA. Lead mechanical engineer providing a new pump station and wet well for approximately 50 properties located on the coastal area of "the fort". Pumping station consisted of two submersible solids handling pumps each rated for 0.22 MGD.

Jerry Otterson, RA

Architecture

Jerry is a senior Architectural manager in the Chelmsford office. His areas of expertise include Architectural discipline management, design project management and quality control, construction project management. Jerry's project experience includes industrial, water treatment and wastewater treatment facilities, and Department of Defense projects.

Years of Experience

Total: 50
With AECOM: 42

Education

MS, Architectural Engineering, University of Illinois - Urbana-Champaign, 1982

MBA, Business Administration/ Management, University of Illinois, 1982

BA, Architectural Engineering, University of Illinois, 1980

Licenses/Certifications

Registered Architect, CT, RI, DE, HI

Professional Affiliations

Project Management Institute

Project Experience

Armed Forces Reserve Center, Armed Forces Reserve Center, Farmingdale, NY. Senior project manager responsible for total project management for 250,000-square-foot, $92 million, 4-story building and supporting facilities. The project was initially unsuccessfully bid as an 8A procurement. Assisted New York DOD reconcile bid protests which led to a successful rebid of the project resulting in saving New York more than $30 million.

Connecticut Air National Guard, CNAF Upgrade A-10 Engine Surf - Bradley International Airport, Windsor Locks, CT. Senior project manager responsible for total project management for 33,000-square-foot, $6.7 million building and supporting facilities.

Providence Water, Residuals and Backwash Recycle Upgrades for Philip J. Holton Water Purification Plant, Providence, RI. Serving as Architectural Discipline Lead to provide engineering services for the residuals and backwash recycle upgrades at the Philip J. Holton Water Purification Plant. Currently in design, this project addresses the separation of spent filter backwash waste from the existing drainage system; the construction of a new spent backwash recycle system to manage spent filter backwash; construction of new engineered residuals thickening lagoons; modification of existing drying beds to handle the thickened residuals; construction of a new decant pumping station to handle decant from the new engineered lagoons; and the removal of residuals from the South Sedimentation Basin and Lagoons 1A, 1B, and 2.

Springfield Water and Sewer Commission Master Plan, Springfield, MA. Architecture Manager for master plan for design of a new and renovated Water Treatment Facilities as a part of a design-build project for a new finished water clearwell and backwash pumping station.

Meriden WPCF and Remote Pump Station Upgrades, Meriden CT. Architecture Manager for design of new buildings and alterations at Wastewater Treatment facility in Meriden Connecticut.

City of Portsmouth, Wastewater Treatment Plant, Portsmouth, NH. Manager for Architectural effortfor additions and alterations to multiple buildings at a wastewater treatment plant in Portsmouth New Hampshire.

Jerry Otterson, RA - Architecture

Wallingford Water Pollution Control Facility, Wallingford, CT. Architecture Manager for design of a new and renovated Water Treatment Facilities.

Water Treatment Plant Design, Tri-Town Commission, Braintree, MA. Architecture Manager for the design of a new, greenfield 12 MGD water treatment plant for the Tri-Town Commission.

Orleans Wastewater Treatment Facility, Orleans, MA. Architecture Manager and Architect of Record for design of a new Water Treatment Facility.

Worcester Road Pump Station, Framingham, MA. Architecture Manager for design of a new Water Treatment facility in Framingham, Massachusetts.

Pittsfield Wastewater Treatment Plant Nutrient Upgrade, Pittsfield, MA. Architecture Manager for design of a new and renovated Water Treatment Facilities.

Foxborough Chestnut Street Water Treatment facility, Foxborough MA. Architecture Manager for design of a new Water Treatment Facility in Foxborough, Massachusetts.

Martha's Vineyard Airport Waste Water Treatment Facility, Martha's Vineyard, MA. Architecture Manager for design of alterations at Water Treatment facility in Martha's Vineyard, Massachusetts.

Greenwich Department of Public Works, Old Greenwich, Chapel Lane, and Cos Cob Pump Stations, Greenwich, CT. Architecture Manager for Architectural design and construction administration services for a water treatment facility in Greenwich, Connecticut.

Mackenzie Water Treatment Plant Chemical Feed Improvements, Clinton, CT. Architecture Manager for design of an additions and alterations at Water Treatment facility in Clinton Connecticut.

Town of Tewksbury, Water Treatment Plant Construction Services, Tewksbury, MA. Architecture Manager for the design of a new facility and construction of the improvements to a 7 MGD Water Treatment Plant.

Town of New Milford, Rock Street and Welches Point Pump Stations, Milford, CT. Architecture Manager for Construction Administration Services for Water Treatment Facility in Milford, Connecticut.

Mattapoisett Chemical Treatment Facility, Mattapoisett MA. Architecture Manager for design of a new Water Treatment Facility Pump Stations in Mattapoisett, Massachusetts.

Woonsocket Regional Wastewater Commission, Woonsocket Wastewater Treatment Plant, Woonsocket, RI. Manager for Architectural effort to develop construction documents for additions and alterations to wastewater treatment plant in Woonsocket, Rhode Island.

Washington Suburban Sanitary Commission, Patuxent Water Filtration Plant Design Services During Construction, Laurel, MD. Architecture Manager for Construction Administration Services.

New Castle Waste Water Treatment Plant Upgrade, New Castle, PA. Architecture Manager for design of a new and renovated Water Treatment Facilities.

City of Hamilton, Woodward Wastewater Treatment Plant, Hamilton, Ontario. Architectural quality control review lead for architectural effort to develop a design-bid-build proposal for new wastewater treatment building in Hamilton Canada.

City and County of Honolulu, City and County of - Department of W, Sand Island Wastewater Treatment Plant Secondary Treatment Planning and Design, Sand Island, HI. Contributing Architect for existing condition survey for water treatment plant at Sand Island Hawaii.

Passaic Valley Sewerage Commission, Wastewater Treatment Plant Upgrade Program Management Services, Newark, NJ. Architecture Manager for Owner Project Management services for a Water Treatment Facility at Newark, New Jersey.

City of Davis, Davis Wastewater Treatment Plant Upgrade - Design-Build Services, Davis, CA. Architectural Manager for design-build wastewater treatment facility including administration building ad laboratory.

Opequon Water Supply Project, Frederick County, VA. Architecture Manager for Design Build Proposal for a new Water Treatment facility in Frederick County, Virginia.

McLoughlin Point Wastewater Treatment Plant, Vancouver Canada. Architecture Manager for design of a new Water Treatment Facility Process Building in Vancouver Canada.

Michael Malenfant, PE

Structural Engineer

Michael is a senior structural design engineer with experience in all aspects of structural engineering design, engineering computer analysis, construction services, and structural condition assessments throughout the world. He has extensive experience in the analysis, design, field investigation, condition assessment, and retrofit of reinforced concrete structures for water and wastewater treatment facilities and ancillary structures, high-pressure treatment cells, and buried storage facilities. Michael also has extensive experience providing structural engineering design oversight, quality assurance, and value engineering for hydraulic structures.

Years of Experience

Total: 24
With AECOM: 24

Education

MS, Civil and Structural Engineering, Duke University, 1998

BS, Civil and Structural Engineering, New Mexico State University, 1996

Graduate Coursework, Construction Management, Northeastern University, 2001-2003

Licenses/Certifications

Professional Engineer, NY, CT, GA, MA, MD, ME, MI, NJ, NH, NM, OH, RI, UT, VA, WA

Professional Affiliations

American Society of Civil Engineers

American Concrete Institute

Project Experience

Nassau County, Bay Park Sewage Treatment Facility Effluent Pump Station Upgrades, NY. Provided Lead structural engineering services for the condition assessment, flood analysis and protection of an existing below grade sewage effluent pump station and the structural design of a new, above floodway electrical facility. Engineering challenges included the analysis of an existing facility for increased hydrostatic forces above and below grade, including unreinforced CMU and brick cladding.

Massachusetts Water Resources Authority, Braintree-Weymouth Intermediate Pump Station, Braintree, MA. Provided structural engineering and field inspections for the 45-mgd Braintree-Weymouth intermediate pump station, for the Massachusetts Water Resources Authority, which pumps wastewater through a 42-inch force main into a deep-rock tunnel for transport to the Deer Island wastewater treatment plant.

DC Water, Bypass Conduit Structural Condition Assessment and Tunnel Dewatering Pump Station Design Reviews, Washington, DC. Provided lead structural engineering services for a confined space entry structural condition assessment of 1300 linear feet of 8'-0" to 11'-0" diameter semi-elliptical sewer bypass conduit at the 370-mgd Blue Plains Advanced Wastewater Treatment Plant. Performed entry under permit-required confined space conditions, observed conditions, and prepared written documentation of tunnel condition. Provided structural engineering design and review services for 132' diameter by 140' deep tunnel dewatering pump station, including 3-D finite element analysis under typical deep pump station loading. Provided topside structural engineering support for dive team underwater inspection of outfall conduits.

Town of Provincetown, Biological Treatment Plant, Provincetown, MA. Lead structural engineer for the design of a new wastewater treatment system in Provincetown, Massachusetts, under a design-build contract. Structural design included the finite-element analysis of a paired semi-circular tank in order to utilize a pre-engineered dome structure as well as to determine the effect of uneven grade around the tank.

Borough of Chambersburg, Wastewater Treatment Plant Upgrade, Chambersburg, PA. Provided lead structural engineering services for the design and construction phases of the upgrades to the water treatment plant in Chambersburg. New facilities included an influent pump station and screenings

Michael Malenfant, PE - Structural Engineer

facility, multiple circular clarifiers, diversion boxes, support buildings, and modifications to existing facilities to accommodate changes in flow rates and newer technologies.

City of Nashville, CSO Control Program/Overflow Abatement Program, Nashville, TN. Provided structural engineering technical review as a member of a multi-disciplinary Design Review and Value Engineering team as part of AECOM's larger Program Management Role. Work included independent review of 30%-level design documents for improvements to the Central Wastewater Treatment Plant headworks, aeration basins, secondary clarifiers, and modifications and retrofit of unused basins to accommodate flow equalization as part of the overall Consent Decree.

South Essex Sewerage District, On-Call Services Contracts, Salem, MA. Performed structural engineering services for on-call services contracts. Work included seismic analysis and design for mechanical, electrical, architectural, and other non-structural components, structural analysis of existing facilities to determine applicability of modification, and assistance in constructability analysis.

Capital Regional District, McLoughlin Point Wastewater Treatment Plant, Esquimalt, British Columbia, Canada. Provided lead structural engineering design services for the design and construction of a 108 megaliter per day liquid treatment facility located on a narrow site at the entrance to Victoria Harbor. Challenges in the design process included an extremely limited sight, zoning restrictions with respect to height and plan area, and construction sequencing to accommodate a rapidly impending consent decree. Design included a structural steel operations and maintenance facility, cast-in-place concrete process train, and incorporation of a green roof and a tsunami-wall in the finished structure. Design included a "no change in footprint" option to increase capacity 15%, compliance with British Columbia Building Code, and eventual achievement of LEED v4 certification.

City of Davis, Wastewater Treatment Plant Upgrades, Davis, CA. Provided structural engineering services for the upgrades of an existing 50 year-old wastewater treatment facility. Engineering challenges included working in a high seismic area, the need to maintain plant operations, and demanding schedule requirements.

City of Bangor, Primary Wastewater Treatment Plant Condition Assessment, Bangor, ME. Provided lead structural engineering services for the condition assessment of existing facility constructed circa 1960 with upgrades constructed circa 1990. Condition assessment and literature study, including review of construction logs, indicated need for further destructive testing due to the suspected presence of Alkali-Silica Reaction (ASR).

City of Gardiner, Maine Avenue CSO Storage Tank, Gardiner, ME. Provided lead structural engineering services for the design of a new, 410,000 gallon combined sewer overflow storage tank located in a significant flood zone. Project challenges include design to resist buoyancy while remaining operational and the future planned use of the top surface of the tank as a concert venue.

City of Portsmouth, Portsmouth Water Treatment Facility Upgrades, Portsmouth, NH. Provided lead structural engineering services for the engineering rehabilitation of a 50-year old wastewater treatment facility, structural design of independent additions to existing structures, and design of new buried tanks to assist in process management. Retrofit work included removing and replacing of flooring systems at multiple buildings and seismic qualification of existing lateral load resisting systems.

Charles River Water Pollution Control District, Secondary Settling Tank Settlement Test, Medway, MA. Provided lead structural engineering services for the assessment of a 95-foot diameter, 25 foot deep circular tank that experienced a loss of bearing strata during a high groundwater event resulting in a pressure relief plug failing. Assessment include a pre-settlement test structural condition assessment under confined space entry conditions, observation of initial filling of tank, and post-settlement test structural condition assessment and analysis.

City of Akron, CSO Long Term Control Plan Value Engineering Study, Akron, OH. Provided structural engineering consulting services as a member of a multi-disciplinary Value Engineering team (under the direction of Robinson, Stafford, & Rude, Inc.) for the 26.5 million gallon CSO storage tunnel, drop shafts, and diversion structures for the Ohio Canal Interceptor Tunnel in Akron, OH. Prepared sketches, cost estimates, and written documentation of proposed alternatives to provide means by which the value of the project as a whole may be improved.

Yasser Rizk, PE

Electrical Engineer

Yasser is a senior electrical engineer in AECOM Northeast Design Center in Chelmsford, MA and is the electrical and control systems department manager. He specializes in electrical engineering and control systems design for wastewater collection, pumping, treatment, and disposal systems as well as water treatment facilities. Yasser is highly skilled in electrical system design and coordination of mechanical process, HVAC, and control systems for environmental treatment facilities.

Years of Experience

Total: 33
With AECOM: 26

Education

BS, Electrical Engineering, Alexandria University, Egypt, 1990

Licenses/Certifications

Professional Engineer, CA, CT, FL, MA, MD, NH, RI, VT

Project Experience

City of Stockton, Regional Wastewater Control Facility Progressive Design-Build, Stockton, CA. Lead electrical engineer for multiple plant improvements to treat 40 MGD (average dry weather, 105 MGD peak hour flow) and meet more stringent nitrogen limits, reduce effluent salinity, and improve overall energy efficiency and operational reliability. Improvements include new influent pumping station and headworks; replacing the existing biotowers, facultative ponds and wetlands with new activated sludge secondary treat- ment process; replacing existing nitrifying biotowers, dissolved air flotation thickeners, gravity filters, and chlorine contact canal with new tertiary disk filters and UV disinfection; new dewatering facilities using centrifuge tech- nology; new buildings for administration, engineering, laboratory, safety, O&M; optimizing overall plant hydraulics to reduce the multiple pumping steps (currently seven) across the plant to only two pumping steps and rely on gravity for most conveyance through the treatment train.

Massachusetts Water Resources Authority, Intermediate Pump Station Design and Construction, Braintree and Weymouth, MA. Provided electrical system design and construction services for the 46-mgd (174,129-m3/d) Braintree-Weymouth intermediate pump station and headworks including the electrical system design for the DSL pumps at the Deer Island treatment plant.

United States Agency for International Development (USAID) - CMC Program, Pump Station and WWTP Upgrade Design-Build, Alexandria, Egypt. Provided electrical and control systems engineering design and construction support for the expansion of six large pumping stations and upgrade of two 378,541-m3/d wastewater treatment plants. Conducted preliminary studies, developed design-build RFP documents, assisted with the bidding process including selection and evaluation of bidders and award of contract, reviewed design submittals during the design phase and managed and oversaw construction activities until successful completion and start-up of facilities.

City of East Providence, Wastewater System Improvements– Design-Build, East Providence, RI. Lead Electrical design engineer for design build facility upgrade. The project included upgrade and expansion of the water pollution control facility, two new pumping stations, and upgrade to a number of existing pump stations. The electrical work includes replacement of the entire electrical distribution system at the existing plant and design of a new system at the plant and the pump stations. Provided electrical design services for the facility upgrade including the replacement of the facility electrical distribution system including 4000 amps, 480 VAC Switchboard, 600 KW standby diesel generator and several

Yasser Rizk, PE - Electrical Engineer

motor control centers. The upgrade also included fire alarm, communications and lighting systems upgrade and replacement.

Mashantucket Pequot Tribal Nation, Foxwoods Casino Wastewater Treatment Plant Upgrade, Ledyard, CT. Provided electrical engineering services during construction for upgrade and expansion of the wastewater treatment plant. Supervised construction of electrical systems and provided coordination with other design disciplines. Reviewed and approved electrical equipment shop drawings. Provided design changes as needed during construction.

City of Davis, Davis Wastewater Treatment Facility Design Build, Davis, CA. Lead Electrical design engineer for a $65 million design build facility upgrade. Provided electrical design services for the facility upgrade including the replacement of the facility electrical distribution system including 4000 amps, 480 VAC Switchboard, 2 MW standby diesel generator system and several motor control centers. The upgrade also included fire alarm, communications and lighting systems upgrade and replacement.

Town of Davie, Water and Water Reclamation Facility Design-Build, Davie, FL. Lead Electrical design engineer for a $100 million design-build project consisting of a 6-mgdreverse osmosis water treatment plant (expandable to 12 mgd) and 3.5-mgd membrane water reclamation facility (expandable to 7 mgd.) Also included is a 13.2-kV distribution system with estimated load of 10-MVA, and a 13.2-kV, 10 MW standby generator facility consisting of four 2.5 MW, 13.2 KV diesel standby generators. The current installation phase included the installation of two (total capacity of 5 MW) of the four generator units with space and SWGR available to add the future two units. The facility was designed in 2010 and is currently built and in operation.

Massachusetts Water Resources Authority, Deer Island Treatment Plant - Electrical Technical Assistance, Boston, MA. Provided a power system short circuit and coordination study using EDSA software. Created an electrical model with more than 1,500 active buses, 5,500 electrical items, a 13.8-kV distribution system, a 4,160-kV system, and a 480-V AC system with more than 38 substations and 200 motor control centers.

Town of Ipswich, Force Main and Town Wharf Pump Station Upgrade, Ipswich, MA. Provided electrical system design and construction services for improvements to the 3.7-mgd (14,006-m3/d) town wharf wastewater pumping station.

Philadelphia Water Department, Water and Wastewater Systems - General Engineering Services, PA. Provided electrical engineering services for design of a 7-MW, 13.2kV digester gas cogeneration facility at the Northeast water pollution control plant. Facility design is based on the use of a blend of digester gas and natural gas to drive five 1.4-MW, 13.2kV internal combustion engines to produce electricity and hot water. The electrical power produced is fed into the plant's main 13.2kV switchgear and synchronized to operate simultaneously with the electrical utility system serving the facility loads. Designed the electrical system with the ability to feed up to 2 MW back into the electrical utility grid.

Cheshire Department of Public Works, Road Pump Station Rehabilitation Design, Mansion, CT. Provided electrical design for the upgrade of the Mansion Road pump station.

Town of Essex, New Sewer and Pump Station System Designs, Essex, MA. Provided electrical engineering services during construction of five pump stations.

New Jersey American Water, Roselle Booster Pump Station Improvements, NJ. Provided electrical engineering services for the Roselle booster pump station.

Wastewater Treatment Facility Upgrade, Taunton, MA. Lead Electrical design engineer for the design and construction services for the upgrade and rehabilitation of a 12-mgd (45,425-m3/d) wastewater treatment plant and 14 pump stations.

Wastewater Treatment Facility Design-Build, Provincetown, MA. Lead Electrical design engineer for the design and construction services for new wastewater treatment plant and several pump stations.

Freedom District Water Treatment Plant Expansion, Carroll County, MD. Provided electrical system engineering services for a design-build contract for the 8-mgd water treatment plant.

Rockville Water Treatment Plant, Connecticut Water Company, Vernon, CT. Lead electrical design engineer for the design and construction services for the $28 million design-build new Rockville water treatment plant.

Sarah Papazian, PE

I&C Engineer

Sarah is a technical specialist with experience in the design of instrumentation and control systems for a variety of environmental treatment systems including water and wastewater. She is a member of the International Society of Automation and is a Past President of the Boston Section.

Years of Experience

Total: 15
With AECOM: 14

Education

BS, Mechanical Engineering, UMass Lowell, 2007

Licenses/Certifications

Professional Engineer, MA

Professional Affilications

International Society of Automation

Project Experience

City of East Providence, Wastewater System Expansion - Construction Oversight, Providence, RI. Provided design and construction support on a design-build contract to design and build an upgrade and expansion to the existing East Providence water reclamation facilities. The project includes expansion of the existing wastewater treatment plant, two new remote pump stations, and upgrade to a number of existing remote pumping stations. The instrumentation and controls portion of the upgrade included designing the instrumentation and control systems for the main portion of the plant as well as several remote pump stations. Systems included in the upgrade and expansion were the headworks area, dewatering press, aeration tanks, chlorine contact tanks, secondary clarifiers, odor control systems, and chemical additions.

City of Portsmouth, Peirce Island Wastewater Treatment Facility, Portsmouth, NH. Provided design support and construction services on an upgrade and expansion to the existing wastewater treatment facility.
The project includes new headworks, Biological Aerated Filtration (BAF), solids handling, odor control, and associated chemicals and other systems. The entire SCADA system was upgraded, and consists of a centralized PLC with distributed remote IO (RIO) panels. MCCs and VFDs were networked via Ethernet.

City of Meriden, Meriden Wastewater Treatment Plant Improvements, Meriden, CT. Lead I&C Engineer. Designed instrumentation and control system improvements associated with the phosphorus removal (tertiary treatment) upgrade and ancillary upgrades throughout the existing 11.6 mgd water pollution control facility. The 25 mgd tertiary treatment upgrade included fine screens, influent and effluent phosphorus monitoring, pump stations, tertiary filtration and chemical metering systems. Design was coordinated with the client's system integrator to maintain consistency with their newly upgraded SCADA system.

Town of Orleans, Downtown Area Wastewater Treatment Facility and Effluent Disposal, Orleans, MA. Lead I&C Engineer. Responsible for Instrumentation and Control System design for a greenfield wastewater treatment plant. The treatment processes utilized influent screens, Sequencing Batch Reactor (SBR) treatment, and UV disinfection. Design required coordination with the associated collection system and pump station contract to ensure uniformity across both contracts.

City of Orleans, Downtown Area Collection System and Pump Station, Orleans, MA. Lead I&C Engineer. Responsible for Instrumentation and Control System design for three new collection system wastewater treatment pumping stations. The remote stations were designed to communicate with the main plant via fiberoptic cable and radio communication. Control system hardware and software was coordinated with the WWTF design to ensure uniformity across both contracts.

Sarah Papazian, PE - I&C Engineer

City of Newport, Newport Water Pollution Control Plant Design-Build-Operate, Newport, RI. Lead I&C Engineer. Designed instrumentation and control system improvements associated with the process upgrade from 18.5-mgd facility to 30-mgd. Scope included rehabilitation and upgrades for primary and secondary clarifiers, headworks, aeration tanks, chemical systems, odor control systems and effluent pumping. Existing Rockwell SLC processors were replaced with CompactLogix.

City of Woonsocket, Woonsocket Water Treatment Plant, Woonsocket, RI. Lead I&C Engineer. Designed the instrumentation and control systems for a new water treatment plant designed to replace an existing plant. Processes included dissolved air flotation (DAF) filters, granular activated carbon (GAC) gravity filters, several chemical metering systems, chlorine contact tank/ clearwell, and finished water pumping and storage. SCADA system was comprised of several distributed PLCs and remote I/O cabinets. Overall SCADA system design included VPN communication offsite, integration of an existing raw water pump station and blending chamber via radio, as well as radio communication to finished water storage tanks for locations for monitoring and control.

The Metropolitan District, South Hartford Conveyance and Storage Tunnel - Final Design, Hartford, CT. Lead I&C Engineer. Provided instrumentation and control design for over 20,000-foot-long, 20-foot- diameter conveyance and storage tunnel to transport combined sewer and sanitary sewer waste from South Hartford locations to the Hartford water pollution control facility. Design includes level monitoring and sewer overflow points, gate control, and coordination with odor control systems. Oversaw communication study to evaluate best communication method for remote sites.

Washington Suburban Sanitary Commission, Western Branch Wastewater Treatment Plant Enhanced Nutrient Removal Upgrade, Upper Marlboro, MD. Lead I&C Engineer. Provided engineering support during construction of an enhanced nutrient removal (ENR) upgrade at a 30-mgd wastewater treatment plant. The upgrade consisted of raw water pumps, raw water bypass pumps, HRAS bioreactors, NAS bioreactors, NAS return pumps, DAF thickening, thickened sludge storage, and scrubber blow-down pumping. SCADA control included tying into existing RIO panels and providing the necessary new RIO panels.

Patuxent WFP Phase II Expansion and UV Disinfection Facilities, Patuxent, MD. Designed the instrumentation and control systems for a plant expansion and ultraviolet (UV) addition for an existing 120MGD water treatment plant in Patuxent, Maryland. Major aspects of the upgrade include adding two filter trains to an existing ten-train system, addition of UV disinfection systems to the discharge of all filter trains and chemical metering of several chemicals. The upgrade also included the addition of a residuals handling system which included centrifuges, mixers, gravity thickeners, and sludge storage and discharge bins.

Connecticut Water Company, Rockville Water Treatment Plant, Vernon, CT. Design Build. Lead I&C design engineer for the design and construction services of the new $28 million design build Connecticut Water Company Rockville Water treatment plant.

Water Treatment Plant Upgrades, Newburyport, MA. Designed the instrumentation and control system for two phases of a plant upgrade project for Newburyport, Massachusetts. One phase consisted of adding a new clearwell and associated instrumentation and integration with existing plant SCADA. The second phase included a new equalization tank, capable of providing a specific range of recycle flow to the head of the plant and also quickly draining the tank to nearby lagoons using the same pumps; upgrading existing sedimentation tanks and filters, upgrading existing chemical systems and integrating all of the new equipment with the existing.

City and County of Honolulu, Sand Island Wastewater Treatment Plant, Honolulu, HI. Lead I&C Engineer. Provided design support on a secondary treatment upgrade to an existing 90 MGD plant. The project included new process reactors, Membrane Bio Reactors, and solids handling. The instrumentation and controls portion of the upgrade included process instruments, distributed SCADA PLCs, vendor-provided PLCs, and thin client workstations, specified to conform with client's detailed standards. MCCs and VFDs were networked via Ethernet. New work was integrated into an existing SCADA system.

Charlie Tripp, PE

Pipeline Condition & Rehabilitation

Charlie is a project manager with over 16 years of experience specializing in the design, management, and oversight of municipal infrastructure rehabilitation and construction projects. His portfolio of experience incsludes a variety of disciplines involving wastewater and stormwater collection systems, water resources, wastewater treatment, and site-civil design.

Years of Experience

Total: 17
With AECOM: 2

Education

MS, Environmental/ Environmental Health Engineering, Worcester Polytechnic Institute, 2012

BS, Civil Engineering, University of Massachusetts - Amherst, 2006

Licenses/Certifications

Professional Engineer, NY, CT, NH, ME, RI, MA, DE, NJ, MA, PA

Professional Affilications

North American Society for Trenchless Technology

New England Water Environment Association

Project Experience

Springfield Water and Sewer Commission, Special Projects BOA 2017-2020 - West Parish Filters WTP Upgrade Clearwell, Westfield, MA. Project Managerleading Owner's Project Management (OPM) services for the Springfield Water and Sewer Commission (SWSC) in undertaking the design and construction of a 500,000-gallon filtered water Clearwell and integral Backwash-Pumping Station onsite at the SWSC West Parish Filters Facility under a design-build format. The design-build project included design, permitting, construction, and commissioning of the new facilities to replace aging existing infrastructure onsite. The project is anticipated to be completed in late 2023, with an estimated cost of $24M. Also assisted the Commission through the State Revolving Loan process and was successful at securing both design and construction financing for this project.

Springfield Water and Sewer Commission, Annual Combined Sewer Overflow (CSO) Report, Springfield, MA. Project manager responsible for leading this annual project. Responsibilities included budgeting, staffing coordination; and quality review of the end deliverable to the Client on this key report regarding CSO Compliance. This yearly assignment included the installation and maintenance/monitoring of over 45 flow meters and rainfall gauges throughout the City of Springfield. The Project also included periodic updates to the collection system's hydraulic model. The model was used as a basis for the preparation of the Springfield Water and Sewer Commission's Yearly CSO Report to both MassDEP and EPA.

Springfield Water and Sewer Commission, Ongoing Sewer System Cleaning and Assessment Program, Springfield, MA. Project manager responsible for managing the daily activities of this annual comprehensive assessment and asset management program. The primary goal of the program was to determine the existing structural and operations and maintenance conditions of sewer pipes within the City's sewerage collection system and utilize this information to develop and advance the various asset management initiatives of the SWSC including a risk-based model for prioritizing and planning capital improvements and proactive maintenance activities. Also responsible for the selection of various asset condition data acquisition technologies, including Closed Circuit and High Definition Television inspections in compliance with Pipeline Assessment and Certification Program (PACP) standards, confined space entries of deep sewer structures, and GPS surveying and MACP inspections of manholes.

Springfield Technical Community College, Pearl Street Parking Lot #2, Springfield, MA. Civil engineer designeda 250+ space parking lot in Springfield, MA, including the design of a 200-foot-long, 60-inch diameter, stormwater detention pipe, and related collections infrastructure, to mitigate any peak discharge over 2, 10, 25, and 100 year storm events.

Charlie Tripp, PE - Pipeline Condition & Rehabilitation

City of Manchester, Phase II CSO Abatement Program, Manchester, NH. Technical manager providing technical guidance and internal design peer review services as part of a progressing combined sewer separation project. The design largely focuses on a proposed alignment of large diameter storm drain (24"-60" diameter) for diversion of storm water away from its previous alignment to the Manchester Water Pollution Control Facility. Additional design review includes that of proposed sanitary sewer rehabilitation along a series of residential collector streets in the neighborhood area within Manchester, NH. The drainage design incorporates hydraulic modeling to accommodate peak discharges over the 10, and 25, year storm events through the utilization of various best management practices.

Narragansett Bay Commission, Final Design Services for OF-218 Facilities Contract IIIA-6, Providence, RI. Project manager responsible for the development of preliminary, 30%, 60%, 90%, final design, and permitting support services for the construction of a consolidation conduit to the forthcoming Pawtucket Tunnel for combined sewerage conveyance. Some key aspects of the project included the following modifications to the existing flow distribution structure between OF-218 and the existing floatables control structure at the head of the Bucklin Brook; modifications to the existing flow distribution structure between OF-218 and the existing floatables control structure at the head of the Bucklin Brook; a new relief structure on the lower BVI on School Street; new pipelines to consolidate and divert flow from OF-218 and the BVI to a gate and screening structure (GSS), including manhole structures; a new sluice gate structure on the BVI branch of the consolidation conduits; a gate and screening structure to screen CSO flow before it enters the future Pawtucket Tunnel Drop Shaft 218; and an approach channel from the GSS that connects into the Pawtucket Tunnel drop shaft (DS) 218.

City of Portsmouth, Peirce Island Force Main Replacement Design, Portsmouth, NH. Subject matterexpert for the preliminary design, design, permitting, and engineering services during construction portions of this critical infrastructure project. Responsibilities included the development of detailed design specifications for the slip lining of an approximate 300 linear foot bridge mounted 24-inch diameter sanitary force main via a 20-inch fusible PVC slip liner.

City of Worcester, Standby Generator Upgrades, Worcester, MA. Design manager provided management, design, and construction administration services to replace generators at several sanitary sewer pumping stations in Worcester, MA on an on-call basis. Services included design plans and project specifications encompassing equipment type, exhaust piping, connection with existing utilities, site work and retrofitting existing structures to house the replacement generators.

South Central Connecticut Regional Water Authority, SCCRWA - RWA Sugarloaf Tunnel, Rocky Hill, CT. Teammember who managed and contributed to the performance of a condition assessment analysis for a 14,000 linear foot raw water service tunnel for the South-Central Connecticut Regional Water Authority (SCCRWA). The 6'-8" concrete lined horseshoe-shaped Sugarloaf Tunnel was constructed circa 1929 and serves to transfer untreated water from the Lake Hammonnasset and Lake Menunkatuc watersheds by gravity flow to Lake Gaillard. The analysis focused upon a comparison between a 2007 vintage man-entry inspection report and a robotic multi-sensor-instrumentation (MSI) platform-based assessment from 2022 for the purposes of determining whether there was noticeable or significant deterioration with the tunnel condition between the two inspections and highlighted defects that could contribute to accelerated deterioration.

City of Lawrence, West Street Phase II Sewer Replacement, Lawrence, MA. Team member who provided project management, design, bidding, and construction administration services for the replacement an ging brick combined sewer on West Street in Lawrence, Massachusetts. The project included the overall construction of 2,000 lf of PVC gravity sewer ranging in size from 10" to 36" diameter.

Chicago Department of Water Management - Jardine Water Purification Plant, Sediment Force Main Pipeline Phase II, Chicago, IL. Subject matter expert responsible for assisting with the development of detailed design specifications to rehabilitate an existing 5,000 linear foot, 18-inch diameter ductile iron Sediment Force Main via sliplining to improve reliability and provide ease of maintenance and inspection of the existing system.

Ryan Delamere

Construction Inspection

Ryan is an Engineer-In-Training (EIT) with 12 years of project engineering experience with municipal capital improvement project work, including municipal facilities, water supply/distribution, and sewerage works. His responsibilities have included resident project representation, testing certification, submittal review, quantity measurement and progress documentation.

Years of Experience
Total: 12
With AECOM: 12

Education
BS, Civil Engineering, State University of New York (SUNY), 2010

Licenses/Certifications
N/A

Professional Affiliations
N/A

Project Experience

Niagara Falls Water Board, WWTP Sedimentation Basins and Scum Removal System Upgrades, Niagara Falls, NY. Project Engineer. Responsible for replacing the traveling bridge system with a chain and flight system, upgrading all sedimentation basin mechanical drives, installing effluent finger weir troughs to increase basin weir length and upgrades to the scum removal system.

Niagara Falls Water Board, WWTP Optimization, Niagara Falls NY. Project Engineer. Assisted with developing physical/chemical treatment system alternative evaluations to improve the performance of the existing WWTP. Evaluations included improvements to the effluent disinfection process; physical/chemical treatment optimization (i.e., treatment chemicals); and chemical use (i.e., oxidant) at the GAC filters. Responsible for developing test plans and treatment systems to evaluate optimization conditions and provide engineering reports and recommendations for improved system operations. After the engineering report, AECOM developed, built and operated a pilot-scale filter bed to analyze the effects of NaOCl and ClO2 oxidants had throughout the carbon bed. Collected data and operating the pilot 5 days a week for 6 weeks.

Niagara Falls Water Board WWTP Biological Treatment Evaluation, New York, NY. Engineer. The project included testing pilot-scale biological treatment systems to evaluate if a future conversion of the existing WWTP is an alternative. The technologies tested included a membrane biological reactor (MBR) system and an attached growth moving bed biological reactor (MBBR) system. Pilot testing was conducted over 8 months to evaluate multiple test conditions and evaluate the wastewater treatability using different biological systems.

Erie County DEP District No.6, Lackawanna WRRF Digester & Solids Management Upgrades, Lackawanna NY. Project Engineer. Responsible for the design of replacement digester covers and new hose pumps. Performed site inspections to confirm the existing layout of piping. Prepared drawings and specifications for the project, including removal of the 30-foot diameter intestinal wall in the step 2 digester, new 50-foot diameter gas holding floating cover for step 2 and step 3 digesters, new pumped mixing systems to facilitate digester mixing, replace all interior digester piping, installed 2 hose pumps for thickener underflow, sludge conditioning tank feed and waste activated sludge, install new heat exchanger, condensate traps, sedimentation traps, replace existing 6-inch and 8-inch valves that are currently inoperable and upgrades to existing MCC including new HVAC.

Evaluation of Erie County Sewer District No. 6 Lackawanna Wastewater Treatment Plant Digestion Process Report, Lackawanna NY. Project Engineer. Evaluated and prepared design report project for the existing sludge handling system at the Lackawanna WRRF. Several site inspections, including confined

Ryan Delamere - Construction Inspection

space entry into the step 2 digester, were completed to assess the condition. The evaluation included replacement options for the digester covers, including fixed, floating, gas holder and membrane covers for step 2 and step 3 digesters and additional equipment to give the facility redundancy. Cost estimates were created for all the options and recommended replacing steps 2 and step 3 with a floating cover.

Erie County DEP, Southtowns AWTF Effluent Disinfection Evaluation, Blasdell, NY. Project Engineer. Responsible for the evaluation and concept design for the Southtowns advanced wastewater treatment facility (AWTF) effluent disinfection process. This project included an alternative evaluation of chemical chlorination and dechlorination versus ultraviolet (UV) light technology. The facility was given a lower effluent total residual chlorine (TRC) limit, and these evaluations tested the facility's wastewater to verify compliance with both proposed technologies. Testing included collimated beam and ultraviolet transmittance (UVT) to verify the use of UV disinfection technology and bench testing with multiple dechlorination chemicals to verify the destruction of TRC via dechlorination chemicals. This evaluation provided the client with an alternative evaluation, including system design concepts, costs, and recommendations so that a sound decision for system upgrades can be made.

Buffalo Sewer Authority, WWTP Secondary System Rehabilitations and Upgrades, Buffalo, NY. Project Engineer. Responsible for assisting with the design of upgrades to the secondary system. The project includes sediment removal, installation of a new fine bubble diffuser aeration system, coarse bubble diffuser system, ninety new sluice gates, and upgrades to the return-activated sludge and waste-activated sludge systems.

Erie County DEP, Boston Valley Pump Station Improvements, Boston, NY. Resident Engineer/ Construction Inspector. Responsible for rehabilitation and floodproofing of an existing 5 mgd Boston valley pump. The project includes constructing a new 40-foot deep cast-in-place pump station and control building while running the existing pump station. Once the new station was completed, the old pump station was demolished, and the entire site was raised approximately 5 feet to keep the pump station from flooding.

Erie County DEP District No.3, Rush Creek Interceptor, Blasdell Milestrip Wet Weather Relief Pumping Station and Forcemain, Hamburg and Blasdell, NY. Resident Engineer/Construction Inspector. Assisted in eliminating sewerage overflows, multiple pump stations and the Village of Blasdell WWTP. The project includes constructing a wet weather relief pump station, 24-inch sanitary sewer forcemain, sanitary gravity sewers, pavement rehabilitation, site work, installation of 24-inch and 27-inch diameter sewer pipe by jacking and boring under railroad tracks and NYSDOT highways, and pipe crossings at Rush Creek.

Town of Amherst, Brantwood Road Sanitary Sewer Upgrades, Amherst, NY. Resident Inspector. Supported construction of 708 linear square feet of 18-inch PVC Sanitary Sewer along Main Street, Brantwood Road and Keswick Road replacing existing 15-inch VTP pipe. Responsibilities included resident project representation, quantity measurement, progress documentation, review of the contractor payment request and record drawings.

Town of Amherst, Smith Road Waterline Replacement, Amherst, NY. Resident Inspector. Supported the construction of 708 linear square feet of 18-inch PVC Sanitary Sewer along Main Street, Brantwood Road and Keswick Road replacing existing 15-inch VTP pipe. Responsibilities included resident project representation, quantity measurement, progress documentation, review of the contractor payment request and record drawings.

Town of Amherst, Indian Trail Waterline Replacement, Amherst, NY. NY. Resident Inspector. Supported the construction of 1900 linear feet of new 8-inch ductile iron water main on Indian Trail Road between North Forest Road and Sheridan Drive. Responsibilities included resident project representation, testing certification, quantity measurement and progress documentation.

Town of Amherst, Emma Woods Subdivision Public Improvement Project, Amherst, NY. Resident Inspector. Responsible for constructing a new waterline, sanitary sewer, storm sewer, and road construction off Paradise Road. Responsibilities included resident project representation, testing certification and progress documentation.

B

Forms

ACKNOWLEDGEMENT OF ADDENDA

RFP TITLE: RFP 2024-01: Capital Projects Engineering Services
(Write the RFP No. and Title on the Line Above)

DIRECTIONS: Complete Part I or Part II, whichever is applicable.

PART I: LISTED BELOW ARE THE DATES OF ISSUE FOR EACH ADDENDUM RECEIVED IN CONNECTION WITH THIS RFP:

ADDENDUM # 1: DATED January 30 , 2024

ADDENDUM # 2: DATED _____ , 20__

ADDENDUM # 3: DATED _____ , 20__

ADDENDUM # 4: DATED _____ , 20__

ADDENDUM # 5: DATED _____ , 20__

ADDENDUM # 6: DATED _____ , 20__

PART II: DG INITIAL HERE IF NO ADDENDUM WAS RECEIVED IN CONNECTION WITH THIS RFP INITIAL HERE

DATE: 02 / 15 / 2024

PROPOSER (SIGNATURE): _____

PROPOSER (NAME): Douglas Gove, Jr.

PROPOSER (FIRM): AECOM USA, Inc.

APPENDIX A, FORM No. 5

STATEMENT ON SEXUAL HARASSMENT
PURSUANT TO STATE FINANCE LAW § 139-l

By submission of this proposal, proposer(s) and each person signing on behalf of any proposer certifies, and in the case of a joint proposal each party thereto certifies as to its own organization, under penalty of perjury, that the proposer has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all of its employees. Such policy shall, at a minimum, meet the requirements of section two hundred one-g of the labor law.

DATE: 1/18/24

PROPOSER (SIGNATURE): _____

PROPOSER (NAME): Douglas B. Gove, Jr

PROPOSER (FIRM): AECOM USA, Inc.

STATE OF Massachusetts)
) ss.:
COUNTY OF Middlesex)

On the 18 day of January, 2024 before me, the undersigned, a Notary Public in and for said state, personally appeared _____ as a representative of _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the entity on behalf of which the individual acted executed the instrument.

Lisa M. Shanahan
Notary Public

LISA M SHANAHAN
NOTARY PUBLIC
COMMONWEALTH OF MASSACHUSETTS
MY COMMISSION EXPIRES APRIL 20, 2029

APPENDIX A, FORM No. 6

REQUEST FOR PROPOSALS
ACKNOWLEDGEMENT AND CERTIFICATION

As a duly-authorized representative of the proposer indicated below, I hereby acknowledge that by submitting a proposal in connection with

RFP 2024-01: Capital Projects Engineering Services
(write RFP Number and Title)

proposer has made a firm offer and agrees to be bound by its terms. Proposer has carefully read the RFP and all addenda, and in submitting this proposal acknowledges proposer understands and agrees to be bound by the requirements set forth in the RFP, except as explicitly stated on a separate sheet attached to this proposal and entitled "Exceptions." Proposer agrees and understands that the terms and conditions set forth in the RFP addenda shall be incorporated into any contract or agreement awarded in connection with this RFP, and agrees to be bound by those terms and conditions.

I recognize that all information submitted is for the express purpose of inducing the Water Board to enter a contract with the submitting business entity. I affirm, under the penalties of perjury, that to the best of my knowledge the information contained in the proposal is full, complete, and truthful.

DATE: 1 / 18 / 24

PROPOSER (SIGNATURE): _____

PROPOSER (NAME): Douglas B. Gove, Jr.

PROPOSER (FIRM): AECOM USA, Inc.

STATE OF Massachusetts)
COUNTY OF Middlesex) ss.:

On the 18 day of January, 2024 before me, the undersigned, a Notary Public in and for said state, personally appeared _____ as a representative of _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the entity on behalf of which the individual acted executed the instrument.

Lisa M. Shanahan
Notary Public

LISA M SHANAHAN
NOTARY PUBLIC
COMMONWEALTH OF MASSACHUSETTS
MY COMMISSION EXPIRES APRIL 20, 2029

NOTICE OF NFWB'S RIGHT TO TERMINATE

The NFWB reserves the right to terminate a Contract (including any lease, license, entry permit, or sale documents) in the event it is found that the certification filed by the Proposer, in accordance with New York State Finance Law §139-k, was intentionally false or intentionally incomplete. Upon such finding, the NFWB may exercise its termination right by providing written notification to the Bidder/Proposer in accordance with the written notification terms of the Contract.

Proposer's Affirmation and Certification

By signing below, the Proposer:

a) Affirms that the Proposer understands and agrees to comply with the policy regarding permissible contacts in accordance with New York State Finance Law Sections 139-j and 139-k.

b) Certifies that all information provided to the NFWB with respect to New York State Finance Law §139-j and §139-k is complete, true and accurate.

DATE: 1 / 18 / 24

PROPOSER (SIGNATURE): _____

PROPOSER (NAME): Douglas B. Gove, Jr

PROPOSER (FIRM): AECOM USA, Inc.

STATE OF _____)
) ss.:
COUNTY OF _____)

On the 18 day of January, 2024 before me, the undersigned, a Notary Public in and for said state, personally appeared _____ as a representative of _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the entity on behalf of which the individual acted executed the instrument.

LISA M SHANAHAN
MY COMMISSION EXPIRES APRIL 20, 2029
NOTARY PUBLIC COMMONWEALTH OF MASSACHUSETTS

_____
Notary Public

APPENDIX A, FORM No. 2

CERTIFICATE OF NON-COLLUSION

Pursuant to New York State Public Authorities Law, Article 9, Title 4, Section 2878, the undersigned proposer hereby subscribes and affirms as true, under the penalties of perjury, the following statement of non-collusion:

By submission of this proposal, each proposer and each person signing on behalf of any proposer certifies, and in the case of a joint proposal each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his/her knowledge and belief:

(1) The prices in this proposal have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other proposer or with any competitor;
(2) Unless otherwise required by law, the prices which have been quoted in this proposal have not been knowingly disclosed by the proposer and will not knowingly be disclosed by the proposer prior to opening, directly or indirectly, to any other proposer or to any competitor; and,
(3) No attempt has been made or will be made by the proposer to induce any other person, partnership, or corporation to submit or not to submit a proposal for the purpose of restricting competition.

DATE: 1 / 18 / 24

PROPOSER (SIGNATURE): _____

PROPOSER (NAME): Douglas B. Gove, Jr.

PROPOSER (FIRM): AECOM USA, Inc.

STATE OF _____)
) ss.:
COUNTY OF _____)

On the 18 day of January, 2024, before me, the undersigned, a Notary Public in and for said state, personally appeared _____ as a representative of _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the entity on behalf of which the individual acted executed the instrument.

Lisa M. Shanahan
Notary Public

LISA M SHANAHAN
NOTARY PUBLIC
COMMONWEALTH OF MASSACHUSETTS
MY COMMISSION EXPIRES APRIL 20, 2029

APPENDIX A, FORM No. 3

NEW YORK STATE FINANCE LAW SECTIONS 139-j AND 139-k ("LOBBYING LAW") – DISCLOSURE STATEMENT

General Information

All procurements by the Niagara Falls Water Board ("NFWB") in excess of $15,000 annually, are subject to New York State's State Finance Law Sections 139-j and 139-k, effective January 1, 2006 ("Lobbying Law").

Pursuant to the Lobbying Law, all "contacts" (defined as oral, written or electronic communications with the NFWB intended to influence a procurement) during a procurement - from the earliest notice of intent to solicit bids/proposals through final award and approval - must be made with one or more designated Point(s) of Contact only. Exceptions to this rule include written questions during the bid/proposal process, communications with regard to protests, contract negotiations, and RFP conference participation. Nothing in the Lobbying Law inhibits any rights to make an appeal, protest, or complaint under existing administrative or judicial procedures.

Violations of the policy regarding permissible contacts must be reported to the appropriate NFWB officer and investigated accordingly. The first violation may result in a determination of non-responsibility and ineligibility for award to the violator and its subsidiaries, affiliates and related entities. The penalty for a second violation within four (4) years is ineligibility for bidding/proposing on a procurement and/or ineligibility from being awarded any contract for a period of four (4) years. The NFWB will notify the New York State Office of General Services ("OGS") of any determinations of non-responsibility or debarments due to violations of the Lobbying Law. Violations found to be "knowing and willful" must be reported to the NFWB Executive Director and OGS.

Moreover, the statutes require the NFWB to obtain certain affirmations and certifications from bidders and proposers. This Disclosure Statement contains the forms with which offerors are required to comply, together with additional information and instructions.

Instructions

New York State Finance Law §139-k(2) obligates the NFWB to obtain specific information regarding prior non-responsibility determinations. In accordance with New York State Finance Law §139-k, an offerer must be asked to disclose whether there has been a finding of non-responsibility made within the previous four (4) years by any governmental entity due to: (a) a violation of New York State Finance Law §139-j or (b) the intentional provision of false or incomplete information to a governmental entity.

As part of its responsibility determination, New York State Finance Law §139-k(3) mandates consideration of whether an offerer fails to timely disclose accurate or complete information regarding the above non-responsibility determination. In accordance with law, no procurement contract shall be awarded to any offerer that fails to timely disclose accurate or complete information under this section, unless the factual elements of the limited waiver provision can be satisfied on the written record.

Disclosure of Prior Non-Responsibility Determinations

Name of Bidder/Proposer: AECOM USA, Inc.

Address: 1 John James Audubon, Amherst, NY 14228

Name and Title of Person Submitting this Form: Douglas Gove Jr., Vice President

Has any governmental entity[1] made a finding of non-responsibility regarding the Bidder/Proposer in the previous four years?

____ **Yes** _X_ **No**

If yes: Was the basis for the finding of the Bidder's/Proposer's non-responsibility due to a violation of State Finance Law §139-j?

____ **Yes** ____ **No**

Was the basis for the finding of Bidder's/Proposer's non-responsibility due to the intentional provision of false or incomplete information to a governmental entity?

____ **Yes** ____ **No**

If yes to any of the above questions, provide details regarding the finding of non-responsibility below:

Governmental Entity: _____

Year of Finding of Non-responsibility:_____

Basis of Finding of Non-Responsibility (attach additional pages if necessary):_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Has any governmental entity terminated or withheld a procurement contract with the Bidder/ Proposer due to the intentional provision of false or incomplete information?

____ Yes _X_ No

If yes, provide details regarding the termination/withholding below:

Governmental Entity: _____

Year of Termination/Withholding:_____

Basis for Termination/Withholding (attach additional pages if necessary):

_____

_____

_____

_____

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_____

APPENDIX A, FORM No. 4

EQUAL EMPLOYMENT OPPORTUNITY ("EEO")
POLICY STATEMENT AND AGREEMENT

Proposer hereby agrees to the following EEO policy with respect to its work on any contract awarded in connection with this RFP:

a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing programs of affirmative action to ensure that minority group members are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on Niagara Falls Water Board ("Water Board") contracts.
b) This organization shall state in all solicitations or advertisements for employees that in the performance of the Water Board contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, disability or marital status.
c) At the request of the Water Board, this organization shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union, or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of this organization's obligations herein.
d) This organization shall comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. Proposer and subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, pregnancy or pregnancy-related conditions, gender identity, familial status, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.
e) This organization will include the provisions of section (a) through (d) of this agreement in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the Water Board contract.

ACCEPTED AND AGREED:

DATE: 01 / 31 / 2024

PROPOSER (SIGNATURE): _____

PROPOSER (NAME): Douglas Gove, Jr.

PROPOSER (FIRM): AECOM USA, Inc.

About AECOM

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle — from advisory, planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy, and the environment, our public- and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical and digital expertise, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a *Fortune 500* firm and its Professional Services business had revenue of US$14.4 billion in fiscal year 2023. See how we are delivering sustainable legacies for generations to come at aecom.com and @AECOM.

Contact

Douglas Gove Jr., PE
Vice President
T: 617-721-7005
E: doug.gove@aecom.com

NIAGARA FALLS WATER BOARD RESOLUTION # 2024-03-009

ACCEPTING AECOM PROPOSAL FOR CALUMET AVENUE SEWER REHABILITATION PROJECT ENGINEERING SERVICES

WHEREAS, in January 2024 the Niagara Falls Water Board issued a request for proposals for engineering services in connection with various planned capital projects, including for rehabilitation of a 48-inch brick sewer on Calumet Avenue; and

WHEREAS, the Water Board has been awarded grant funds under CWSRF Project No. 6603-17-00 that will partially offset the total cost of sewer rehabilitation work that is the subject of this resolution; and

WHEREAS, one proposal was received for the project, from AECOM and dated February 19, 2024; and

WHEREAS, Water Board staff have reviewed that AECOM's proposal, which includes a statement of the firm's project understanding and past experience with similar projects, as well as project staff with appropriate qualifications and experience; and

WHEREAS, AECOM's proposed engineering fee of $145,000 for the project is inclusive of survey, design, bidding, construction administration, and construction inspection;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that on behalf of the Niagara Falls Water Board, its Chairperson hereby is authorized to execute an agreement to be negotiated with AECOM to perform engineering services for the Calumet Avenue 48-Inch Brick Sewer Rehabilitation, consistent with AECOM's February 19, 2024 proposal for that work and for a total fee not to exceed $145,000.

Water Board Personnel Responsible for Implementation of this Resolution:

Executive Director
Director of Technical & Regulatory Services
General Counsel

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:

Capital Plan Items:	Capital Line for Calumet Avenue (Project requires addition of a new CIP item)
Capital Items Provided by:	D. Williamson to Revise CIP
Available Funds Confirmed:	B. Majchrowicz (Financing for Construction May Require CRSRF Financing, Depending on Cost)

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	Yes	**No**	**Abstain**	**Absent**
Board Member Asklar	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By: Vote Witnessed By:

_____ _____

Nicholas J. Forster, Chairman Sean W. Costello, Secretary to Board

NIAGARA FALLS WATER BOARD RESOLUTION # 2024-03-010

PROCUREMENT OF VAC CON COMBINATION SEWER CLEANING TRUCK AND DISPOSAL THROUGH TRADE IN OF 2017 AQUATECH COMBINATION TRUCK

WHEREAS, the Niagara Falls Water Board ("Water Board") outside maintenance crews heavily rely upon and frequently utilize the Water Board's two combination jet/vacuum sewer trucks for sewer cleaning, hydro-excavating, and more; and

WHEREAS, the Water Board's 2017 AquaTech combination sewer cleaning truck has been used extensively and because certain parts are wearing it requires frequent maintenance and repairs, during which time the outside maintenance crews are deprived of an essential tool, impacting productivity and effectiveness; and

WHEREAS, Water Board staff have identified a Vac-Con combination sewer truck Model VPD4212HEN/1300 mounted on a Freightliner Model 114SD chassis that is available for procurement from Vac-Con Services, Inc., by "piggybacking" pursuant to General Municipal Law Section 103(16) on a contract let by Sourcewell (Contract No. 101221-VAC); and

WHEREAS, the quote provided by Vac-Con includes on-site customer training and delivery, for a total cost of $652,038; and

WHEREAS, Vac-Con Services, Inc., has offered to provide a trade-in credit of $120,000 for the 2017 AquaTech combination sewer truck, reducing the total cost to the Water Board to $532,038;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that the Executive Director hereby is authorized procure a Vac-Con combination sewer truck Model VPD4212HEN/1300 mounted on a Freightliner Model 114SD chassis from Vac-Con Services, Inc., as described in that firm's February 26, 2024 quote, and to dispose of the 2017 AquaTech combination sewer truck, VIN 1FVHG5FE1JHJP7422, by trading it in toward the purchase cost, with a net cost to the Water Board of $532,038.

Water Board Personnel Responsible for Implementation of this Resolution:
Executive Director

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:
Capital Plan Items: C-3 Fleet Replacement
Capital Items Provided by: B. Majchrowicz
Available Funds Confirmed: B. Majchrowicz

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	Yes	**No**	**Abstain**	**Absent**
Board Member Asklar	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By: Vote Witnessed By:

_____ _____

Nicholas J. Forster, Chairman Sean W. Costello, Secretary to Board

02/26/2024

COMBINATION JET/VACUUM SEWER CLEANER

SOURCEWELL CONTRACT: 101221-VAC

Customer: NIAGARA FALLS WATER BOARD Shipping: NEW YORK

Requirement Specification	
Combination jet/vacuum sewer cleaner with all standard equipment VPD4212HEN/1300 (827 at 18")	$363,550.00
Sourcewell Discount	($36,355.00)
Freightliner 114SD Plus 6 x 4 66,000GVWR ISL370 3000RDS	$124,900.00
Body mounting on Chassis	$8,150.00
Hydrostatic drive	$0.00
10' Aluminum Telescoping boom with pendant control station	$21,434.00
Front Mounted Articulating to Driver side. 600' (1") Capacity (Std. Pivot) hose reel	$27,497.00
1300 Gallon polyethylene water tank capacity with 10 year warranty	$0.00
12 Cubic yard capacity debris tank 3/16" corten steel, (5 year warranty) with full opening rear door (minimum 50 degree debris tank dumping, power up and down	$0.00
Automatic vacuum breaker (prevents operation when full and contains debris when moving unit) and overfill protection	$0.00
600' of 1" Jet rodder hose	$1,395.00
Positive Displacement Blower Roots model 827 @ 18" HG	$0.00
Water pump system: Giant 80 @ 2500 PSI - Single Engine	$6,043.00
Cobra hose brand	$0.00
6" Knife valve with center post and handle	$1,151.00
Flat style rear door in lieu of standard domed door	$8,491.00
Built in body prop - rear support frame mounted	$734.00

Requirement Specification	
Debris tank drain screen placement	$0.00
Rear splash shield	$2,974.00
Rear, hydraulic pump off system, 200 GPM with 20' lay flat hose	$12,391.00
Two Screen assemblies over drain ports in debris tank	$1,398.00
1/4 turn ball valve water drain	$717.00
50' Capacity retractable hand gun hose reel	$3,211.00
Air purge system	$1,309.00
Debris body “Power Flush” System, 8 Jets	$3,040.00
Hydro-excavation package	$10,068.00
Pre-Tank Water Filter Y-Type	$1,463.00
Water pump remote oil drain	$424.00
Winter recirculating system for rodder hose	$1,619.00
Hose footage counter	$907.00
Behind cab boom support	$5,257.00
Cone storage rack	$653.00
Rear bumper assembly	$2,762.00
Remote debris tank grease assembly	$4,030.00
Remote transfer case engagement	$3,651.00
LED 4 strobes - (2) front bumper, (2) rear bumper	$2,994.00
LED Arrow stick	$4,409.00
LED Midbody flood lights with guards	$1,152.00
LED Rear mounted flood lights with limb guard	$1,152.00
Two Mirror mounted LED strobe light with limb guard	$2,904.00
6 way pendant control	$802.00
Grounding cable with screw clamp, 25' of cable & Ball Stud Assembly	$800.00

Requirement Specification	
Low water alarm with light	$796.00
Rear camera placement	$864.00
Wireless remote control	$7,273.00
Traffic camera system with color monitor	$1,868.00
A 48" Extension for high pressure hand wand	$269.00
Paper Vac-Con Manual	$313.00
1" x 20' Length Leader Hose	$678.00
Lazy Susan pipe rack (Holds 5 Pipes)	$4,020.00
24" x 18" x 18" Aluminum tool box	$2,777.00
Aluminum storage box behind cab 16" x 42" x 96"	$8,025.00
Aluminum storage box 16" x 42" x 96" (upgrade) Behind cab in lieu of standard steel	$4,287.00
Dry Decking - behind cab storage box 96"	$837.00
6 ½" x 6" Catch Basin nozzle with serrated end	$337.00
Paint Vac-Con module: Elite White	$0.00
Safety striping: Light Blue	$1,078.00
Paint chassis hood flat black	$1,204.00
Two standard ENZ nozzles, one sanitary (egg) and one Chisel point penetrator	$0.00
ICC lighting	$0.00
Hose guide (tiger tail) for hose protection, hydrant wrench, 25' of fill hose	$0.00
20 gpm @ 600 PSI wash down system with hand gun and 25' of ½" hand gun hose	$0.00
Block heater	$1,462.00
Freightliner 114SD 3 Years/200,000mi. Ext Warranty: Includes 3yrs. Towing. Cummins-ISL370 3yr./150,000mi. (PP1 with after treatment), Allison 3000 5yrs./UNLmi. (Requires TrandSynd Synthetic Transmission Fluid or TES-295)	$8,198.00
Local dealer pre delivery and inspection	$0.00

Requirement Specification	
On site customer training	$5,500.00
Consignee Delivery	$5,175.00
TOTAL CONTRACT PRICE	$652,038.00
Trade In - 2017 Aquatech B10	($120,000.00)
TOTAL PRICE OFFERED TO SOURCEWELL MEMBER AFTER TRADE IN	$532,038.00

Delivery is _____ Days after receipt of order.

SOURCEWELL CONTRACT NO 101221-VAC

VENDOR/CONTRACT HOLDER: VAC-CON, INC. 969 HALL PARK RD GREEN COVE SPRINGS, FL 32043 410-924-1004

CONTACT: M.J. DUBOIS EMAIL MJDUBOIS@DUCOLLC.COM

THIS QUOTE IS VALID FOR (30) DAYS FROM THE DATE OF QUOTATION