Regular Session of the
Niagara Falls Water Board
July 30, 2018 5:00 PM at
Michael C. O'Laughlin Municipal Water Plant

1. **Attendance and Preliminary Matters**

    a. **Forster ___Kimble ____ Larkin____ Leffler___ O'Callaghan____**

    b. **Letters and Communications**

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

    d. **Approval of Minutes from June 25, 2018**

2. **Executive Director**

    I. **Questions or Comments on the Following Items Discussed during July 23 Work Session (if any):**
        a. Consent order
            i. **Draft Q2 report**
            ii. **GHD consent order support**
            iii. **AECOM consent order support**
        b. Outreach/PR
            i. **Media day Martin Group - Highlighting accomplishments**
        c. Vanguard Report
        d. Grants Update
            i. **Draft GHD Engineering Report – WWTP and GPS Rehabilitation**
        e. SPAR 3D
        f. Request for Proposal for WWTP Projects
            i. **Scope of Work**

g. Five-year Capital Plan and Bond Information

3. Director of Operations

I. Questions or Comments on the Following Items Discussed during July 23 Work Session (if any):

a. Upgrade of camera truck software resolution $20K
b. NAASCO training
c. Vanguard Security – Disposition Relative to Recommendations

II. Chemical Tank Removal at WWTP

4. Superintendent

I. Questions or Comments on the Following Items Discussed during July 23 Work Session (if any):

a. Private Fire hydrant update.
b. NFWB Fire Hydrant update.
c. Valves GPS program.

5. Engineering

I. Questions or Comments on the Following Items Discussed during July 23 Work Session (if any):

a. National Grid Annual Savings Report

6. **Personnel Items**

    I. **Questions or Comments on the Following Items Discussed during July 23 Work Session (if any):**
        a. Personnel Actions and Reports
            i. **General Merchandise and Material Control Specialist**
            ii. **Records Retention Control Specialist**
        b. Organization Chart

    II. **Staff Requested:**

    Will the Board Formally Approve Personnel Actions and Report dated Monday, July 23, 2018?

7. **Information Technology (IT) Dept.**

    I. **Questions or Comments on the Following Items Discussed during July 23 Work Session (if any):**
        a. Verizon One Talk Presentation

8. **Financial Reports**

    I. **Questions or Comments on the Following Items Discussed during July 23 Work Session (if any):**
        a. NFWB Bank Accounts
        b. Budget Monitoring Expenses – June
        c. July 20, 2018 Payment Listing
        d. Credit Card Report
        e. Bank on Buffalo Transition Update
        f. Finance Department Handout

9. **Reports**

    a.

a. **O&M Report**
b. **Safety**
b.

10. **General Counsel and Secretary**

I. **Questions or Comments on the Following Items Discussed during July 23 Work Session (if any):**
   a. T-Mobile – Request for Expansion of Lease Space at 56th St. Water Tank
   b. *Janus v. ASFCME* – Impact on NFWB
      i. **Department of Labor Guidance**
      ii. **Department of Labor FAQ**
   c. American Water Resources Water and Sewer Line Protection Program Partnership

II. **New Items**

a. **NY Alerts Regarding Sewer Overflows**
   i. **Sign up without a NY.gov Account**
   ii. **Sign up with a NY.gov Account**
b. **Twitter Page - https://twitter.com/NFWB_Official**

11. **From the Chairman**

12. **Resolutions**

a. **RESOLUTION 2018-07-001 -- AUTHORIZING PURCHASE OF HARDWARE AND SOFTWARE TO ENHANCE CAMERA TRUCK CAPABILITIES**
   i. **Supporting Document: Cyncon Pipelogix Quote**

b. **RESOLUTION 2018-07-002 -- AWARD BID FOR SEWER LINE CHEMICAL ROOT CONTROL**
   i. **Award Recommendation Memorandum**
   ii. **Bid Tally Sheet**

c. **RESOLUTION 2018-07-003 -- AUTHORIZING PURCHASE OF HARDWARE AND SERVICES TO UPGRADE TO VERIZON ONE TALK PHONE SYSTEM**
   i. **Verizon One Talk Service Quote**
   ii. **Connected Solutions Hardware and Installation Quote**

d. **RESOLUTION 2018-07-004 -- AUTHORIZING FUNDS FOR GHD TO PERFORM WORK REQUIRED BY CONSENT ORDER**

   i. **GHD's June 27, 2018 Proposal**

e. **RESOLUTION 2018-07-005 – SEQRA NOTICE LEAD AGENCY DESIGNATION AND DETERMINATION OF SIGNIFICANCE FOR THE NIAGARA FALLS WATER BOARD BEECH AVE WATER TANK IMPROVEMENTS**
   i. **Full EAF Part 1**
   ii. **Full EAF Part 2**
   iii. **Full EAF Part 3**
   iv. **Copy of Resolution 2018-02-20**
   v. **Letters from Interested Agencies**
   vi. **Water Tank Study**

f. **RESOLUTION 2018-07-006 -- ADOPTING FIVE YEAR CAPITAL PLAN**
   i. **Proposed Five Year Capital Plan**

g. **RESOLUTION 2018-07-007 -- REQUIRING WEEKLY STAFF REPORTS TO BOARD MEMBERS**

h. **RESOLUTION 2018-07-008 -- DIRECTING STAFF TO REQUEST PROPOSALS FOR FORENSIC ACCOUNTING SERVICES**

i. **RESOLUTION 2018-07-009 -- SETTING WILLIAM WRIGHT'S SALARY AFTER SIX-MONTH CONTRACTUAL REVIEW**

j. **RESOLUTION 2018-07-010 -- PURCHASE OF HYDRAULIC GUILLOTINE CUTTER WITH SAFETY FUNDS**
   i. **E.H. Wachs Quote**

k. **RESOLUTION 2018-07-011 -- REQUIRING IT DEPARTMENT REVIEW OF PURCHASES FOR POSSIBLE INTEGRATION WITH WATER BOARD SYSTEMS**

l. **RESOLUTION 2018-07-012 -- ADOPTING NYS DEPARTMENT OF LABOR GUIDANCE REGARDING JANUS CASE**
   i. **Department of Labor Guidance**

m. **RESOLUTION 2018-07-013 -- AUTHORIZING SETTLEMENT AGREEMENT WITH JONI CIMINO**

n. **RESOLUTION 2018-07-014 -- STRATUS SERVER MIGRATION SERVICES**
   i. **Applied Sciences Group, Inc., Proposal**

o. **RESOLUTION 2018-07-015 -- AWARDING CONTRACT FOR SANITARY SEWER MANHOLE REPLACEMENT PROJECT AT 66TH STREET AND GIRARD AVENUE**
   i. **4th Generation Construction, Inc., Proposal**

p. **RESOLUTION 2018-07-016 -- AUTHORIZING LIFT STATION SCADA CONTROL**
   i. **Proposal and Estimates**

q. **RESOLUTION 2018-07-017 -- AUTHORIZING FUNDS TO PROCURE TWO ADDITIONAL SETS OF SEDIMENTATION BASIN SCRAPER BLADES**

13. **Unfinished Business**

14. **New Business & Additional Items for Discussion**

15. **Executive Session and/or Recess for Seeking Legal Advice**
    i. **Update regarding litigation**

(Additional topics only if required and announced during the meeting.)

16. Adjournment of Meeting

Regular Session of the
Niagara Falls Water Board
June 25, 2018 5:00 PM at
Michael C. O'Laughlin Municipal Water Plant

1. **Call to Order & Pledge of Allegiance:** ***Meeting was called to order at 5:00 p.m.***

    1. **Roll Call:**

    Forster __*P*___Kimble ___*P*___ Larkin___*P*___ Leffler__*P*___ O'Callaghan___*P*___

2. **(a) Letters and Communications**

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

    1. Jabril and Ellen Shareef spoke in front of the board regarding their May 2018 water bill, for the amount of $11,799. Their existing vacant rental property is located at 411 Hyde Park Blvd. Ms. Shareef explains there was a meter reading that was completed on April 1, 2018 with no indication of outstanding water usage; even though she explains they did experience a pipe leak in their basement around the same time the meter reading was taken. Ms. Shareef spoke with customer service at the NFWB and was instructed to bring the matter in front of the board due to some restrictions regarding bill adjustments. Mr. and Ms. Shareef are

seeking a bill adjustment at this time. Ms. Walker recommends completing the bill adjustment application and submitting the completed application for review.

2. Ronald Cunningham spoke in front of the board regarding his $2,745 water bill. He explains his property is a commercial building that is currently vacant. Mr. Cunningham's property is located at 559 19th St. The NFWB meter shop completed a meter read with no significant findings. Mr. Cunningham states he believes the issue is due to a meter malfunction, because he has not made any repairs since the high meter reading. He also raises concern with an additional property located at 551 19th St. This building is a residential, 3 unit apartment complex. There are tenants living in a 3 apartments at this property. Mr. Cunningham has also completed an adjustment application for this matter as well.

3. Niagara Falls Councilman Ezra Scott spoke in front of the board on behalf of Roswell Park Cancer Institute in hopes to making the NFWB a tobacco-free workplace. Mr. Scott mentioned signage will be supplied if we decide to move forward. He commended the Water Board on the great job it has been doing.

3. Approval of Minutes from May 21, 2018

Motion to approve by Mr. Forster and seconded by Ms. Larkin

*Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Abstain _ O'Callaghan_ Y_*

Motion was carried 4-0

4. Executive Director

a. Questions or Comments on the Following Items Discussed During June 18 Work Session (if any):

a. Consent Order – AECOM & GHD
   i. AECOM Draft Report on Work Item 10
   ii. GHD Draft Report on Various WWTP Projects
   iii. Scrapers – Sed. Basin #5 – *(See Resolution 2018-06-011)*

Mr. Porter explains that sedimentation basin #5 will be taken offline on July 9th to be pumped out and cleaned. Mollenberg-Betz Inc. will be fabricating the necessary parts needed for the sedimentation basin repair. On July 17th, the NFWB employees will reassemble the basin.

Mr. Forster asks if spare scrapers for the basins will be fabricated.

Mr. Porter confirms.

iv. Grit Screw - Sed. Basin #1 - $30,000 - *(See Resolution 2018-06-011)*
v. Gates - $21,000 - *(See Resolution 2018-06-011)*
vi. Sludge Building - 3 pumps are installed, 1 more needed. On schedule to be completed by June 2018.

b. WWTP
   i. Payments - GHD, AECOM, & Danforth
   ii. Electric - Second feed to be completed by 6/22/18
   iii. Backflow prevention - 2 mechanics have passed their courses in order to complete necessary repairs, in order to repair our backflows.

c. 5 Year Capital Projects
   i. Option 1 – Assumes NYS Funding
   ii. Option 2 – Assumes only NFWB Resources
   iii. Option 3 – Includes outfalls

d. Vanguard Report

b. New Items:

a. Update on Buffalo Ave. Water Main Replacement Project
b. Revised 5-year Capital Plan

Still working on refining the plan and evaluating potential impact on rates to fund these improvements. Mr. Forster requested that several problematic water mains be added to the draft plan.

c. Chlorine odor complaint – June 20, 2018

Mr. Porter noted that Water Board staff and consultants are working on improving the chlorine injection process, which may help to address that issue.

d. Draft Internal Controls Policy

5. Director of Operations

1. Call-in to security procedures – temporarily on hold

The board questions the "hold-up" regarding the implementation of this requested procedure.

Mr. Perry explains the Union has a right to request further information regarding this procedure prior to implementation.

Mr. O'Callaghan questions how long this process with take?

Mr. Perry states it will take an additional few weeks to finalize everything.

Mr. Forster states he would like Mr. Costello to gather job description information for the employees who have handled these calls in the past.

6. Superintendent

I. Questions or Comments on the Following Items Discussed During June 18 Work Session (if any):

a. Grant-Funded Lead Service Replacement Project

Mr. O'Callaghan asks Mr. Wright and Mr. Eagler if their crews involved with this work are full.

Mr. Wright states they are 1 man short.

7. Engineering

1. DOT ADA Compliance Program – (See Resolution 2018-06-006)

This project impacts the Water Board because it involves raising a few Water Board manhole covers.

8. **Personnel Items**

    1. **Review of Org Chart**

    2. **<u>Personnel Actions and Reports</u>**

The Board discussed with staff what criteria are involved in recommending a promotion from MW2 to MW3.

Motion to approve the personnel actions by Mr. Forster and seconded by Ms. Kimble
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

9. **Information Technology (IT) Dept.**

Mr. Perry states the Ethernet cables have been installed for the time management system; effects bargaining with Union is moving ahead as well.

10. **Financial Reports**

    I. Questions or Comments on the Following Items Discussed During June 18 Work Session (if any):

a. June 2018 Department Overview Report
b. NFWB and Bank on Buffalo Transition
c. NFWB Bank Accounts
d. Budget Monitoring Expenses - April
e. Budget Monitoring Revenues - April
f. Overtime Hours #201812

Mr. O'Callaghan states he would like Mr. Costello and Ms. Walker to work together to review the how water suppliers in surrounding areas handle high water bills; possibly re-addressing our water bill adjustment procedure if a better process is identified.

Mr. Forster requests from Ms. Walker a report for anything on track to exceed 60% of the budget for 2018, and asked whether there have been any budget transfers. Noted that the 2019 budget process will begin in July.

11. Reports

I. Questions or Comments on the Following Items Discussed During June 18 Work Session (if any):

a. O&M Report
b. Safety

No recordable/reportable injuries have been mentioned at this time.

12. Attorney/Legal

I. Questions or Comments on the Following Items Discussed During June 18 Work Session (if any):

a. Legal Department Mission Statement and Needs Assessment
b. Recovery on Hydrant Claim
c. Annual Execution of Certain Governance Documents
d. Fiduciary Duty Acknowledgment
e. Certificate of Independent Director

II. New Items

a. American Water Resources Proposal

Mr. Costello recommends that the board members allow him to proceed with negotiating a proposed agreement with AWR whereby the Water Board would help AWR offer water and sewer line protection programs to Water Board customers in exchange for a share of the revenue generated by AWR.

13. From the Chairman

Mr. O'Callaghan shared his gratitude in regards to the hard work of the employees at the NFWB. He states everyone is going a great job, building necessary up crew sizes as well as the completed of the WWTP gates.

14. Resolutions

a. RESOLUTION 2018-06-001 – PROHIBITING ALTERATION OF WATER BOARD PROPERTY WITHOUT AUTHORIZATION

Motion to approve by Mr. Forster and seconded by Ms. Kimble
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

b. RESOLUTION 2018-06-002 – HIRING PROCEDURES

Motion to approve by Mr. Forster and seconded by Ms. Larkin
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

c. RESOLUTION 2018-06-003- REVISING CREDIT CARD POLICY TO PROHIBIT TRANSFER OF CREDIT CARDS OUTSIDE OF DEPARTMENTS

1. Supporting Document: June 2018 Proposed Revised Credit Card Policy

Motion to approve by Mr. Forster and seconded by Ms. Kimble
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

d. RESOLUTION 2018-06-004 – AUTHORIZING INFORMATION CAMPAIGN ADVERTISING

Ms. Kimble questioned the money spent on the Martin Group and the cost of advertising. Ms. Walker noted that $5,100 has been paid for ads in The Niagara Reporter. Ms. Larkin added that the Water Board paid the Martin Group an additional $2,500 to create those ads. Mr. Porter explained that the resolution is for print ads to communicate relevant information to Water Board ratepayers (past ads have explained sewer surcharges, how the wastewater treatment plant works). Ms. Kimble said her concern was more with the Martin Group bills which do not really detail what work was performed, what specific services were provided, but will support the resolution to the extent it provides public information and notices. This is less expensive than the cost of mailing information to ratepayers. Ms. Larkin states that she feels this is a poor way to spend $10,000 and that the $5,100 to date was spent unwisely. The resolution for an additional $10,000 is not limited to public notices required by law and she will not support the resolution unless it is limited to public notices required by law. Mr. O'Callaghan feels we have to communicate with and educate the public and that this is the least expensive way to do things.

Motion to approve by Mr. Forster and seconded by Ms. Kimble
Forster_ Y _ Kimble_ Y _ Larkin_ N _ Leffler_ N_ O'Callaghan_ Y _
Motion was carried 3-0

e. **RESOLUTION 2018-06-005 – AUTHORIZING SETTLEMENT OF MARYANN TAIBI CLAIM FOR DAMAGE TO SHRUB AT 2948 WOODLAWN AVENUE**

1. **Supporting Document: Notice of Claim, Maryann Taibi**
2. **Supporting Document: Repair Estimates**

Motion to approve by Ms. Kimble and seconded by Ms. Larkin
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

f. **RESOLUTION 2018-06-006- GRANTING THE STATE OF NEW YORK AUTHORITY TO PERFORM AN ADJUSTMENT OF NIAGARA FALLS WATER BOARD FACILITIES AND AGREEMENT TO MAINTAIN FACILITIES ADJUSTED VIA THE STATE-LET CONTRACT**

1. **Supporting Document: Correspondence and Forms Related to Department of Transportation ADA Improvement Program (adjusts depth of Water Board manholes on Military Road)**

Motion to approve by Mr. Forster and seconded by Ms. Kimble
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

g. **RESOLUTION 2018-06-007 –COMMITTING TO FUND OR BOND EXPENSES OF PROPOSED IMPROVEMENTS TO SEWER PLANT, WATER MAINS, AND BEECH AVE. WATER TANK**

Motion to approve by Mr. Forster and seconded by Ms. Larkin
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

h. **RESOLUTION 2018-06-008 - FINANCE AND AUDIT COMMITTEE MEMBERSHIP AND MEETINGS**

Motion to approve by Ms. Kimble and seconded by Ms. Larkin
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

i. RESOLUTION 2018-06-009 - GOVERNANCE COMMITTEE MEMBERSHIP AND MEETINGS

Motion to approve by Mr. Forster and seconded by Ms. Larkin
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

j. RESOLUTION 2016-06-010 - REQUIRING THAT COSTS OF COOPERATION WITH OTHER MUNICIPAL ENTITIES BE TRACKED

1. Supporting Document: Draft Cost of Cooperation Tracking Form

Ms. Leffler asked what provisions are made if Water Board equipment loaned to other municipal entities is damaged? Mr. Drury will work with General Counsel to add some relevant language to the tracking form.

Motion to approve by Ms. Kimble and seconded by Mr. Forster
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

k. 2018-06-011 - AUTHORIZING FUNDS TO COMPLETE REPAIRS TO WASTEWATER TREATMENT PLANT SEDIMENTATION BASIN SCRAPERS, GRIT SCREW, AND GATES

Motion to amend resolution to state under the resolved section, "repair or replacement of the scraper blade assembly in Sedimentation Basin #5, with the scraper blade replaced with stainless steel in order to extend its service life, and procurement of a spare scraper blade and complete assembly to reduce the time required to make future repairs, at a total estimated cost of $120,000."

Motion to amend by Mr. Forster and seconded by Ms. Larkin

Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

Motion to approve by Ms. Kimble and seconded by Ms. Larkin
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y _
Motion was carried 5-0

l. 2018-06-012 - AUTHORIZING FUNDS TO RESTORE SCADA SYSTEM FUNCTIONALITY AND TO PREPARE A REPORT ON NEEDED IMPROVEMENTS

Motion by Mr. Forster and seconded by Ms. Kimble to approve.
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y
Motion was carried 5-0

Walk-on-Resolutions

Motion to consider walk on resolutions numbered 2018-06-013 and 2018-06-014 by Ms. Kimble and seconded by Mr. Forster
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y
Motion was carried 5-0

Resolution 2018-06-013 – Authorizing Agreement with Modern Corporation to Dispose of Approximately 600 Tons of Water Treatment Plant Residuals, Also Known as Alum Sludge

Motion to approve by Ms. Kimble and seconded by Ms. Larkin
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y
Motion was carried 5-0

Resolution 2018-06-014 – Authorizing Change Order for Gorge Pumping Station Roof Replacement Project

Motion to approve by Mr. Forster and seconded by Ms. Leffler
Forster_ Y _ Kimble_ Y _ Larkin_ Y _ Leffler_ Y_ O'Callaghan_ Y
Motion was carried 5-0

15. Unfinished Business

Nothing was discussed at this time.

16. New Business & Additional Items for Discussion

Mr. Forster states he would like there to be a daily checklist implemented where employees observe and track potential or existing problems with the sedimentation basins.

Mr. Porter states there is a shared primary performance comprehensive checklist to be completed on a routine basis.

17. Executive Session and/or Recess for Seeking Legal Advice

The Board voted to enter into an executive session to discuss two matters related to collective bargaining at 7:13 p.m., but before the public was cleared from the room it was noted that these matters (the time management system and call in procedures) already had been discussed in the open session. The Board determined that therefore

there was no need for executive session, voted to exit executive session, and at 7:15 p.m. voted to adjourn the meeting.

18. Adjournment of Meeting

NIAGARA FALLS WATER BOARD, NEW YORK

Cash Flow Projections based on a $12,000,000 bond issuance in 2019

Line		2018	2019	2020	2021	2022
	Revenues					
1	Water and wastewater user payments	31,231,999	32,628,068	34,556,970	34,897,742	35,241,922
2	Interest earnings	459,709	459,709	459,709	459,709	459,709
3	Total	31,691,708	33,087,777	35,016,679	35,357,451	35,701,631
	Operations and Maintenance Expenses					
4	Salaries and benefits	11,713,075	12,123,974	12,551,922	12,997,703	13,462,137
5	Chemicals/sludge	5,068,132	5,490,495	5,581,645	5,674,617	4,741,617
6	Insurance/safety	504,189	514,273	524,558	535,049	535,049
7	Maintenance	1,255,748	1,280,863	1,306,480	1,332,610	1,332,610
8	Utilities	1,302,049	1,328,090	1,354,652	1,381,745	1,381,745
9	Other expenses	1,588,377	1,620,145	1,652,547	1,685,598	1,685,598
10	Authority/Board expenses	875,512	893,022	910,883	929,100	929,100
11	PILOT payment to City	750,000	765,000	780,300	795,906	795,906
12	Total	23,057,082	24,015,861	24,662,987	25,332,329	24,863,763
13	**Revenues available for debt service**	8,634,626	9,071,916	10,353,692	10,025,122	10,837,869
	Debt Service					
14	Debt service on outstanding bonds	7,401,817	7,427,360	7,363,716	7,021,537	7,369,642
15	Debt service on future Authority bonds	-	-	1,470,000	1,480,000	1,480,000
16	Total	7,401,817	7,427,360	8,833,716	8,501,537	8,849,642
17	**Surplus (line 13 - line 16)**	1,232,809	1,644,556	1,519,976	1,523,585	1,988,227
18	**Debt Service Coverage (minimum 1.15)**	1.17	1.22	1.17	1.18	1.22
19	**Proposed Rate Increase**		3.0%	6.0%	1.0%	1.0%

NIAGARA FALLS WATER BOARD, NEW YORK
NOTES

- 2018 costs and revenues come directly from the budget document as year-to-date figures (through April 2018) were for the most part, consistent with budget.
    - Exception for sludge removal - Per management's request, sludge removal budget was increased $3.4 million over the existing budget allocated through 2021.
- Assumed a 2% increase on personnel and contractual costs in 2019 through 2022.
- Employee benefits are increasing 5% from 2019 through 2022.
- Debt principal and interest payments are expected to begin in 2020.
- All other debt payments are taken directly from the audited financial statements.

MCSC Approved (Date)

General Merchandise and Material Control Specialist

DISTINGUISHING FEATURES OF THE CLASS: The immediate opening seeks a Merchandise and Material Control Specialist with responsibility for planning, scheduling, maintaining and managing the movement, storage, use and inventory of Merchandise and Materials. The work involves the management of a moderately large storeroom, containing a variety of parts, supplies and some equipment. The successful candidate will work collaboratively with other Water Treatment Plant (WTP) and Waste Water Treatment plant (WWTP) employees, Niagara Falls Water Board management, and administrative staff. The Control Specialist provides support for the Niagara Falls Water Board through the storage, management and tracking of a variety of company supplies, equipment and inventories used by multiple functions within the business. Periodically, the Control Specialists might be responsible for training employees on inventory management procedures and policies, which would include setting par levels, FIFO, contingency planning, auditing and forecasting. Functionally, the Control Specialist shall be responsible for product related data entry into the business system. The Merchandise and Material Control Specialist performs related work as required

PRIMARY RESPONSIBILITIES:

- Plan and manage all material and merchandise movement.
- Maintain clearly organized warehouse spaces, controlled inventory cages, and office.
- Receive materials into inventory control system.
- Assure proper storage of all merchandise and materials.
- Master Setup and Maintenance – Create and manage new and existing inventories and master lists- including warehouse location management, changes, revision control, etc.
- Prepare reports as necessary.
- Obsolescence - Identify low or no usage items, updating part maintenance and implementing necessary inventory adjustments.
- Work with management staff in order to assist with workload management on multiple projects, meeting, and deadlines.
- Inventory Analysis and Adjustments - Work with Operations and Purchasing to monitor and manage inventory levels, scrap, returned goods, build out analysis, and order as necessary.
- Overall system maintenance and data entry as required.
- Training of coworkers or subordinates as needed.
- Miscellaneous duties as directed.

POSITION SUMMARY

The Merchandise and Material Control Specialists is responsible for ensuring adequate stock levels and dispensing repair parts, materials, equipment and supplies in accordance with approved procedures. It is the responsibility of the Control Specialist to exam goods for defects, properly store merchandise, and keep track of inbound and outbound materials. The control specialist also maintains detailed records of all merchandise and materials.

FULL PERFORMANCE KNOWLEDGES, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:

Good knowledge of inventory methods used in keeping merchandise and materials. Good knowledge of terminology, procedures, routines and equipment associated with inventory management; good knowledge of arithmetic and English; Outstanding computer skills; ability to understand and carry out complex oral and written directions; ability to get along well with others; mental alertness; good judgment; accuracy; attention to detail; integrity; physical condition commensurate with the demands of the position. General understanding of the operation and minor

maintenance of pumps, valves and related mechanical and electrical equipment helpful.

MINIMUM QUALIFICATIONS:

(A) Graduation from a regionally accredited or New York State registered college or university with an Associate's degree and two (2) years of experience involving the ordering, storage, inventory and distribution of supplies, equipment, and materials- on a moderately large scale.

OR

(B) Graduation from high school or possession of a high school equivalency diploma and four (4) years' experience involving the ordering, storage, inventory and distribution of supplies, equipment, and materials- on a moderately large scale.

SPECIAL REQUIREMENT:

A valid Fork Lift Operator's license or ability to obtain one within 6 months of hire.

MCSC Approved (Date)

Records Retention Control Specialist

DISTINGUISHING FEATURES OF THE CLASS: The opening seeks a Records Retention Control Specialist with responsibility for maintaining and managing the storage and inventory of archived records, and other NFWB documents. The work involves the management of the storeroom, containing a variety of documents and records. The successful candidate will work collaboratively with other Water Treatment Plant (WTP) and Waste Water Treatment plant (WWTP) employees, Niagara Falls Water Board (NFWB) management, and administrative staff. The Specialist provides support for the Niagara Falls Water Board through the storage, management and tracking of documents and records used by multiple functions within the business. This position requires proficiency in scanning, organizing and maintaining documents such that they adhere to the company's document lifecycle procedures, as well as controlling archived and inactive records in accordance with the records retention schedule. Periodically, the Records Specialists will be responsible for training employees on records management procedures and policies, which include retention, retrieval, destruction and disaster recovery. Functionally, Records Specialist will be responsible for product related data entry into the business system. The Records Specialist performs related work as required

PRIMARY RESPONSIBILITIES:

- Maintain clearly organized storage spaces, controlled inventory, and office.
- Receive material into record control system.
- Assure proper storage of all records.
- Organize and maintain documents and records in adherence to NFWB lifecycle procedures and record retention guidelines.
- Store, Manage and track company archives.
- Ability to research and interpret record retention guidelines.
- Maintain control and retrieval of all archived records.
- Manage RFI (request for Information) by receiving and processing, as well as tracking.
- Assist on Freedom of Information (FOIL) requests by gathering information and documents.
- Master Setup and Maintenance – Create and manage new and existing inventories and master lists.
- Prepare reports as necessary.
- Overall system maintenance and data entry as required.
- Training of coworkers/subordinates, as needed.
- Miscellaneous duties as directed.

POSITION SUMMARY

The Records Retention Control Specialists is responsible for managing company archived documents while also ensuring their accuracy, quality and integrity. The specialists will ensure the NFWB adheres to record retention policies, safeguards information and is able to retrieve data more effectively. The specialist will contribute to the NFWB ability to become more eco-friendly and efficient- updating current systems. This position performs inventory and record retention duties.

FULL PERFORMANCE KNOWLEDGES, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:

Good knowledge of inventory methods used in keeping records. Good knowledge of terminology, procedures, routines and equipment associated with inventory and record management; good knowledge of arithmetic and English; Outstanding computer skills; ability to understand and carry out complex oral and written directions; ability to get along well with others; mental alertness; good judgment; accuracy; attention to detail; integrity; physical condition commensurate with the

demands of the position. General understanding of the operation and minor maintenance of pumps, valves and related mechanical and electrical equipment helpful.

MINIMUM QUALIFICATIONS:

(A) Graduation from a regionally accredited or New York State registered college or university with an Associate's degree and two (2) years of experience involving the ordering, storage and distribution of supplies, equipment, and materials- including records, or previous work experience in inventory procedures and practices.

OR

(B) Graduation from high school or possession of a high school equivalency diploma and four (4) years' experience involving the ordering, storage and distribution of supplies, equipment, and materials- including records, or previous work in inventory procedures and practices

SPECIAL REQUIREMENT:

None

Niagara Falls Water Board
Personnel Actions and Report
Monday, July 23, 2018

Recommended Moves by the Director of Administrative Services

I. PERSONNEL ACTIONS RECOMMEND TO HIRE

Line Item Number	Position	Department/Location	Pay Rate or Grade	ADDITIONAL INFORMATION
1	GMMC Specialist	New position/ see job description	Grade 9 Pending	The position is still under review by MCSB
2	Records Retention Specialist	New position/ see job description	Grade 9 Pending	The position is still under review by MCSB

II. RECOMMENDED PROMOTION / MOVE / APPOINTMENT

Line Item Number	Position	Type of labor move	Change in pay rate or grade	ADDITIONAL INFORMATION

IV. BOARD NOTIFICATION OF OTHER MOVEMENT (CBA BID, MCSB APPOINTMENT, LEGAL STATUS CHANGE)

Name	Position & type of labor move	Department/Location	Pay Rate or Grade	ADDITIONAL INFORMATION / AUTHORITY

V. OTHER ACTIVITY **OTHER PERSONNEL ACTIVITY FOR BOARD NOTIFICATION**

Monthly O&M Report For the Month of June 2018

Agenda Item # 7.1

1. Treatment & Plant Maintenance

1.1. Water – Robert Rowe, updated 07/05/2018

OPERATIONS AND MAINTENANCE

Total water production for the month of June was 626 million gallons. The average daily water production was 20.9 million gallons. The plant data summary table is included below for your reference.

2018 TOTALS AND AVERAGES

	R/W PUMPAGE	PRE CL2 LBS	PACL LBS	H2SiF6 LBS	PO4 LBS	POST CL2 LBS	F/W 1000 GAL/ DAY
JAN	670103	6739	130700	15545	1271	3979	21616
FEB	657443	6477	138300	16193	1572	4126	23480
MAR	667740	7042	153500	16497	1715	4410	21540
APR	623399	7174	158300	15162	1555	4280	20780
MAY	642201	7875	147300	16376	1603	4473	20716
JUN	626242	8320	126800	15168	1638	4359	20875
JUL							
AUG							
SEP							
OCT							
NOV							
DEC							
TOTAL	3887128	43627	854900	94941	9354	25627	129007

2018 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	9.6	8.0	0.58	1.23	0.061	7.7	0.70
FEB	4.8	8.0	0.56	1.21	0.063	7.6	0.71
MAR	2.5	8.0	0.57	1.21	0.067	7.7	0.70
APR	9.3	8.0	0.57	1.23	0.063	7.6	0.67
MAY	2.9	8.0	0.54	1.24	0.063	7.6	0.69
JUN	1.7	8.0	0.53	1.25	0.063	7.6	0.67
JUL							
AUG							
SEP							
OCT							
NOV							
DEC							
AVG	5.1	8.0	0.56	1.23	0.063	7.6	0.69

Operations and Maintenance Highlights

Ongoing Items…
We have received our replacement online turbidity meters, and will be looking to schedule the installation soon. These will be replacing our original, outdated units and will allow us to more effectively and efficiently clean and calibrate the instruments as required. The units are also EPA approved for using a safer, less toxic substance for the calibrations, which was a major factor in choosing this brand and model.

1.2 Wastewater – Bob Dunn, Chief Operator- updated 07/12/2018

Non Compliance Events: NONE

1. **Sampling Notes:** There were no samples processed in June 2018.

OPERATIONAL and MAINTAINENCE- Highlights

Work on the Air Scour Unit was completed after minor delays. The Grit Screw on Sediment Basin #1 was damaged when one of the mounting bolts failed. The Basin was emptied for a thorough examination. Plans for removal and repair are in place. The Basin can function without the Grit Screw. While it was empty, inspections were conducted and maintenance performed. The Gorge Pump Station elevator was examined and plans for repairs have been made. The malfunctioning Carbon Bed Actuators have been removed and sent out for rebuild. The 4th Thickened Sludge pump has been installed and tested. Due to the dry weather, sludge has been reduced. The first good rain will likely bring large amounts of solids to the WWTP. Both operations and Maintenance are prepared to deal with this. Sediment Basin #4 is currently empty for this reason. *Both Operations and Maintenance have performed above and beyond to address the ongoing problems.*

Sediment Basin #5: On June 4, 2018, a "ticking" noise was heard during the morning walk through, it was believed to be a possible problem with the sludge rake mechanism. Speculation led to the decision to take Basin #5 down for further investigation. Since all work on #5 must be approved by the DEC, work was scheduled to begin the following Monday (pending approval). (Rain was expected) Dewatering was hampered by the discovery that the #5 drain was non-functional. Permission was received to use alternate methods. Crews worked through their shifts and overtime to shovel and hose the basin to ready it for inspection. On June 11th it was determined that a portion of the Sludge Plow Blade had broken off and was lodged in the Sludge screw. Removal of several feet of raw sewage was required for closer inspection. A second piece of the blade was found to have broken off. It was decided to replace the blade and stanchions. The Basin was brought back online with plans in place to take it down for repairs beginning July 9th.

1.2 Continued

WASTEWATER TREATMENT PLANT OPERATING DATA														
2018		**FLOWS**		**Chlorine**	**Rainfall**	**SLUDGE**		**Polymer**		**FeCl3**	**LIME**	**H2O2**	**NaOCl**	**Grit**
	INF/EFF	CBE	GPS	**Residual**	**average**	NET	LANDFILL	BFP	PRIM					
DATE	MGD	MGD	MGD	PPM	inches	(Tons)		(Lbs)		(gals.)	(Tons)	(gals.)	(gals.)	(Tons)
January	849.22	1119.08	358.13	2.0	2.3	515.5	537.8	3905.0	5849.1	24420	57.4	24200	97590	51.8
February	937.49	1169.86	377.68	2.0	2.2	483.0	576.5	4070.0	4406.2	26910	69.3	20110	85220	59.8
March	869.60	1109.82	390.90	2.0	2.4	463.8	446.4	2805.0	4986.0	32020	67.3	21390	87320	56.0
April	978.38	1220.23	408.61	2.0	3.3	424.9	511.2	2410.0	4871.0	31640	62.9	21050	91355	44.0
May	727.92	984.12	381.90	2.0	3.2	490.1	568.0	3025.0	4888.8	32950	52.2	22380	186270	45.9
June	591.01	928.69	317.52	1.8	1.2	495.2	538.0	3300.0	4855.0	29160	58.3	21920	236770	25.8
July														
August														
September														
October														
November														
December														
Totals	**4953.62**	**6531.80**	**2234.74**	**2.0**	**14.6**	**2872.5**	**3177.9**	**19515.0**	**29856.1**	**177100**	**367.4**	**131050**	**784525**	**283.3**

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

2. Pipes:

2.1. Sewer Collection – Michael Eagler, updated 07/16/2018

Sewer Collection System O&M Report										
2018	Service Calls	Flushing (Feet)	UFPO Responses	Receivers Cleaned	Bypass Pumping (Hours)	CB	MH	MAIN	Connections	Lateral
January	41	17125	157	156	81.1					
February	62	18940	111	70	147.6	1	2		1	
March	35	300	215	71	10.5	2	1		1	
April	28	7543	159	77	304	5	3	1	2	1
May	96	53201	110	72	0	2	5	0	1	2
June	87	37,801	311	45	0	6	3	5	2	1
July										
August										
September										
October										
November										
December										

Notes Sewer Department curtailed to assist in water service/hydrant repair Feb March. April may

2.2 Water Distribution – Michael Eagler, updated 07/16/2018

2018	MAIN BREAKS	SERVICE LEAKS	VALVE REPR/ REPL	HYDRANT REPLACE	HYDRANT REPAIRS	HYDRANT FLOW/FLUSH MAINTENANCE	HYDRANTS OUT OF SERVICE	MISC. SERVICE CALLS	CONCRETE LANDSCAPE	UFPO
JANUARY	22	9	0	4	6	215	64	66	6	157
FEBRUARY	8	6	0	12	8	207	47	71	8	111
MARCH	7	6	1	27	10	196	10	56	1	215
APRIL	8	5	3	6	4	120	0	77	2	159
MAY	7	9	3	4	2	133	2	68	18	110
JUNE	13	9	1	3	2	341/659	3	140	15	311
JULY										
AUGUST										
SEPTEMBER										
OCTOBER										
NOVEMBER										
DECEMBER										

3 hydrants damaged in Feb not on out of service list.

3. Analytical Services

3.1 Water Laboratory –Patrick Fama, updated 7/10/18

1. **New York State Sanitary Code Part V Monitoring/Reporting**
   -June samples have been collected & analyzed in-house for TOC, DOC & UV_{254} on both finished and source water. All samples were in compliance.
   -June bacteriological and chemical monitoring from the distribution system samples were within compliance limits.

2. **In-house/DEC Monitoring**

   -All in-house monitoring for bacteriology and water chemistry have been within normal limits.
   -The monthly SPDES sample collected from the freeze thaw bed was within normal limits.
   -Samples analyzed to date are 8,978.

3. **Laboratory Concerns**
   - The Department of Health conducted a required ELAP Biannual Assessment of the Laboratory. Satisfactory results were received with only minor findings. All findings have been addressed and submitted to ELAP for final approval.
   - As part of the assessment the Laboratory began the Certification process for an additional ten metals.
   -The laboratory Analyzed 38 water samples from The Town of Tonawanda for Lead and Copper. The Laboratory also analyzed 9 samples for Total Organic Carbon and 9 required Wet chemistry analysis.
   -The microbiology lab analyzed 21 samples from the Aquarium of Niagara's indoor and outdoor pools as well as three samples from the Village of Lewiston. All results were reported to the representative contacts.
   - Revenue created to date is $16,722.

3.2 Wastewater Laboratory For May Brian Eldridge 6/12/18

1. The data for May's State Pollutant Discharge Elimination System (SPDES) report is currently being compiled with no anticipated violations.

2. The second quarter BHC PMP samples were collected and are being analyzed.

3. Sampling for the yearly Priority Pollutant scan will be conducted in June.

4. Customers & Compliance

4.1. Meter Shop – Bob Reid Updated 6/18/18

MONTH:	WORK ORDERS	STOPPED METERS	Registers Replaced	SCRAPPED METERS	INDUSTRIAL METERS READ	RESIDENTIAL METERS READ
JANUARY	77	1	5	0	0	7192
FEBRUARY	94	0	7	0	0	5262
MARCH	100	5	9	0	569	5497
APRIL	101	2	6	0	0	7192
MAY	107	4	7		0	5265
JUNE						
JULY						
AUGUST						
SEPTEMBER						
OCTOBER						
NOVEMBER						
DECEMBER						
TOTAL	489	12	34	0	0	30408

METER READINGS:

DISTRICT 3	B.REID	M.MACRI	V.Virtuoso	J.PAUL	F.DERUBEIS	TOTAL
5/2/18	676	841				1517
5/3/18	687	756	24			1467
5/4/18	954				26	980
5/7/18	525	754				1279
5/8/18			22			22
4/30/18						
TOTAL	2842	2351	46		26	5265

Shop read 5265 residential meters for the month. The daily appointments were split up between Macri, Paul, DeRubeis and Virtuoso. Also Tagged approx.. 675 properties for shutoff and did as many shutoffs as time and manpower allowed.

4.2. Industrial Monitoring/Enforcement – Joel Paradise updated 6/13/2018

a) Hauled Waste Program – The Hauled waste moratorium imposed on August 16th is still in effect.
b) Investigations/Enforcement – All inspections have been conducted and Notices of Violation have been issued as required.

c.) SIU Updates

1.) On 12/10/17 the Chemours Corp. discharge permit number 77 was terminated. Chemours will enter into a private agreement with Olin Corp, who now control MS #8, to discharge to MS #8. Olin's discharge permit #23 was modified on that same 12/01/17 date to account for these changes. As the permit holder at MS #8, Olin has complete responsibility for anything discharged through MS #8 to the NFWB
.

2.) Any SIU whose discharge permits are nearing expiration in the next several months have been sent renewal applications for us to review and eventually issue a renewed discharge permit lasting for a term of 5 years. This is an ongoing and continuing process.

3.) The 2018 SIU Verification program is underway and on schedule.

4.) On 12/06/17 TAM Ceramics Group of NY, LLC was reclassified from CIRSU permit # 71 to SIU discharge permit # 79.

5.) Our Compliance Officer / Industrial Waste Inspector Matt LaGamba is progressing in his training in the position.

6.) The EPA conducted their scheduled 5-year audit of the Pretreatment Program on September 26th and 27th. As was expected, there are several relatively minor items that will have to be addressed. The EPA finally issued their report on March 27th, 2018 and it was received at the NFWB on March 30th, 2018. Their findings are being addressed and our response was sent to the EPA via USPS on May 17th, 2018 as requested. All SIU discharge permit have been modified with the recommended changes. We are awaiting any comments from the EPA with regard to our response sent in May 17th, 2018. Once those comments are received and dealt with the modified SIU discharge permits can be issued.

5. Support Services

5.1. Safety – Gina Senia, updated 7/16/18

Safety Performance (June 2018):
The NFWB experienced ***zero*** OSHA/PESH recordable injuries and ***zero*** first aid incidents in June bringing our Injury Frequency Rate to 5.6 for Total Recordable Injuries and 1.9 for Lost Work Day Cases:

MONTHLY SAFETY PERFORMANCE:	June	YEAR TO DATE SAFETY PERFORMANCE:	YEAR TO DATE INJURY FREQUENCY RATE:
OSHA/PESH LWDC	0	1	1.9
OSHA/PESH Recordable Injuries	0	3	5.6
Man Hours Worked (est.)	19,347	104,289	-
First Aid Cases	0	-	-

2018 GOALS	
OSHA/PESH LWDC	0
TOTAL OSHA/PESH Recordables	0
INJURY FREQUENCY RATE	0

Summary of Recordable Injuries (June 2018): 0

Summary of First Aid Incidents (June 2018): 0

Summary of Other Incidents (June 2018): 1

6/18/18 – A backhoe being operated by an Outside W/S employee hit another NFWB vehicle while working in a tight work-zone causing minor damage; no one was injured in the incident.

Safety Activities (June 2018):

- A total of 54 Water Board employees attended the monthly Safety/Training meetings in June. Employees reviewed the revised Emergency Action Plan (EAP) including the evacuation routes (primary and secondary) for each plant and location of spill control and safety equipment (i.e., eyewash, safety showers). Employees also reviewed the incident command structure and the new role of security at each plant. In addition to EAP training, employees were trained on confined space awareness where they reviewed how to identify a confined space, potential hazards of confined spaces and reviewed the revised list of confined spaces that have been assessed at each plant.

5.1 Safety Continued

- **Hazardous Waste Disposal (WTP) –** Veolia was onsite on June 11 to pack and dispose of universal waste, and expired and unused process and janitorial chemicals; a similar waste lab-pack and disposal is being planned for the WWTP.

- **Fall Protection (WWTP) –** In compliance with OSHA 1910.28 we purchased "Glide-Loc" rail systems that will be installed on all fixed ladders greater than 24' high. New harnesses having a front "D-ring" for use in the Glide-Loc system also were ordered; all O&M employees will be trained on proper use. Additionally, on June 26 a Miller fall protection representative was onsite to evaluate the sedimentation basins for fall protection options. It was recommended that we replace the existing corroded horizontal "Sky-Grip" life-line with a new life-line, similar to the current setup. The intent is for the employee to tie-off at each side of the walkway using a double lanyard. We are purchasing new equipment (harnesses and double lanyards) and will be evaluating the cost for upgrading the life-line.

- **Lab Safety** – on June 27 we held a "mini" HazCom and safety data sheet (SDS) training for WWTP laboratory employees. Employees reviewed the sections of the SDS particularly pertaining to exposure hazards and how to protect against the hazards. Employees also reviewed proper labeling and storage. Lab employees will be taking inventory of unused and expired chemicals to facilitate future lab-pack and disposal (expected to be completed by end of July).

- **WTP Process Hazards Analysis (PHA) –** we will be accepting a proposal from Arcadis to lead WTP employees in an OSHA-required PHA. The PHA will identify and evaluate the leak/release prevention controls that are in place (or that are lacking) within the chlorine process. The PHA will cover the chlorine process from the point of cylinder delivery at the gate to the point where "finished" water leaves the plant. Additionally, the PHA is expected to facilitate development of the alternative offsite consequence scenario and analysis that is required by USEPA under their Risk Management Program.

- The **Water Board Safety Committee** met on June 21 with an impressive turnout; employees discussed the new fixed gas detection systems (including the system at the Gorge Pump Station), fall protection, chain hoists and lifting aids among other safety items. The committee continues to provide updates to employees as it progresses.

- **New Employee Safety Orientation –** A total of 5 new hires (3 mechanics and 2 HR specialists) attended safety orientation in June. Each new employee was provided a general overview of our safety program and information regarding primary hazards and how to eliminate or protect against them. Additionally, new employees were provided our Workplace Violence Prevention policy.

6. Technical Services – Doug Williamson, updated 7/6/18

1. **Wastewater Treatment Plant and Sanitary Sewer Lift Station Standby Power Generator Systems (General and Electrical contracts #7519 and #7520):**
   We are waiting for the record drawings and O & M manuals requested from GHD. The automatic transfer switch for back-up power to main pumps 1 and 2 will be delivered on 8/3 and work to begin afterwards.
2. **Hazard Mitigation FEMA Grant Program No.4204-0003**:
   There was a project conference call held on June 14th with GHD, FEMA and NYSDHSES. SEQR Coordination Notice was distributed to each interested/involved party notifying them that the NFWB intends to act as Lead Agency under the SEQR for this project.
3. **Niagara Gorge Corridor - Robert Moses Parkway Removal Project**:
   The NYSDOT Project Identification No. 5761.90 Removal of NY Route 957A (Niagara Scenic Parkway) AutoCAD contract drawings were received from Watts Engineering in June. We plan on creating a water/sewer utility GIS map of the project area, prior to the start of construction activities.
4. **Seneca Niagara Resort and Casino Arrival Experience Project**:
   We are still waiting for a maintenance agreement from Seneca Gaming. We provided correspondence to Wendel on May 22nd requesting a pressure recorder installation in Schoellkopf shaft #1 for continuous level measurements. A letter has been drafted regarding acceptance of the project based on certain criteria being met.
5. **Schoellkopf Tunnel Surcharge**:
   Ongoing measurements and review of data with GHD at shaft #1 and #2 reveal no unusual behavior.
6. **LaSalle SSO Abatement Program and Consent Order**:
   Milherst Construction completed additional site restoration for the LaSalle SSO (2016-17) project in June. We are still waiting for a formal response from the NYSDEC regarding the letter submitted by RBPC Attorneys on May 7th regarding the LaSalle SSO consent order. The year 11 (2018) work that includes the re-evaluation of the need for Love Canal Sewer Rehabilitation have been put on hold. Future work in years 12 (2019) to year 18 (2025) were addressed along with another revision of the Table 4.2 of the original consent.
7. **NYSDEC Consent Order**:
   CPL, GHD and AECOM continue to progress on items due under the consent order.
8. **Niagara Falls WWTP SPDES No. NY0026336**:
   The quarterly Publicly Owned Treatment Works (POTW) legal advertisement was published in the Niagara Gazette. The current WWTP SPDES permit expires on October 31st, 2018. We are currently waiting to hear back from the NYSDEC regarding the higher hexachlorocyclohexanes (BHC) limits proposed under the new

6. Continued

Permit. The RBPC Attorneys submitted a letter to the NYSDEC on March 23rd addressing our concerns with the new proposed limit. The SPDES Renewal Application that was submitted in April also addressed our concerns.

9. **Stormwater Mapping**:
The Western New York Stormwater Coalition (WNYSC) was at the NFWB on Friday 6/29 to map the storm drainage catch basins and manholes at the water treatment plant, wastewater treatment plant and Gorge Pumping Station.

10. **Town of Niagara Flow Monitoring**:
The spring of 2018 flow data and calculations were provided to the Town of Niagara in June.

11. **Gorge Pump Station Flow Measuring Instrumentation**:
We plan to perform calibration of the flow measuring instrumentation in August. The NYSDEC was notified that a dry weather overflow event may be avoided.

12. **Falls Street Tunnel Drop Shaft Zero Inspection and Calibration**:
We made a formal request on 6/26 to the NYSDEC for a short-term dry weather discharge of FST groundwater infiltration for the purpose of checking and calibrating the overflow measurement system (maintenance). A bypass rate of approximately three mgd for a period of less than two hours is expected. We are targeting October 16th for the inspection date, preserving October 17th as an alternate rain date.

13. **CSO Public Notification Plan:**
We received a letter from the NYSDEC regarding public notification requirements for combined sewer overflows to the Great Lakes Basin. A public notification plan is being developed for submittal to the DEC by 8/7/18. CSO discharge notification signage has been ordered for four locations along the Lower Niagara River that must be installed by 11/7/18.

14. **WWTP Spill Prevention Report:**
The WWTP Spill Prevention Report was updated and certified in June. CBS tanks #213, #214 and #215 are due for their five year inspection in mid-August.

15. **Radiological Monitoring Program**:
We plan on continuing to utilize Greater Radiological Dimensions (GRD) for their radiation consulting services that include recalibration of the instruments and training in 2018.

6. Continued

2018 OXIDIZER BUDGET

BUDGET = $1,670,000.00 for year

COST = $611,137.03 to date

% USED = 36.60% to date

BUDGET = $4,575.34 per day avg. **$139,166.67** per month avg.

COST = $3,376.45 per day avg. **$101,856.17** per month avg.

27.5 Flow (MGD) 181 total days

WWTP DATA		OXIDIZER USEAGE				SLUDGE REMOVAL			
MONTH	FLOW (MG)	H2O2 (GAL)	NaOCl (GAL)	GAL PER MG FLOW	TOTAL COST	LANDFILL SLUDGE (TONS)	SOLIDS THROUGH PUT (%)	FERRIC CHLORIDE (TONS)	LIME (TONS)
Jan-2018	873.5	24,200	97,590	142	$92,848.11	537.8	104.3	45.8	57.4
Feb-2018	937.4	20,110	85,220	123	$78,899.03	576.5	119.4	50.5	69.3
Mar-2018	869.6	21,440	87,320	125	$82,622.39	446.4	96.2	60.0	67.3
Apr-2018	978.4	21,050	91,355	121	$83,496.46	511.2	120.3	59.3	62.9
May-2018	727.9	22,380	186,270	294	$126,452.73	568.6	116.0	61.8	50.0
Jun-2018	590.3	21,920	236,770	442	$146,818.31	495.2	122.0	54.7	58.3
Jul-2018									
Aug-2018									
Sep-2018									
Oct-2018									
Nov-2018									
Dec-2018									
TOTALS	4,977.1	131,100	784,525	208	$611,137.03	3,135.7	678.2	332.1	365.2

Low value for year

High value for year

7. SECURITY REPORT-- Richard Beutel, updated 07/13/2018

Emergency Lighting is currently being installed.

New Lighting at the WWTP has improved visibility after hours.

Key cards have been issued and use is being enforced. Monitoring of "Piggybacking" without second vehicle scanning is being done at the WWTP. Security is addressing the problem.

7.1 SECURITY INCIDENTS

There were no Security incidents in June 2018.

8. INFORMATION TECHNOLOGY (I.T.) Joe Morock 05/08/2018

1. Parameter Survey for the Infotronics IT 3100 (Intelligent Terminal time management system) is complete. It was submitted to ComputerSearch Corp. The next step will be system installation and training.
2. Preparing New and Updating existing NFWB IT policies and Procedure forms to be used on new and existing employees, to provide audit trails of NFWB employee's access and permissions to our network.
    a) Will be building/hosting an INTRANET site that all NFWB employees can access to get any IT, policy and procedures, forms and see current events, or special announcements.
3. Reviewing assets tracking/tagging systems for all equipment.
4. Soon to be implementing an IT trouble ticketing system, exploring options through Lucity, SharePoint or 3rd party.
5. Implementing a collaborative NFWB SharePoint site to assist with new and ongoing projects to provide status updates from NFWB, consultants and vendors on an "as needed basis.
6. Lucity is still in development. The feedback is being used to refine and further develop the platform moving forward. Current improvements include:
    a) Working with outside contractors to assist with uploading additional data and linking assets to work orders and GPS.
    b) Building reports that can be run to display the real-time status of assets.
    c) 3-D Integration of plant and equipment for both WTP & WWTP.
    d) Tie-in with New World system integration and 3-D to provide clickable real-time asset information.
    e) Lucity Mobile – will be the next phase. Lucity Desktop must be completed prior to being able to focus on the mobile app
7. Email (Exchange) we are exploring a Cloud Email system.
8. Office 365- Bundling with Exchange Cloud Bids sent out (received one back).
9. We are looking into Infrastructure needs and improvements at each plant, which will improve the reliability and speed of the NFWB Network. Such as;
    a) Fiber connectivity between the plants.

b) New Routers & Switches with room for growth and network segregation of traffic.

c) Improvements to Network Security.

d) Wi-Fi Coverage at WW & WWTP (Work and Guest network)

e) Exploring ways to improve Emergency Recovery Plan. Several methods are being explored; redundancy options for Network and Internet.

11. Will explore multiple IP phone vendors, for possible cost reductions in service.
12. Guard house – Assisting with main gate doorbell solutions, intercom integration, phone installation.
13. Datacenter – I.T. will be re-wiring all WW & WWTP servers with CAT6 Ethernet cable.

    a) I.T. will also be replacing all desktop and phone cables to Cat 6 Ethernet to replace existing brittle cabling.

14. Preparing a modernization plan for conference rooms at both plants.
15. Exploring real-time server hardware monitoring solutions (proactive solutions)
16. Looking to implement SCCM (Microsoft System Center Configuration Manager) which will allow IT to manage the deployment and security of devices and applications across our network.
17. Assisting with videography of plant operations, to be used as training videos for current or future break fix scenarios.
18. Issued IPad tablets for board to use for access to SharePoint and to check Lucity work order status and for NFWB email access. - done

    a) Providing support.

19. Preparing for a major Lucity software upgrade which will add new functionality and reliability to the system.
20. Systematically upgrading Desktop PC's.
21. Working on electronic O&M manual, PM's and Checklists at WTP.

22. Efforts to organize IT areas at both plants continues, taking inventory of equipment and material on hand. We are also setting everything up to look more professional.

23. SCADA at WTP – working with Rob to address needs of SCADA.

24. Phone WWTP- whole basement maintenance area needs approximately 9 corrosive resistant phones installed.

    a) We also need to locate, wire check (test) all lines and replace if necessary.

25. Verizon – met with Verizon to talk about installing mobile cell signal antennas inside WWTP & WTP, coverage to include basement to top floors.

    a) Gorge pumping station – elevator and station landlines will be tested and fixed if faulty.

    b) Discussed replacing the old Comtel phones with a new digital IP phone system to replace Comtel.

26. IT will be scheduling full WTP & WWTP and GORGE site survey tours checking and testing all phones, PC's and data connections.

27. IT will be visiting other Water Treatment Facilities (both WWTP & WTP) as permitted this year to benchmark their IT process. This is going to help us throughout the course of the year to observe best practices and possibly become a World Class Operation.

28. Historian – Data collection server for SCADA (IFIX, Proficy) systems need attention, upgrades and consolidation of new services from current ways.

    a. Met with Automatech's Henry to discuss upgrade of SCADA systems, to new version and hardware "stratus server" meeting being setup to include, B. Millroy, Kevin Coleman and IT.

29. STATIC IP – to solve issues as seen from the electrical project, IT will be manually assigning all static IP addresses to every PC/PRINTER.

To Enroll With a New NY.GOV ID

Step 1: Create a new NY.GOV Account

a) Enter First Name, Last Name, E-mail Address, Confirm E-Mail Address
b) Select CAPTCHA checkbox
c) Click Create Account

Step 2: Confirm Personal Information

a) Review Personal Information and Click Continue

Step 3: Receive Confirmation E-mail

a) Open E-mail where
b) Select click here link to Activate Account

Step 4: Create Security Questions

a) Add 3 Security Questions
b) Click Continue

Step 5: Set Password

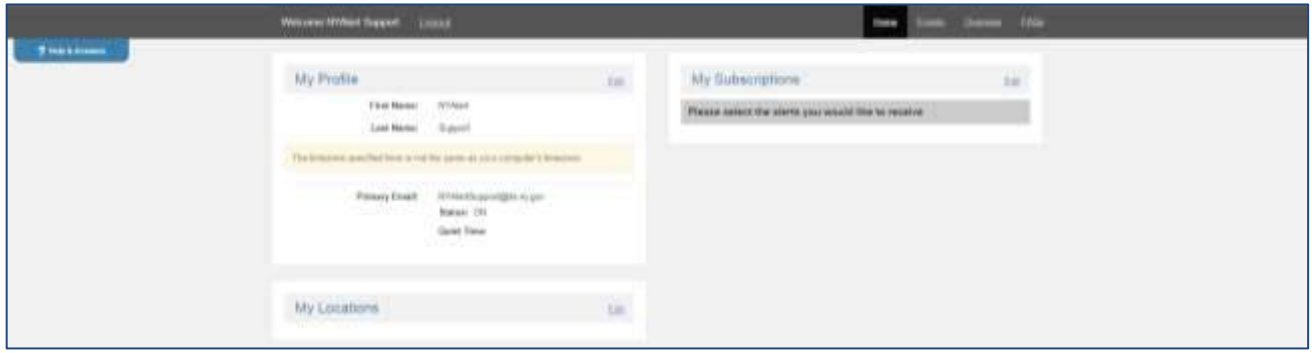
a) Set a Password with Minimum of 8 characters with at least 3 letters and 1 number
b) Click Set Password

c) Click Continue

Step 6: Agree to NY-Alert Terms of Service

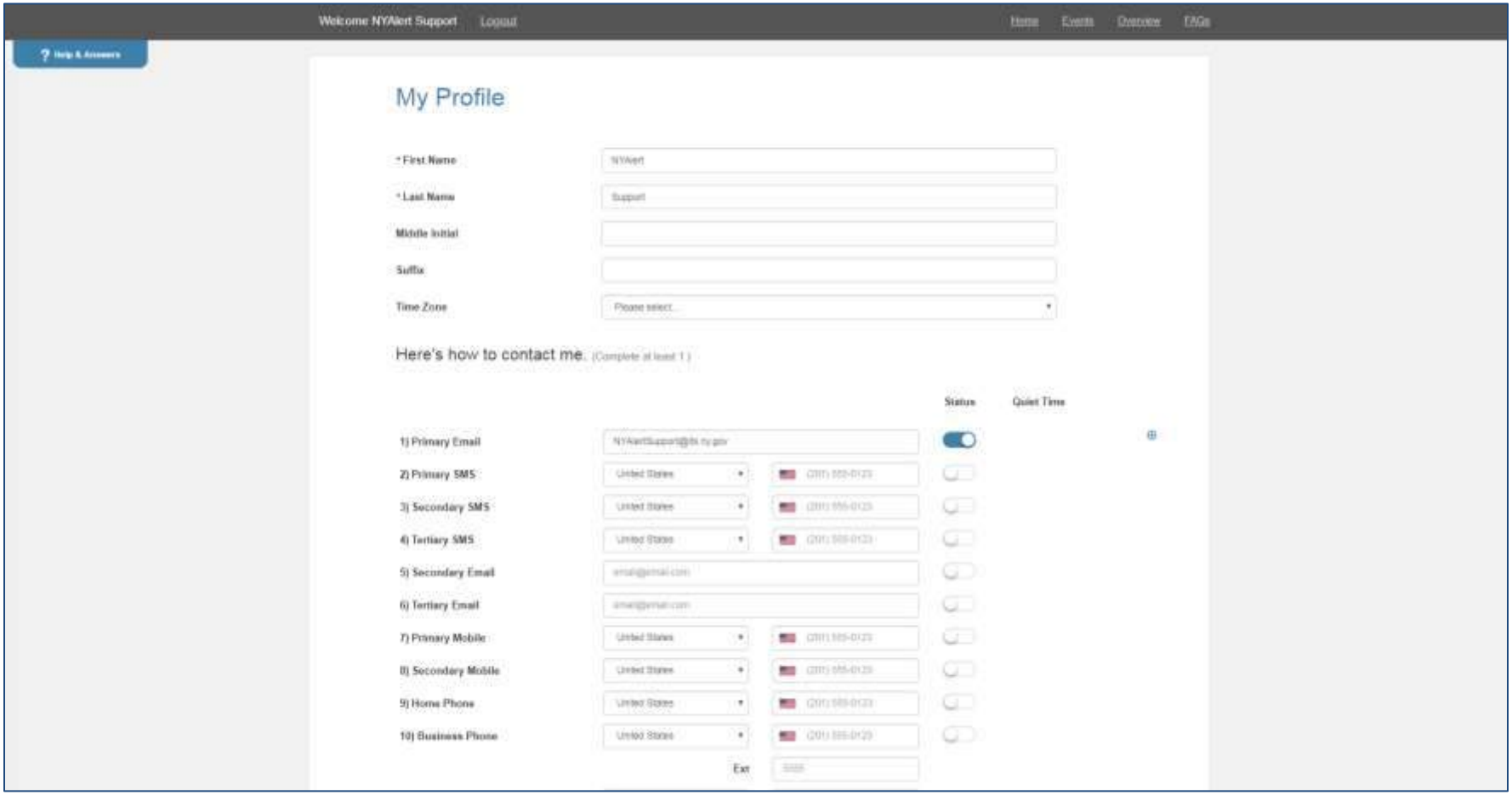
a) Read NY-Alert Terms of Service and Scroll to the bottom
b) Click Continue

Step 7: System Redirects to NY-Alert System



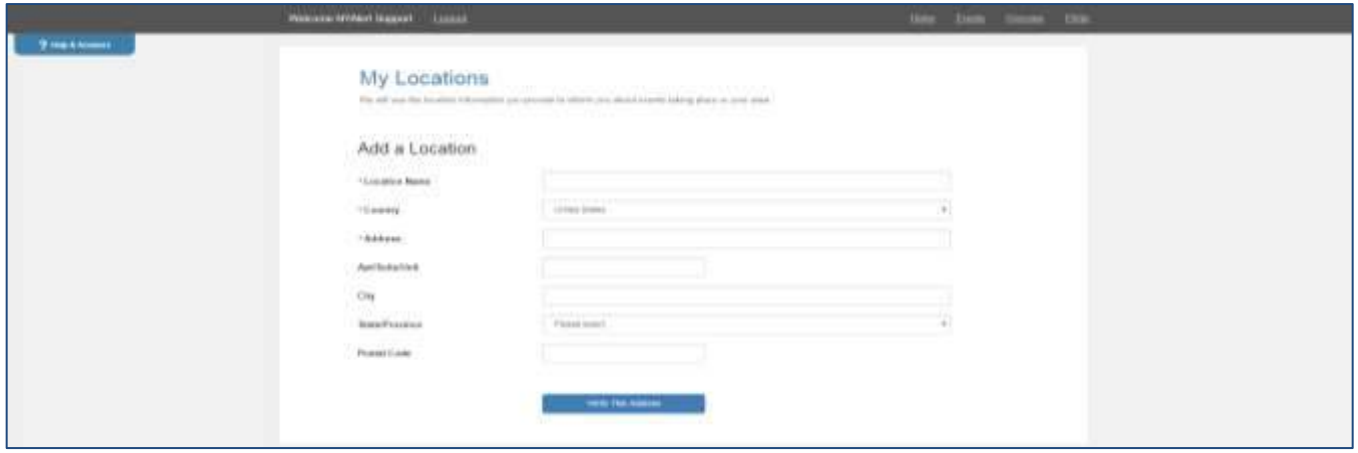
Step 8: Edit My Profile

a) Click Edit under My Profile
b) Add or Remove Contact Information & Time Zone
c) Add or Remove Email Address, SMS, or other Phone Numbers
d) Click Save



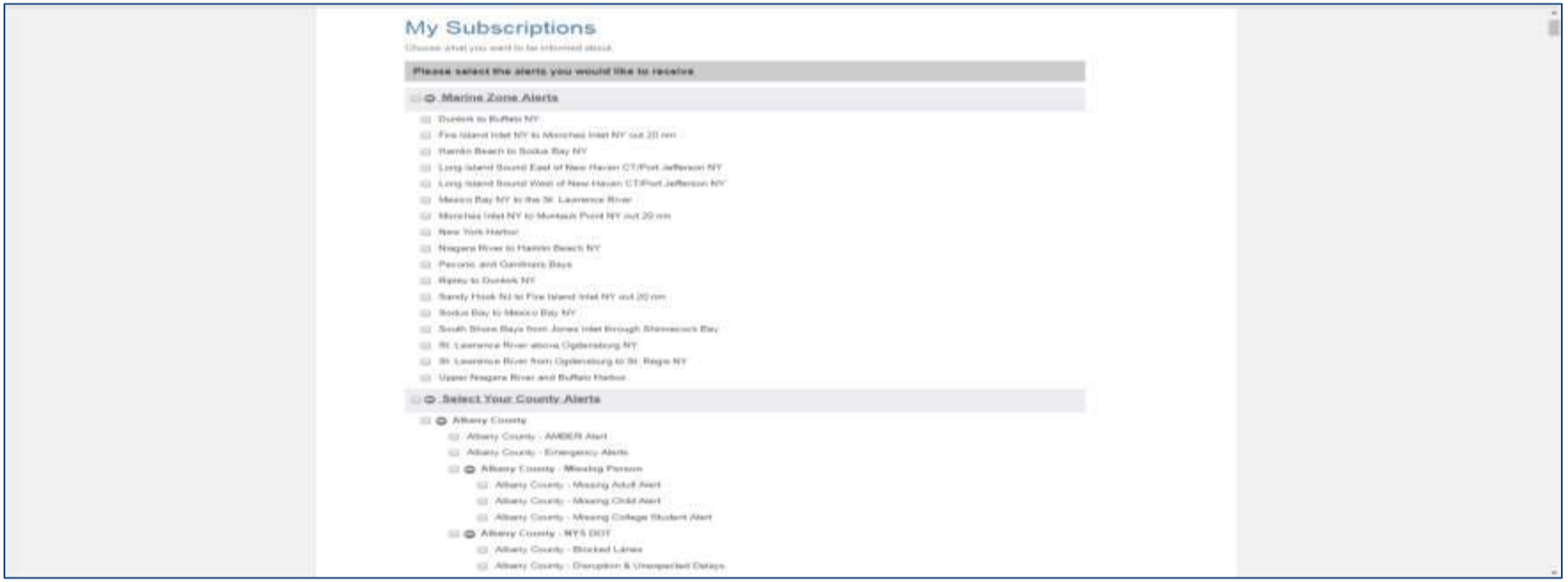
Step 9: Edit My Locations

a) Click Edit Under My Locations
b) Add Locations (up to 5)
c) Click Verify Address



Step 10: Edit My Subscriptions

a) Click Edit under My Subscriptions
b) Select Marine Zone Alerts (+) Dropdown Menu
    a. Select appropriate checkboxes for Maritime Zones
c) Select Your County Alerts (+) Dropdown Menu
    a. Select County (+) Dropdown
    b. Select appropriate alerts per county
d) Click Save



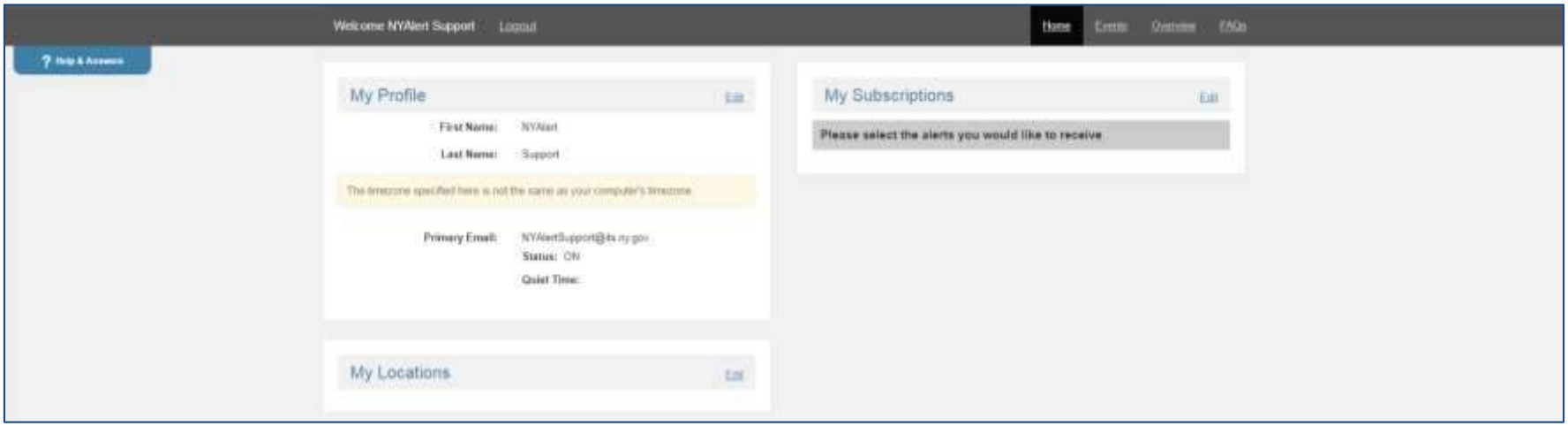

My Subscriptions
Please select the alerts you would like to receive
Marine Zone Alerts
Select Your County Alerts

To Enroll With an Existing NY.GOV ID

Step 1: Enter Existing NY.GOV ID

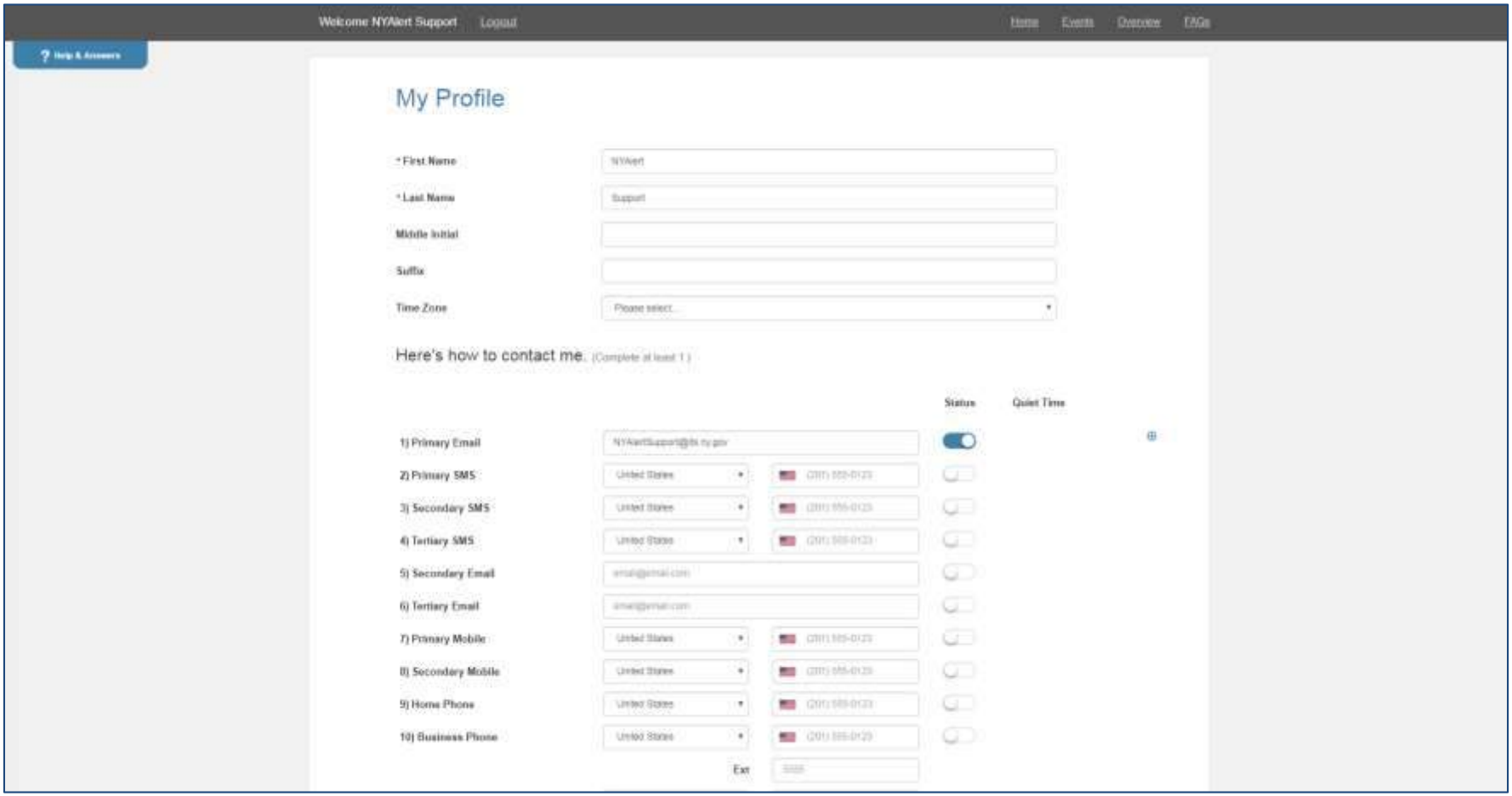
a) Click Sign In

Step 2: System Redirects to NY-Alert System



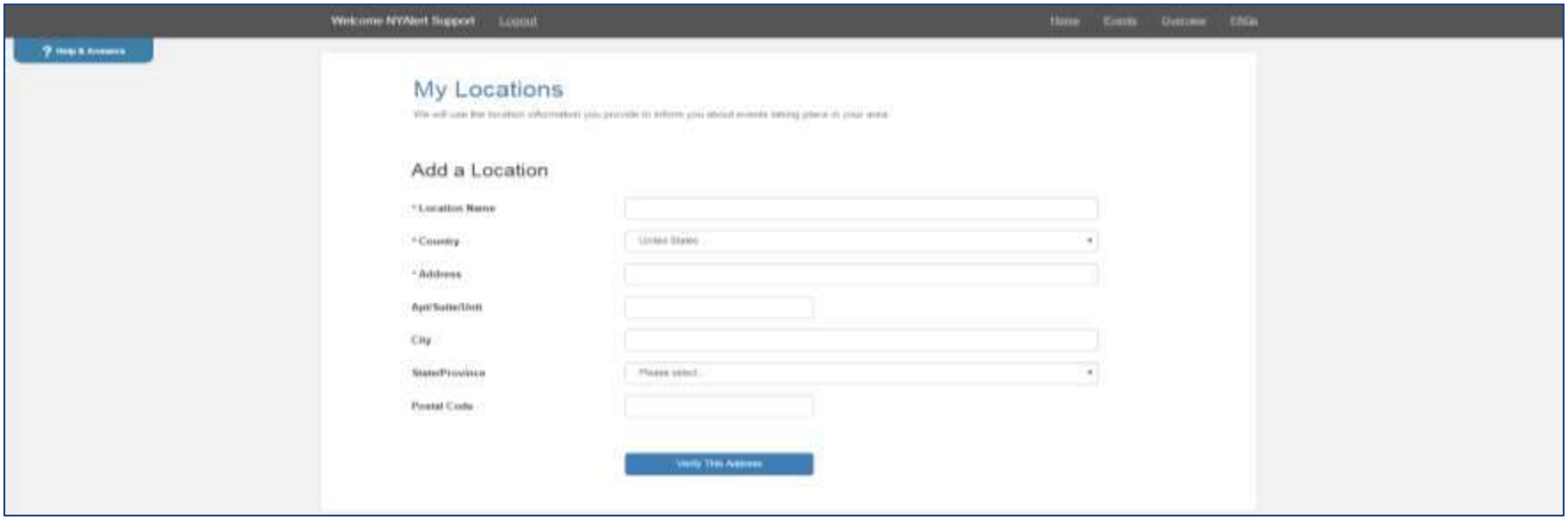
Step 3: Edit My Profile

a) Click Edit under My Profile
b) Add or Remove Contact Information & Time Zone
c) Add or Remove Email Address, SMS, or other Phone Numbers
d) Click Save



Step 4: Edit My Locations

a) Click Edit Under My Locations
b) Add Locations (up to 5)
c) Click Verify Address



Step 5: Edit My Subscriptions

a) Click Edit under My Subscriptions
b) Select Marine Zone Alerts (+) Dropdown Menu
    a. Select appropriate checkboxes for Maritime Zones
c) Select Your County Alerts (+) Dropdown Menu
    a. Select County (+) Dropdown
    b. Select appropriate alerts per county
d) Click Save

https://twitter.com/NFWB_Official Twitter, Inc. [US] dec.ny.gov NFWB (@NFWB_Official) | T...

Home Moments Search Twitter Have an account? Log in

Tweets 76 Following 40 Followers 68 Likes 2 Follow

NFWB

@NFWB_Official

Official account of the Niagara Falls Water Board (NFWB)

Niagara Falls, NY

nfwb.org

Joined November 2017

Tweets Tweets & replies Media

NFWB @NFWB_Official · 19h

Rising temperatures means rising outdoor water use. Check out some simple tips for saving water outdoors this summer!

When it's Hot | US EPA

During the summer, when the temperatures rise, so does our use of water. We can be smarter about how we use water during the summer to relieve stress on our wate...

epa.gov

NFWB @NFWB_Official · Jul 25

Possible Scam Alert: Dishonest salespersons may attempt to mislead homeowners into believing that their company needs to test the water on behalf of the NFWB; while trying to sell a water softener or purification system. If in doubt, call the Water Board at 283-9770.

2 2

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-001

AUTHORIZING PURCHASE OF HARDWARE AND SOFTWARE TO ENHANCE CAMERA TRUCK CAPABILITIES

WHEREAS, in December 2017 the Niagara Falls Water Board ("Water Board") authorized the purchase of a vehicle equipped with sewer camera technology and apparatus in order to inspect its sewer mains; and

WHEREAS, that camera truck has proven to be exceptionally useful in responding to incidents and provides critical information to understand the condition of the sewers, proactively to identify defects in the sewer before serious problems occur, identifying the locations of water main leaks, and to better target investments in repairing and replacing sewer lines; and

WHEREAS, using the Water Board's sewer camera truck avoids the expense of hiring contractors to perform certain camera survey work; and

WHEREAS, Water Board staff have identified an upgrade to the camera truck's software and hardware that would make operation of the camera even more efficient by linking information and video created by the camera truck directly to the Water Board's existing asset and maintenance management software and the Water Board's Geographical Information System ("GIS") software; and

WHEREAS, this hardware and software upgrade package, which includes PipeLogix software, associated computer hardware, training, and support, is available from Cyncon, the original supplier of the camera truck, for a total investment of $19,990 after trading in certain existing equipment that will be replaced by the new hardware and software package;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that Water Board staff hereby are authorized to purchase the PipeLogix software and hardware package from Cyncon pursuant to that company's July 2, 2018 quote, with a total cost after trade-in of the software and hardware system being replaced not to exceed $19,990.

Water Board Personnel Responsible for Implementation of this Resolution:
Director of Operations

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

On July 30, 2018, 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 Forster	[ ]	[ ]	[ ]	[ ]
Board Member Kimble	[ ]	[ ]	[ ]	[ ]
Board Member Larkin	[ ]	[ ]	[ ]	[ ]
Board Member Leffler	[ ]	[ ]	[ ]	[ ]
Chairman O'Callaghan	[ ]	[ ]	[ ]	[ ]

Signed By:

_____
Daniel T. O'Callaghan, Chairperson

Vote Witnessed By:

_____
Sean W. Costello, Secretary to the Board

CYNCON

Premier Municipal and Truck Equipment Since 1978

July 2, 2018

Rolfe Porter
Niagara Falls Water Board
5815 Buffalo Ave.
Niagara Falls, NY 14303

Cyncon Equipment, Inc. is pleased to provide you with our quote for the following equipment:

Description	**Quote**
PipeLogix Full Reporting License	
DVS Recording Module	
GIS Module	
PipeLogix Software Support Program – 1 Yr.	
Software Setup and Training (2 Days On-Site)	
ArcGIS Engine Runtime License	
Rack Mount computer	

Sub Total	$ 22,990.00
Discount for MuniXS Trade-in	($3,000.00)
Total	$ 19,990.00

Thank you for the opportunity to supply your equipment needs. As always, please contact me with any questions.

Kind Regards,

Dave Hull

Dave Hull
Sales Representative

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-0xx

AWARD BID FOR SEWER LINE CHEMICAL ROOT CONTROL

WHEREAS, the Niagara Falls Water Board ("Water Board") is responsible for maintaining an extensive network of sewer mains in the City of Niagara Falls; and

WHEREAS, the intrusion of roots into sewer mains can cause structural damage to sewer mains and also block or reduce flow, cause overflows, or reduce hydraulic capacity (leading to a loss of self-scouring velocities); and

WHEREAS, to combat roots in its sewer mains, the Water Board performs camera inspections of its system and makes targeted application of approved root-control chemicals into its sewer mains; and

WHEREAS, with the assistance of City of Niagara Falls Purchasing, Water Board staff developed specifications for the application of DEC approved root control chemicals to Water Board sewer mains under Bid No. W2018-04; and

WHEREAS, the lowest bid that met Water Board specifications was submitted by Municipal Sales, Inc.;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that the bid for Sewer Line Chemical Root Control hereby is awarded to Municipal Sales, Inc., and Water Board staff hereby are authorized to purchase sewer line chemical root control services from Municipal Sales, Inc., in an amount not to exceed $25,000 without further Board resolution.

Water Board Personnel Responsible for Implementation of this Resolution:
Superintendent

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:
GA 8120.4900.0449.599- Undesignated Services

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By:

_____
Daniel T. O'Callaghan, Chairperson

Vote Witnessed By:

_____
Sean W. Costello, Secretary to the Board

TO: The Niagara Falls Water Board

FROM: Rolfe Porter
Executive Director

DATE: July 16, 2018

SUBJECT: **Bid #W2018-04 Sewer Line Chemical Root Control**

We respectfully request you award the above referenced bid per the enclosed tally sheet as follows:

TO: Municipal Sales, Incorporated
P.O. Box 4743
Queensbury, New York 12804
FOR: Items #1 – 17, per the attached tally sheet

The Purchasing Agent certifies that all bids were solicited in accordance with Section 103 of the General Municipal Law.

Notice that bids were to be received was advertised in the Niagara Gazette and bid requests were sent to the two (2) companies authorized to do this work. Two (2) bids were received. The above referenced company submitted the lowest overall bid which meets the specifications.

Respectfully submitted,

Rolfe Porter
Executive Director, NFWB

Douglas A. Janese, Jr.
Purchasing Agent, CNF

DAJ: lkh
Enc.

FORSTER _____ KIMBLE _____ LARKIN _____ LEFFLER _____ O'CALLAGHAN _____

OFFICIAL TALLY SHEET

BID #W2018-04 SEWER LINE CHEMICAL ROOT CONTROL
BID OPENING: MAY 9, 2018 11:00 AM

ITEM #	PIPE DIAMETER (in inches) NOTE: PRICES ARE UNIT PRICE PER LINEAR FOOT	Duke's Root Controls, Inc. 1020 Hiawatha Boulevard West Syracuse, NY 13204-1118	Municipal Sales, Inc. P.O. Box 4743 Queensbury, NY 12804	XXX
1.	6	1.10	1.40	
2.	8	1.10	1.40	
3.	10	1.25	1.40	
4.	12	1.55	1.40	
5.	15	1.90	1.40	
6.	18	2.75	1.40	
7.	20	2.75	1.40	
8.	21	2.75	1.40	
9.	24	2.75	1.40	
10.	27	2.75	1.40	

OFFICIAL TALLY SHEET

BID #W2018-04 SEWER LINE CHEMICAL ROOT CONTROL
BID OPENING: MAY 9, 2018 11:00 AM

ITEM #	PIPE DIAMETER (in inches) NOTE: PRICES ARE UNIT PRICE PER LINEAR FOOT	Duke's Root Controls, Inc.	Municipal Sales, Inc.	XXX
11.	30	2.75	1.40	
12.	33	2.75	1.40	
13.	36	2.75	1.40	
14.	40	2.75	1.40	
15.	42	2.75	1.40	
16.	46	2.75	1.40	
17.	48	2.75	1.40	
	NAME OF PROPOSED CHEMICAL ROOT CONTROL AGENT:	Razorooter II	Sanafoam Roo-Pru (Dichlobenil)	
	VENDOR'S QUALIFICATION PAGE:	✓	✓	
	CERTIFICATIONS:	✓	✓	
	BID BOND:	✓	✓	

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-003

AUTHORIZING PURCHASE OF HARDWARE AND SERVICES TO UPGRADE TO VERIZON ONE TALK PHONE SYSTEM

WHEREAS, the Niagara Falls Water Board ("Water Board") has identified a need to upgrade its internal phone system in order to improve reliability and efficiency; and

WHEREAS, Water Board staff have identified Verizon's One Talk phone system as offering the best value and most useful features for the Water Board; and

WHEREAS, the estimated monthly service price for the desired system features is $3,388.99 from Verizon, and the equipment and installation services required for the upgrade are available for a one-time cost of $14,542.49 from Connected Solutions Group; and

WHEREAS, the competitive bidding requirements for this procurement have been satisfied, as the Verizon service is available through a National Association of State Procurement Officials (NASPO) pre-bid contract that meets the requirements of General Municipal Law § 103(16), and the Connected Solutions Group procurement is below the $20,000 threshold requiring competitive bidding;

NOW THEREFORE BE IT

RESOLVED, that Water Board staff hereby are authorized to procure Verizon One Talk monthly service from Verizon, and to purchase the equipment and installation services required for the upgrade to the One Talk system from Connected Solutions Group for a total cost not to exceed $14,542.49.

Water Board Personnel Responsible for Implementation of this Resolution:
Director of Administrative Services

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

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By: Vote Witnessed By:

_____ _____

Daniel T. O'Callaghan, Chairperson Sean W. Costello, Secretary to the Board

verizon

Prepared by	Michael DiFranco	**Company**	Niagara Falls Waterboard
Mobile #	716-512-5128	**Contact**	Joseph Morock
Today's Date	June 29, 2018	**Valid Until**	7/15/2018

Government Contract Pricing - NASPO Contract

Plan	Quantity	Data Included (GB)	Discounted Monthly Access	Total Data (GB)	Features	Total
Flexible Business Plan One Talk Desk Phone	110	100MB	$25.00	9.76 GB	Unlimited Talk / Text / 100 MB Data	$2,750.00
Flexible Business Plan Tablet Data Plan w/ One Talk	20	2GB	$26.95	40 GB	2GB Data Share Plan w/One Talk Line Share App	$539.00
Flexible Business Plan Cradlepoint Modem	1	Unlimited	$39.99	X	Unlimited Router Data Plan	$39.99
Samsung EMM Knox Manage	20	X	$2.00	X	Samsung EMM - Knox Manage	$40.00
Flexible Business Plan One Talk Auto Receptionist	1	X	$20.00	X	Auto Receptionist	$20.00
Total	**121**			**49.76 GB**		**$3,388.99**

DATA PLAN WITH OPTIONAL SERVICES AND FEATURES MONTHLY TOTAL: **$3,388.99**

Equipment:

Product Description	Qty	Device Pricing:	Total
Yealink T46GW IP Desk Phone	105	$155.00	$16,275.00
YealinkT49G IP Desk Phone	5	$495.00	$2,475.00
Yealink CP860 IP Desk Phone	2	$395.00	$790.00
Pepwave MAX BR1 Mini-LTE (Antenna/Cables/Shipping)	1	$524.49	$524.49
			$20,064.49

Install & Service Costs:

Product Description	Locations	Cost per Location	Total
CSG White Glove Installation w/2 year One Talk Support Services	2	$199.99	$399.98
Total	**2**		**$399.98**

ONE TIME EQUIPMENT AND ACCESSORY TOTAL **$20,464.47**

Connected Solutions Group
8529 Meadowbridge Road
Suite 300
Mechanicsville VA 23116

Sales Quote

Date	Quote #
7/12/2018	4962

Name / Address	Ship To
NIAGARA FALLS WATER BOARD Attn: Joe Morock 5815 BUFFALO AVE NIAGARA FALLS, NY 14304	NIAGARA FALLS WATER BOARD Attn: Joe Morock 5815 BUFFALO AVE NIAGARA FALLS, NY 14304

P.O. No.	Terms	Rep
L-5211111	CC	JKOTK

Description	Qty	Cost	Total
Verizon CPO Yealink T46GW - Including OEM Handset, Phone Cord and Base	95	139.00	13,205.00
One Talk Promotional Subsidy Discount	95	0.00 -2,850.00	0.00 -2,850.00
Verizon ONE TALK Handsets **Yealink T49G-D Desktop Phones** from Manufacturer, Executive Video	5	495.00	2,475.00
Verizon One Talk Conference Phone System Yealink CP860 OEM Sealed	2	395.00	790.00
MAX-BR1-MINI-LTE-US-T Pepwave MAX BR1 Mini - LTE (North/South America)	1	299.00	299.00
New MiMo WMM LTE High Gain Antenna, 2G/3G/4G 0.3m/1ft N(f) Mfr.P/N: WMMG-7-27-03NJ SKU#: 4250926	1	160.00	160.00
C29 Low Loss Cable (10 Meters) SKU#: 4516791	1	29.99	29.99

Total

Connected Solutions Group
8529 Meadowbridge Road
Suite 300
Mechanicsville VA 23116

Sales Quote

Date	Quote #
7/12/2018	4962

Name / Address	Ship To
NIAGARA FALLS WATER BOARD Attn: Joe Morock 5815 BUFFALO AVE NIAGARA FALLS, NY 14304	NIAGARA FALLS WATER BOARD Attn: Joe Morock 5815 BUFFALO AVE NIAGARA FALLS, NY 14304

P.O. No.	Terms	Rep
L-5211111	CC	JKOTK

Description	Qty	Cost	Total
CSG White Glove Installation and 2 years of One Talk support services: Services Included: Pre-Sale Consultation Call Whiteboarding Session Network Speed Testing Call Flow & Call Mapping My Biz Portal Configuration Pre-Installation on-site inspection Remote Training on Portal Remote Training on Phone & OneTalk App 2 years of remote support Lifetime troubleshooting Installation of OneTalk Solution Network configuration as needed **The $199 is NON-REFUNDABLE after the network survey has been completed.** **100 OT Lines** **Install of router and antenna @ $150 per hour (billed once we know the amount of time of install)**	2	199.00	398.00
UPS Ground Shipping		35.50	35.50
TAX EXEMPT		0.00%	0.00

Total $14,542.49

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-004

AUTHORIZING FUNDS FOR GHD
TO PERFORM WORK REQUIRED BY CONSENT ORDER

WHEREAS, the Niagara Falls Water Board ("Water Board") entered into a Consent Order with the New York State Department of Environmental Conservation (the "Department") dated December 19, 2017 to address water quality concerns related to discharges from the Niagara Falls Wastewater Treatment Plant (the "WWTP"); and

WHEREAS, GHD is performing substantial miscellaneous engineering work in connection with the Consent Order, in addition to work on engineering studies required by the Consent Order that are partially reimbursable pursuant to a grant and thus are dealt with in a separate Water Board resolution; and

WHEREAS, in a proposal dated June 27, 2018, GHD has estimated its fees for miscellaneous necessary work in connection with the Consent Order from May 2018 to May 2019 at $455,000, to be billed on a time and material basis; and

WHEREAS, the Water Board has engaged Clark Patterson Lee as its engineering management consultant and to monitor the work performed by engineering firms in connection with the Consent Order, and Rick Henry, P.E., has recommended that the Water Board authorize funds for the estimated future cost of GHD work on Consent Order items, with any payments to be subjected to review and approval by CPL; and

WHEREAS, CPL will provide regular reports to the Water Board regarding payments to GHD related to Consent Order work;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that on behalf of the Niagara Falls Water Board, the Executive Director is hereby authorized to enter into an agreement with GHD to perform miscellaneous engineering work required by the Consent Order, to be billed on a time and material basis and at a total cost not to exceed $455,000 as outlined in GHD's June 27, 2018 proposal, with said agreement and any payments made pursuant to this resolution first to be approved by Rick Henry, P.E., of CPL, as the Board's engineering management consultant.

Water Board Personnel Responsible for Implementation of this Resolution:
Executive Director

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

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By: Vote Witnessed By:

_____ _____

Daniel T. O'Callaghan, Chairperson Sean W. Costello, Secretary to Board

June 27, 2018 Reference No. 11145878

Original Sent Via Email

Rolfe Porter, PE
Executive Director
Niagara Falls Water Board
5815 Buffalo Avenue
Niagara Falls, New York 14304

Dear Mr. Porter

Re: Niagara Falls Water Board
Order on Consent R9-20170906-129
Continuing Order Assistance

GHD appreciates the opportunity to submit this proposal to continue assisting the Niagara Falls Water Board (NFWB) respond and comply with the Order on Consent (Order) referenced above. Our proposal provides for engineering assistance to the NFWB on items listed in Schedule A of the Order with the exception of Items 11 and 14 (GHD received separate authorization). These items were specifically addressed in a proposal dated March 13, 2018, and have subsequently received State funding. This proposal addresses professional engineering services required from May 1, 2018 through the completion of the Order requirements (March 2019).

We have reviewed the 17 items in Schedule A of the Order with the NFWB, and identified those items that GHD will lead the engineering effort to comply with the item and those where GHD will support the efforts of John Goeddertz, PhD of AECOM. Through these discussions, we developed a collaborative approach to addressing each Order item. This approach has been working extremely well and resulted in numerous submittals to the New York State Department of Environmental Conservation (NYSDEC) prior to the Order stipulated due dates.

Scope of Services

GHD proposes to complete the following tasks in support of the NFWB's obligations under the Order:

Order Item 1 – O&M Procedures and Documentation Submittals

1. Update and expand the computerized operations and maintenance manual (COMM) originally developed in the mid-2000s. We will migrate the existing content to a new website maintaining the COMM's functionality and purpose. The NFWB will initiate the new website, host the data, and provide GHD read/write access. The COMM will be developed using WordPress, the NFWB's preferred software.

2. Attachment A is a proposed table of contents for the COMM, which we developed following meetings with NFWB management, operations and maintenance personnel. Through these meetings, we developed the following standard appearance for process related pages in the COMM.

3. We also developed the "storyboard" approach to the WWTP graphical navigator to assist operations and maintenance staff quickly access desired content of the COMM. The graphical navigator may require the NFWB to have their website developer provide advance design assistance.

4. Expand the NFWB's existing Lucity computerized maintenance management system (CMMS) to include preventive maintenance tasks and schedules for the process equipment at the WWTP. This effort involves obtaining manufacturer operations and maintenance manuals (O&MM) from the NFWB and/or from the manufacturer when possible. We will extract maintenance tasks and schedules from the manufacturer's O&MM along with necessary attribute information (i.e., motor size), if available in documents. GHD will assemble the preventive maintenance tasks in a table organized in a schedule format. The preventive maintenance table will be reviewed with NFWB maintenance staff and we will address their suggested changes and comments. The agreed to maintenance tasks and schedules will then be placed into a "flat file" as required for upload into the CMMS by Lucity personnel.

5. Provide access through the COMM website to a staffing plan developed by the NFWB. We anticipate the staffing plan will consist of an organization chart, job duties, and shift assignments.

Order Item 2 – Operation as per Approved Plans

AECOM developed this item and the NYSDEC has approved this submittal.

Order Item 3 – Sedimentation Basin Dewatering Procedures

AECOM developed this item and the NYSDEC has approved this submittal.

Order Item 4 – Excess Solids Work Plan Submittal

AECOM developed Items 4a-4c and GHD developed Item 4d for the February 2018 required submission; NYSDEC has approved this submittal.

Order Item 5 – Improve Sedimentation Basin Traveling Bridge and Chain & Flight Reliability

Item 5a of the Order will mainly be addressed through the expansion of the COMM and update of the CMMS when addressing Item 1 of the Order. Ongoing O&M efforts to repair and maintain operability of the equipment is being led by Dr. John Goeddertz (AECOM) and Kenneth Maving of GHD. GHD will provide support as requested and will incorporate updated O&M tasks into COMM and Lucity CMMS.

AECOM developed Items 5b-5c for the March 2018 required submission.

Item 5d of the Order requires an evaluation of the recurring mechanical problems with sedimentation basin mechanical equipment and the development of recommendations and schedules for problem correction. GHD proposes to:

1. Investigate the operational issues with the subject equipment including recent maintenance observations and repair activities.
2. Develop a draft report summarizing the findings, consistent with quarterly progress reports and facility improvement funding initiatives.
3. Distribute the draft report and attend one review meeting with NFWB and AECOM staff.
4. Finalize the report and provide to NFWB Counsel for the NYSDEC submission.
5. Address NYSDEC questions concerning the report.

Implementing the recommended sedimentation basin improvements, once approved by the NYSDEC, will be an additional effort requiring a supplemental authorization.

Order Item 6 – Ferric Chloride Alternative Evaluation Work Plan Submittal

Dr. John Goeddertz (AECOM) is taking the lead with this work item. GHD will support AECOM's work by providing relevant background information, reviewing and commenting on documents, participating in meetings to plan and conduct the associated work, and technical input as requested by AECOM and the NFWB.

Order Item 7 – Sedimentation Basin 5 Alternative Evaluation Work Plan Submittal

Dr. John Goeddertz (AECOM) is taking the lead with this work item. GHD will support AECOM's work by providing relevant background information, reviewing and commenting on documents, participating in meetings to plan and conduct the associated work, and technical input as requested by AECOM and the NFWB.

Order Item 8 – WWOP Update Submittal

The current Wet Weather Operating Plan (WWOP) was approved by the NYSDEC in November 2004, as required by the NFWB facility SPDES permit. The Order now requires an update to the WWOP focusing on changes to reduce wet weather plant bypasses. GHD proposes to:

1. Review the current plan and all associated documents.
2. Update the WWOP for changes in staff, SIU's, the current SPDES permit, etc.
3. Update the WWOP for changes to facility and sewer collection system infrastructure that have occurred since 2004.
4. Update the WWOP for changes to facility operations that have been implemented since 2004. This includes changes to sedimentation basin and carbon filter operation made during 2018.
5. Distribute the draft update and attend one review meeting with NFWB and AECOM staff.

6. Finalize the update and provide to NFWB Counsel for NYSDEC submission.

7. Address NYSDEC questions concerning the updated WWOP.

The format of the WWOP will be similar to the format of the 2004 approved plan.

Order Item 9 – Disinfection Improvement Recommendation Submittal

Dr. John Goeddertz (AECOM) is taking the lead with this work item. GHD will support AECOM's work by providing relevant background information, reviewing and commenting on documents, participating in meetings to plan and conduct the associated work, and technical input as requested by AECOM and the NFWB.

Order Item 10 – Carbon System Oxidizer Evaluation Work Plan Submittal

Dr. John Goeddertz (AECOM) is taking the lead with this work item. GHD will support AECOM's work by providing relevant background information, reviewing and commenting on documents, participating in meetings to plan and conduct the associated work, and technical input as requested by AECOM and the NFWB.

Order Item 11 – Treatment Process Alternative Report

This item was specifically addressed in a proposal dated March 13, 2018, has subsequently received State funding, and GHD received a separate authorization to perform the work.

Order Item 12 – GPS and FST CSO and SSO Documentation Submittal

GHD developed this item for the March 2018 required submission. GHD has since addressed related questions by the NYSDEC.

Order Item 13 – NY-Alert CSO and SSO Reporting Documentation Submittal

GHD developed a response to this item for the March 2018 required submission.

Order Item 14 – Outfall 001 and 003 Relocation Evaluation Submittal

This item was specifically addressed in a proposal dated March 13, 2018, has subsequently received State funding, and GHD received a separate authorization to perform the work.

Order Item 15 – Quarterly Report Progress Submittals

Dr. John Goeddertz (AECOM) serves as the designated On-Site Environmental Monitor (OEM) and, as such, prepares the required quarterly progress reports. GHD has been reviewing and commenting upon the draft quarterly reports, and will continue to do so as requested.

Order Item 16 – Sedimentation Basin 5 Dewatering Restrictions

GHD has been providing technical assistance concerning the operation of Sedimentation Basin 5 and will continue to do so as requested.

Order Item 17 – Update Operating Plans and Staff Direction

GHD has been providing technical assistance concerning day-to-day facility operations and training, and will continue to do so as requested.

SharePoint and Microsoft Project Scheduling Assistance

GHD has been providing assistance with implementation of NFWB SharePoint sites. We have also developed the overall Order schedule and are tracking progress on each of the items listed in Schedule A. We will continue providing this technical assistance as requested by the NFWB.

Training PowerPoints

GHD has developed training PowerPoints for many of the key processes of the WWTP. We will continue developing these training tools as requested by the NFWB.

Engineer's Report for Funding Applications

Assist the NFWB in pursuing funding for various improvements at the WWTP by preparing an engineer's report that the NFWB will use when applying for funding from State and Federal agencies. The report will follow New York State Environmental Facilities Corporation's (NYSEFC) guidelines. The report will address the nine project groupings identified by the NFWB and contained in the 5-Year Capital Plan.

Meetings and General Consultation

Attend team meetings scheduled by the NFWB to discuss response development and respond to issues related to the Order. GHD will continue providing consultation as requested by the NFWB.

Proposed Schedule and Fee

GHD will complete the above scope of services by the due dates listed in Schedule A of the Order. GHD proposes to furnish the above scope of services for an estimated not-to-exceed fee of $455,000. Table 1 provides an anticipated breakdown of our fee. Labor will be invoiced hourly in accordance with our 2018/2019 USA Fee Schedule. Invoicing for services will be issued monthly and direct expenses will be invoiced at cost plus 5 percent. Invoices will be due within 30 days from receipt.

Table 1 Anticipated Fee Breakdown

Scope Tasks	Estimated Fee
Order Item 1 – COMM	$175,000
Order Item 1 – CMMS (Lucity)	$100,000
Order Item 5d	$ 15,000
Order Item 8	$ 20,000
Engineer's Report for Funding	$ 35,000
Meetings, SharePoint, MS Project and General Consultation Allowance (includes GHD support of AECOM lead efforts)	$110,000
TOTAL	**$455,000**

Thank you for the opportunity to submit this proposal. We look forward to continuing our assistance to the Niagara Falls Water Board on the Order on Consent. If you have any questions, please contact us at your convenience.

Sincerely,

GHD

Robert P. Lannon Jr., PE
Vice President

RPL/PJM/RRR/las/6

Attachments

cc: Paul J. McGarvey, PE BCEE – GHD
Richard R. Roll, PE DEE – GHD
Mr. Kenneth F. Maving – GHD
Casey W. Cowan, PE – GHD

Attachment A
Niagara Falls Water Board
Wastewater Treatment Plant Computerized O&M Manual
Table of Contents

Chapter 8 – Emergency Procedures

8.1 Emergency Situations

8.2 Wet Weather Operating Plan

8.3 Emergency Contacts and Telephone Tree

Attachment B
Niagara Falls Water Board
Wastewater Treatment Plant Computerized O&M Manual
Equipment Page Template

Relevant Text

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-005

SEQRA NOTICE LEAD AGENCY DESIGNATION AND DETERMINATION OF SIGNIFICANCE FOR THE NIAGARA FALLS WATER BOARD BEECH AVE WATER TANK IMPROVEMENTS

WHEREAS, the Niagara Falls Water Board ("Water Board") has, by Resolution # 2018-02-20, determined that it is appropriate to apply for grant funding to assist in the financing of the various capital improvement projects identified in such resolution; and

WHEREAS, the Water Board has proposed to demolish the existing Beech Avenue Water Tower and erect a new storage tank for improving the water distribution system within the City; and

WHEREAS, in accordance with the provisions of 6 NYCRR Part 617 (SEQRA), the Board adopted Resolution # 2018-02-20, on February 26, 2018 declaring its intent to act as Lead Agency for the Proposed Action and circulated said intent to all Involved Agencies; and

WHEREAS, no Involved Agencies challenged the intent of the Board to act as Lead Agency.

* CONTINUED ON NEXT PAGE *

NOW, THEREFORE, BE IT

RESOLVED, that the Water Board hereby designates itself as Lead Agency for the proposed action pursuant to 6 NYCRR Part 617; and

BE IT FURTHER RESOLVED, that based upon examination of the Environmental Assessment Form (EAF), its own independent analysis of the Proposed Action, and comparison with the criteria for determining significance under 6 NYCRR 617.7, the Water Board finds that the Proposed Action will not have a significant environmental impact and hereby issues a Negative Declaration; and

BE IT FURTHER RESOLVED, that this determination is based on the facts and conclusions as noted in the attached EAF.

Water Board Personnel Responsible for Implementation of this Resolution:
Executive Director

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:
Not applicable.

On July 30, 2018, 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 Forster	[ ]	[ ]	[ ]	[ ]
Board Member Kimble	[ ]	[ ]	[ ]	[ ]
Board Member Larkin	[ ]	[ ]	[ ]	[ ]
Board Member Leffler	[ ]	[ ]	[ ]	[ ]
Chairman O'Callaghan	[ ]	[ ]	[ ]	[ ]

Signed By: Vote Witnessed By:

_____ _____
Daniel T. O'Callaghan, Chairperson Sean W. Costello, Secretary to the Board

CERTIFICATION

I, Sean W. Costello, duly appointed and qualified as General Counsel and Secretary to the Niagara Falls Water Board, do hereby CERTIFY that the foregoing resolution was adopted at a meeting duly called and held in the office of the Niagara Falls Water Board, a quorum present on the 30th day of July 2018, and that said copy is a true, correct and compared copy of the original resolution so adopted and that the same has not been revoked or rescinded.

WITNESSETH, my hand and seal this ____ day of July, 2018.

_____
Sean W. Costello, General Counsel
and Secretary to the Board

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: Demolish and Replace Beech Avenue Water Tank		
Project Location (describe, and attach a general location map): 1780 Beech Avenue, Niagara Falls, NY		
Brief Description of Proposed Action (include purpose or need): Demolish an existing 2 million gallon, steel multi-leg tank that is approximately 150 feet high, 80 foot diameter and was constructed in 1948. A new storage tank with concrete support legs and metal tank to be constructed in same location that is approximately same size in volume (2 million gallons) and that will also be about 40 feet taller in height. The new tank will allow for better water distribution within the City, increased water pressure for customers, additional fire fighting capabilities. Also, replacement of this tank will allow for greater system redundancy, as the tank has been out of service for twenty years, which results in the storage tank along 56th Street currently being the only storage tank in service.		
Name of Applicant/Sponsor: Niagara Falls Water Board, attn: Douglas S. Williamson	Telephone: 716-283-9770 E-Mail: dwilliamson@nfwb.com	
Address: 5815 Buffalo Avenue		
City/PO: Niagara Falls	State: NY	Zip Code: 14304
Project Contact (if not same as sponsor; give name and title/role):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☐Yes ☑No		
c. City Council, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	Niagara County Department of Health	TBD
f. Regional agencies ☑Yes ☐No	Empire State Development Corp. funding	July 1, 2018
g. State agencies ☑Yes ☐No	Environmental Facilities Corp. funding	June 15, 2018
h. Federal agencies ☑Yes ☐No	Federal Aviation Administration	TBD

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes ☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Exempt

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Niagara Falls School District

b. What police or other public protection forces serve the project site?
Niagara Falls, NY

c. Which fire protection and emergency medical services serve the project site?
NIagara Falls

d. What parks serve the project site?
NA

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Maintenance of public water supply facility

b. a. Total acreage of the site of the proposed action? 1.25 acres
b. Total acreage to be physically disturbed? 1 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 1.25 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)

ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 2
- Anticipated commencement date of phase 1 (including demolition) 3 month 2019 year
- Anticipated completion date of final phase 9 month 2019 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:
Phase 1: demolition of existing tank, Phase 2: Construct replacement tank

f. Does the project include new residential uses? ☐ Yes ☑ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐ Yes ☐ No

If Yes,

i. Total number of structures 1

ii. Dimensions (in feet) of largest proposed structure: 200 height; 80 width; and 80 length

iii. Approximate extent of building space to be heated or cooled: 0 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☑ Yes ☐ No

If Yes,

i. Purpose of the impoundment: water storage for municipal water system

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☑ Other specify: Niagara River

iii. If other than water, identify the type of impounded/contained liquids and their source.

iv. Approximate size of the proposed impoundment. Volume: 2,000,000 million gallons; surface area: N/A acres

v. Dimensions of the proposed dam or impounding structure: 40 height; 80 length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

Concrete support legs with upper steel section for storage of water.

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i .What is the purpose of the excavation or dredging?

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards):
- Over what duration of time?

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe.

v. What is the total area to be dredged or excavated? acres

vi. What is the maximum area to be worked at any one time? acres

vii. What would be the maximum depth of excavation or dredging? feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan:

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description):

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will proposed action cause or result in disturbance to bottom sediments? ☐ Yes ☐ No

If Yes, describe: _____

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☐ No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐ Yes ☑ No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐ Yes ☐ No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No
- Do existing lines serve the project site? ☐ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☑ No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☑ No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐ Yes ☑ No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑ Yes ☐ No

If Yes:

- Name of wastewater treatment plant to be used: Niagara Falls Wastewater Treatment Facility
- Name of district: City of Niagara Falls
- Does the existing wastewater treatment plant have capacity to serve the project? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No

- Do existing sewer lines serve the project site? ☑ Yes ☐ No
- Will line extension within an existing district be necessary to serve the project? ☐ Yes ☑ No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

  _____

  _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐ Yes ☑ No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

_____

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

_____

_____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐ Yes ☑ No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

_____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

_____

- If to surface waters, identify receiving water bodies or wetlands: _____

  _____

  _____
- Will stormwater runoff flow to adjacent properties? ☐ Yes ☐ No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐ Yes ☐ No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐ Yes ☑ No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐ Yes ☑ No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐ Yes ☑ No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend

☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

_____

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade to, an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7:00 am to 4:00 pm
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: 24
- Saturday: 24
- Sunday: 24
- Holidays: 24

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

_____

_____

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: _____

_____

n.. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

Site lighting to illuminate ground for maintenance workers and security purposes.

_____

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: _____

_____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

_____

_____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally describe proposed storage facilities: _____

_____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

_____

_____

_____

_____

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☑ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____

  _____
- Operation: _____

  _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____

  _____
- Operation: _____

  _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

No hazardous waste is generated from operation of a water storage tank.

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.5	0.5	0.0
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)	0.75	0.75	0.0
• Other Describe: _____			

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☑ No

If Yes,

i. Identify Facilities:

_____

_____

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:_____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? N/A feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: Urban 100 %
_____ _____%
_____ _____%

d. What is the average depth to the water table on the project site? Average: N/A feet

e. Drainage status of project site soils:
☐ Well Drained: _____% of site
☑ Moderately Well Drained: 100 % of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 100 % of site
☐ 10-15%: _____% of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☑ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☑ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100 year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500 year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____
_____ local bird life _____ _____
_____ _____ _____

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation): _____
_____
ii. Source(s) of description or evaluation: _____
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑ No

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No
If yes, give a brief description of how the proposed action may affect that use: _____
_____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No
If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☐ No
i. If Yes: acreage(s) on project site? _____
ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☐ No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____
_____
_____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No
If Yes:
i. CEA name: _____
ii. Basis for designation: _____
iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☑ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: Niagara Falls State Park

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): state park

iii. Distance between project and resource: 3 miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Niagara Falls Water Board Date _____

Signature Douglas S. Williamson Title Director of Technical & Regulatory Services

PRINT FORM

Agency Use Only [If applicable]

Project : Beech Avenue Water Storage Tank

Date : July 2018

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☐ NO ☑ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☑	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☑	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☑	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☑
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☑	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	□	□
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	□	□
c. Other impacts: _____ _____		□	□

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑ NO ☐ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	□	□
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	□	□
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	□	□
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	□	□
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	□	□
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	□	□
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	□	□
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	□	□
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	□	□
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	□	□
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	□	□

l. Other impacts: _____ _____		□	□

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	□	□
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	□	□
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	□	□
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	□	□
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	□	□
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	□	□
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	□	□
h. Other impacts: _____ _____		□	□

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	□	□
b. The proposed action may result in development within a 100 year floodplain.	E2j	□	□
c. The proposed action may result in development within a 500 year floodplain.	E2k	□	□
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	□	□
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	□	□
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	□	□

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. ☑ NO ☐ YES
(See Part 1. D.2.f., D,2,h, D.2.g)
If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑ NO ☐ YES
If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	□	□
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	□	□
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	□	□
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	□	□
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	□	□
j. Other impacts: _____ _____		□	□

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	**No, or small impact may occur**	**Moderate to large impact may occur**
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	□	□
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	□	□
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	□	□
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	□	□
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	□	□
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	□	□
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	□	□
h. Other impacts: _____		□	□

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☑ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on or has been nominated by the NYS Board of Historic Preservation for inclusion on the State or National Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		□	□
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	□	□
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	□	□
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	□	□

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	□	□
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	□	□
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	□	□
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	□	□
e. Other impacts: _____ _____		□	□

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
c. Other impacts: _____ _____		□	□

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____			

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☐ NO ☑ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☑	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☑	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☑	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☑	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☑	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☑	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☑	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☑	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☑	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☑	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☑	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☑	☐
m. Other impacts: _____ _____		☐	☐

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES

(See Part 1. C.1, C.2. and C.3.)

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES

(See Part 1. C.2, C.3, D.2, E.3)

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

Agency Use Only [IfApplicable]

Project : Beech Avenue Water Storage Tank

Date : July 2018

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

The Beech Avenue water storage tank has existed since 1947 within a developed area of the City of Niagara Falls. As such, the tank has become familiar to the surrounding residents. Furthermore, existence and operation of the tank does not create excessive noise, pollution, light, shadows, or bird strikes. The tank is located adjacent to the Henry J Kalfas Magnet School which was why Section 16 of EAF Part 2 was answered yes. The tank does not cause any adverse impacts to the school. The new tank will be similar in storage size and look but may be increased in height to provide better water service. This increase in height will not alter the essential characteristics of the tank and will not create excessive noise, pollution, light, shadows, or bird strikes. The proposed replacement will be newer, including fresh paint and elimination of any lead paint that may be discovered on the existing tank, and thus its finish is expected to be more attractive. Replacement of the tank will provide water customers with continued supply of water, adequate water pressure, redundant system storage and firefighting capabilities. Furthermore, during the 30 day response period, only letters were received from the NYSDEC and Niagara County DOH for which, no objections were noted. Therefore, the proposed action will not create any adverse impacts.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☐ Type 1 ☑ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information
May 2018 Water Tank Study prepared by Clark Patterson Lee Engineers. Comment letters received from noticed agencies.

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the
Niagara Falls Water Board as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.d).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: **Demolish and Replace Beech Avenue Water Tank**

Name of Lead Agency: Niagara Falls Water Board

Name of Responsible Officer in Lead Agency: Rolfe Porter

Title of Responsible Officer: Executive Director

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer) Date:

For Further Information:

Contact Person: Seth Krull, PE/ Clark Patterson Lee

Address: 26 Mississippi Street Suite 300, Buffalo, NY 14203

Telephone Number: (716) 880-1256

E-mail: skrull@cplteam.com

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-02-20

RESOLUTION AUTHORIZING NYS WATER INFRASTRUCTURE IMPROVEMENT ACT AND CONSOLIDATED FUNDING GRANT APPLICATIONS AND DECLARATION OF INTENT TO SERVE AS LEAD AGENCY FOR ENVIRONMENTAL REVIEW PROCESS

WHEREAS, the Niagara Falls Water Board (NFWB, or "Board") has determined that it is appropriate to apply for grant funding to assist in the financing of its various scheduled capital improvement projects and certain projects to be initiated upon the conclusion of engineering studies currently scheduled or estimated for completion within the next year; and

WHEREAS, as authorized by the New York State Water Infrastructure Act of 2017, the Environmental Facilities Corporation has been empowered to provide grants to assist in funding water quality and wastewater infrastructure projects, and

WHEREAS, certain funding opportunities are also available via the Consolidated Funding Application process administered by the NY Empire State Development Corporation (ESD) and

WHEREAS, staff has identified the following projects in the City of Niagara Falls as eligible for grant funding pursuant to applicable State of New York finding programs:

Waterline and lead service replacement at:

- 10th Street from Lockport to North Avenue
- Michigan from Lockport Street to 10th Street
- Whitney Avenue from 11th to 18th Street
- 77th Street from Lasalle Pkwy to Niagara Falls Boulevard
- Military from Jacob Place to Bollier Ave

Water tower demolition and replacement:

- Beech Avenue Water Tower

and,

WHEREAS, certain other projects have been identified as necessary for the maintenance of the viability and operational integrity of the NFWB Waste Water Treatment Plant, and

WHEREAS, such projects consist of work to performed entirely within the physical structure of the WWTP and are identified as follows:

- Replace medium voltage switchgear and transformers
- Provide primary scum removal and treatment system
- Replace screenings conveyor and add girt conveyor

- Refurbish and upgrade sediment basins

and,

WHEREAS, pursuant to the requirements of the State Environmental Quality Review Act, NYCRR Section 617 (SEQRA) the NFWB intends to serve as Lead Agency for SEQRA review of the above actions and will determine if any of the proposed actions will have a significant effect on the environment, and

WHEREAS, the Lead Agency will undertake a coordinated review of each proposed action.

NOW THEREFORE BE IT

RESOLVED, that the Board hereby authorizes the submittal of grant applications for the above projects and declares its intention to serve as the Lead Agency for the proposed actions and will circulate Lead Agency Notices (in those instances where required) along with Part 1 of the Long Form Environmental Assessment form (in those instances where required) along with any other supporting documentation to all involved Agencies. These agencies shall be given 30 days from the mailing of the Lead Agency Notice to consent. Interested Agencies will be given notice but are not required to consent pursuant to 6 NYCRR Part 617.

Water Board Personnel Responsible for Implementation of this Resolution:
Executive Director

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

On February 26, 2018, 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 Forster 1st.	[X]	[ ]	[ ]	[ ]
Board Member Kimble	[X]	[ ]	[ ]	[ ]
Board Member Larkin 2nd	[X]	[ ]	[ ]	[ ]
Board Member Leffler	[X]	[ ]	[ ]	[ ]
Chairman O'Callaghan	[X]	[ ]	[ ]	[ ]

Signed By:

Daniel T. O'Callaghan, Chairperson

Vote Witnessed By:

Rolfe Porter, Executive Director
and Secretary to the Board

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 9
270 Michigan Avenue, Buffalo, NY 14203-2915
P: (716) 851-7165 | F: (716) 851-7168
www.dec.ny.gov

June 8, 2018

Douglas S. Williamson
Niagara Falls Water Board
5815 Buffalo Avenue
Niagara Falls, New York 14304

Dear Mr. Williamson:

SEQR LEAD AGENCY SOLICITATION
WATER TANK REPLACEMENT
1780 BEECH AVENUE
CITY OF NIAGARA FALLS, NIAGARA COUNTY

In response to the Niagara Falls Water Board's SEQR Lead Agency solicitation letter for the above-noted project, please be advised of the following:

Since it is anticipated that this project will be funded through the Clean Water State Revolving Fund administered by the NYS Environmental Facilities Corporation, State Environmental Review Process (SERP) requirements must be satisfied. Although the site does not appear to be within an archaeologically sensitive area, the Niagara Falls Water Board must confirm this with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). This office must receive an OPRHP concurrence letter before SERP certification can be obtained. They can be contacted at 518/237-8643 with any questions.

We concur that the Niagara Falls Water Board should act as SEQR Lead Agency, as the environmental impacts of the proposal are primarily of local significance.

Thank you for providing this office the opportunity to review the proposed project. If you have any questions, please feel free to contact Mr. Mark Passuite or me at 716/851-7165.

Respectfully,

David S. Denk
Regional Permit Administrator

MFP:

ecc: Mr. Rob Locey, NYSDEC, Division of Water

NEW YORK
STATE OF
OPPORTUNITY.

Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

May 21, 2018

Mr. Seth Krull
Project Engineer
Clark Patterson Lee
26 Mississippi Street
Suite 300
Buffalo, NY 14203

Re: DOH
Water System Improvements - Beech Ave Storage Tank Replacement
1780 Beech Ave, Niagara Falls, Niagara County, NY
18PR03037

Dear Mr. Krull:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Based upon this review, it is the New York State Office of Parks, Recreation and Historic Preservation's opinion that your project will have no impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Michael F. Lynch, P.E., AIA

Director, Division for Historic Preservation

NIAGARA COUNTY DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH DIVISION
5467 Upper Mountain Road, Suite 100
Lockport, New York 14094-1894

(716) 439-7444
(716) 439-7427 FAX

June 18, 2018

Douglas Williamson
Niagara Falls Water Board
5815 Buffalo Ave
Niagara Falls NY 14304

Re: SEQR Review
Niagara Falls Water Board
Beach Ave. Storage Tank Water System Improvement
Niagara Falls-City

Gentlemen:

This department has received and reviewed your Full Environmental Assessment Form (EAF) Part 1, for the project as referenced above and offers the following comments:

1. The Niagara County Health Department is the approval authority for all municipal drinking water infrastructure replacements or extensions in Niagara County. Attached for your information is a copy of this department's minimum submittal requirements for drinking waterline and storage tank modifications. Departmental approval must be granted **prior** to the initiation of construction.

2. This department has no desire to undertake the responsibilities of lead agency for this project. No objection exists for the Water Board becoming lead agency for this proposal.

3. The department has reviewed your EAF submittal for compliance with 6NYCRR 617 and does not intend to oppose your action on this proposal. As always, the lead agency is required to submit a copy of your determination of significance (negative or positive declaration) to this department's attention.

Please feel free to contact this office if you have any questions relative to this matter.

Yours very truly,

Ronald Gwozdek, P.E.
Principal Public
Health Engineer

RG:
Cc: Engineering - Nia Falls

NIAGARA COUNTY HEALTH DEPARTMENT
PUBLIC WATER LINE EXTENSION SUBMITTAL REQUIREMENTS

1. **Three set of plans** - All plans must be stamped and signed by a licensed New York State Professional Engineer or in the case of a minor project a Land Surveyor with an Exemption Certificate (Section 7208n of the New York State Education Law) and carry the appropriate warning note (Section 7209, Provision 2 of the New York Education Law).

2. **Submittal/Review Fee** - A submittal and review fee of $265.00 is required for all waterline extensions. Checks are to be in U.S. funds and made payable to the Niagara County Health Department.

3. **Engineering report** - Must describe the project in detail. The report should supplement the data contained in the plans and application form such as location, size design basis, maximum flow and fire flow requirements, topography, elevations, direction of flow, location of streams in the area, etc.

4. **Project location** - A copy of a U.S.G.S./soils/state wetland map section of the project area with the project location identified on each map.

5. **Plans/Forms** - When a water line extension is proposed, the details must be included on a separate plan showing the water extension only. Application form DOH 348 Application for Approval of Plans For A Public Water Supply Improvement shall be completed signed and dated by the appropriate official and must accompany the plan submittal. The design must be in accordance with Bulletin 42 entitled RECOMMENDED STANDARDS FOR WATER WORKS, latest edition.

   A letter must be submitted from the official in charge of the water treatment plant or appropriate water district indicating that adequate water pressure and volume is available to serve the extension.

6. **SEQR** - All municipal public water line extensions must be submitted to the local municipality for review in addition to satisfying all State Environmental Quality Review (SEQR) Part 617 of 6NYCRR Regulations. The Niagara County Health Department must be included as an "involved agency" for all notification requirements including the review of the Environmental Assessment Form (E.A.S.). Documentation of SEQR compliance in the form of a negative declaration, conditioned negative declaration or positive declaration must accompany all submittals.

7. **Wetlands** - The project sponsor must contact the appropriate U.S. Department of Army Corp. of Engineers Office to ensure that the project will not involve Federally Regulated Wetland. Written verification by that agency stating their jurisdiction on the matter must accompany the proposal.

8. Other permits may be required in accordance with the following portions of the law (in each case information and procedures, including the implication of the State Environmental Quality Review Act, can be secured from the Department of Environmental Conservation headquarters office in Albany or from any DEC Regional Office): See next page

I. Article 15 - Stream Crossings

Article 15 of the Environmental Conservation Law requires the Department to protect insofar as possible the beds and banks of all watercourses in the state, and prohibits, unless a permit for such has been duly applied for and issued, the disturbance of the bank or bed or any stream, lake, pond, etc. Crossing of streams with utility lines is included in this control.

II. Article 19 - Air Resources Permits

Permits to construct sources of air contaminant emissions are required for stationary combustion installations, incinerators, and process exhaust or ventilation systems. Combustion installations with a maximum operating heat input or less than 1 million BTU per hour and stationary internal combustion engines under 400 horsepower are exempted.

III. Articles 24 and 25 - Wetlands

Article 24 authorizes the Department to issue permits for construction activities in and adjacent to freshwater wetlands. Article 25 applies to tidal wetlands.

IV. Article 27 - Solid Waste Transport and Management Permits

Permits are required to transport and dispose of solid wastes, including septage and sewage sludge. The permits needed are a function of the facility size and the disposal method.

V. Article 36 - Development in Flood Hazard Areas

Pursuant to this article, NYS has adopted regulations governing development of flood hazard areas (NYSCRR Title 6, Part 502). In addition, local governments should be consulted concerning Local Flood Plain Management Regulations before choosing a site or technique for waste treatment and disposal.

Water Tank Study

for the

Niagara Falls Water Board

Niagara Falls Water Board
5815 Buffalo Avenue
Niagara Falls, NY 14304

May 2018

Clark Patterson Lee
ARCHITECTURE | ENGINEERING | PLANNING

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

In June 2017 the American Water Works Association (AWWA) mentioned the City of Niagara Falls in their article *Analysis of Water Infrastructure for Midsize and Large Cities with Declining Populations* (included in Appendix A). The article states:

> Older industrial cities that have experienced steady, long-term population declines and job losses, called "legacy cities," also have diminished revenues and less ability to provide services such as for drinking water and wastewater (Mallach & Brachman 2013, 110th American Assembly 2011). Many also face water and wastewater infrastructure problems, including the presence of lead pipes in drinking water service lines.

Despite the decreasing population and loss of industry, insufficient storage for the purposes of fire flow and everyday use is one of the main water infrastructure problems faced in Niagara Falls. This report will describe Niagara Falls' existing water system, analyze the need for additional storage, and evaluate multiple alternatives to increase the City's storage capacity.

2.0 EXISTING CONDITIONS

2.1 General System Description

The Niagara Falls Water Board (NFWB) assumed control of the City's water system in 1990 from the City of Niagara Falls. The system contains a water treatment plant, a 2 million-gallon (MG) storage tank and roughly 300 miles of water main. Approximately 56,000 residents along with 12 to 14 million visitors brought in by the City's tourism industry are served by the system.

2.2 Surface Supply

Niagara Falls' water system contains a conventional water treatment plant that draws its water from the Upper Niagara River through an intake tunnel beneath the river. After entering the plant, the raw water passes through 0.39 MG pretreatment tanks, 0.84 MG flocculation tanks, 1.23 MG settling tanks, 0.81 MG filters, and 1.42 MG contact tanks. Finished water is stored in a 1.31 MG clear well before being discharged to the system.

In 2016, the water plant produced 7.4 billion gallons of water. The average daily production was 20.3 million gallons per day (MGD) and the highest single day was 23.3 million gallons (MG). Table 2.1 shows the totals for water plant production since 2008.

YEAR	TOTAL PRODUCED (GAL)	DAILY AVERAGE (MGD)
2008	5,978,012,000	16.38
2009	6,221,999,000	17.04
2010	6,637,425,000	18.18
2011	6,713,431,000	18.39
2012	6,727,217,000	18.43
2013	6,536,679,000	17.91
2014	7,831,479,000	21.46
2015	7,785,336,000	21.33
2016	7,440,929,000	20.37

Table 2.1 Historical Water Plant Production

After the clear well, water is pumped to a 2 MG storage tank on 56th Street. The NFWB operates 2 larger lead pumps and 3 smaller lag pumps. The lead pumps are rated 700 horsepower, 1185 rpm, and flow 10760 gpm at 205 feet total dynamic head (TDH). The lag pumps are rated 300 horsepower, 1790 rpm, and flow 4510 gpm at 205 feet TDH. Under normal conditions, one lead pump is running at all times. An operator will turn on one or more lag pumps to fill the tank once it reaches its low water level.

2.3 Historical Water Consumption

According to the Annual Drinking Water Quality Report for 2016 issued by the NFWB, 2.4 billion gallons of metered water were delivered to customers, leaving 5 billion gallons of water unaccounted for. Possible causes of unaccounted water include: water main flushing, meter inaccuracies, illegal consumption, hydrant usage, authorized unmetered usage, and underground pipe leakage. Table 2.2 compares the NFWB percentage of unaccounted for water to other local municipalities

Municipality	**% Unaccounted Water**
Niagara Falls Water Board	68
Erie County Water Authority	30
Town of Tonawanda Water	42
Grand Island Water	32.6
City of Buffalo	35-40

Table 2.2 Percent Unaccounted Water

The NFWB has been diligent in decreasing the amount of unaccounted water in their system through leak repair, hydrant replacement, meter replacement and calibration, and elimination of illegal connections. For this report, it is assumed that these efforts have reduced the quantity of unaccounted water to 30% of the total amount of water produced. Adding metered usage and 30% unaccounted water yields a total consumption of 3.4 billion gallons a year, which converts to 9.3 MGD.

2.4 Water Distribution System

As stated earlier, Niagara Falls contains approximately 300 miles of water main that ranges in size from 4 inch to 42 inch. Some parts of the system are estimated to be over 100 years old. The system is constructed of cast iron, ductile iron, concrete and PVC pipe. A layout of the existing system can be found in Appendix B. There are approximately 2,200 hydrants with associated system valves. Residents and businesses are served through roughly 18,000 service connections ranging in size from 5/8 inch to 10 inch. Table 2.3 shows the breakdown of main size and pipe material within the system.

Distribution System Piping

Water Main	Material Type	Length (ft)
6-inch	PVC	1,500
8-inch	PVC	2,610
10-inch	PVC	700
12-inch	Asbestos Cement	5,500
20-inch	RCPP	7,800
24-inch	RCPP	5,600
30-inch	RCPP	13,370
36-inch	RCPP	16,810
42-inch	RCPP	7,850
2-inch	Cast/Ductile Iron	700
4-inch	Cast/Ductile Iron	95,030
6-inch	Cast/Ductile Iron	596,540
8-inch	Cast/Ductile Iron	239,680
10-inch	Cast/Ductile Iron	121,455
12-inch	Cast/Ductile Iron	102,045
14-inch	HDPE	6,540
16-inch	Cast/Ductile Iron	59,660
20-inch	Cast/Ductile Iron	46,730
24-inch	Cast/Ductile Iron	26,230
30-inch	Cast/Ductile Iron	9,060
	Total:	1,365,410

Table 2.3 Main Size and Material Breakdown

Niagara Falls Water System Approximate Age Distribution of Pipe

Age	Feet	Percent
1890-1910	65,802	5%
1911-1930	515,179	38%
1931-1950	288,940	21%
1951-1970	251,682	18%
1971-1990	144,121	11%
1991-2013	101,772	7%
Total	1,367,496	100%

Table 2.3 Continued Main Size and Material Breakdown

2.4 Water System Storage

The 2 MG storage tank on 56th Street is 215' tall elevated metal tank with a diameter of 84' and was built in 1996. The typical operating range for the tank is listed below:

High Water Level (HWL): 774.5'
Low Water Level (LWL): 754.5'

A site plan and elevation view of the 56th Street Tank is included in Appendix C.

The system also contains an abandoned 2 MG Water Tank on Beech Avenue. The Beech Avenue tank was built in 1947 and is a multi-leg style elevated tank. The tank is 150' tall with an operating range as follows:

HWL: 735'
LWL: 700.5'

Due to the 40' difference in water levels, the Beech Avenue tank was abandoned after completion of the 56th Street tank. A site plan and elevation view of the Beech Avenue tank is also included in Appendix C. An aerial image of the Beech Avenue tank taken during a recent drone survey is shown in Figure 2.1.

Figure 2.1 Beech Avenue Tank Aerial Image

3.0 NEEDS ANALYSIS

3.1 Pressure Requirements

According to *Recommended Standards for Water Works* (also known as 10 State Standards), a water system should have a minimum working pressure of 35 psi and a normal working pressure between 60 and 80 psi. Pressure for the entire water system in Niagara Falls is driven by the water level in the 56th Street Tank. Neglecting head loss. the static pressure at the highest elevation in the system, 635 feet, is 52 psi at LWL and the static pressure at the lowest point in the system, 542 feet, is 100 psi at HWL. These values meet or exceed the 10 States pressure requirements.

Due to the age of the system, there is a large amount of head loss caused by tuberculation, leaks and partially closed valves. Areas in the system further away from the 56th Street Tank, mainly in the northwest portion of the city, experience pressures as low as 30 PSI according to our water model. An elevated tank in this area would help boost the pressure to match those areas closer to the 56th Street Tank. A graphic showing the modeled pressures throughout the system is included in Appendix D.

3.2 Storage Requirements

Based on 10 State Standards, a water system should have sufficient storage for one average day's consumption and fire flow as recommended by the appropriate state Insurance Services Office (ISO). A fire flow scenario of 2,500 GPM for 2 hours which totals 300,000 gallons is assumed for this report. Some locations throughout the City may require additional fire flow protection according to ISO ratings. However, given the age of the system and the abundance of smaller mains, 2,500 GPM is an achievable fire flow that will not negatively impact the system.

As mentioned earlier, an average daily consumption of 9.3 MGD is assumed for this report. Combining the average daily consumption of 9.3 MG and a fire flow of 300,000 gallons yields a total storage requirement of 9.6 MG. With the current storage of 2 MG, Niagara Falls is under capacity by 7.6 MG.

3.3 Other System Considerations

Currently, the only active storage tank in Niagara Falls system is the 2 MG tank on 56th Street. During water main breaks or if the 56th street tank were to be damaged or malfunction, the system is maintained through the pumps at the water plant and supplemented through an interconnection with the Niagara County Water District (NCWD). During recent breaks, the NFWB was barely able to maintain sufficient pressure to avoid issuing a boil water warning. Only having one tank in the system also causes a maintenance issue. When it comes time to paint the inside of the 56th street tank, there is no viable option to maintain the system while the tank is offline. A second tank in the system would provide an additional storage buffer and redundancy in case the 56th street tank was taken offline.

4.0 PROPOSED IMPROVEMENTS

4.1 General

The Niagara Falls water system is under the recommended 10 States Standards capacity by 7.6 MG. While it is not economically feasible for the NFWB to add this amount of storage at once, the storage capacity of Niagara Falls system needs to be increased.

This section will explore the following options in which the NFWB may proceed:

Option 1: No Action
Option 2: Raise Existing Beech Avenue Tank
Option 3: Demolish and Replace Existing Beech Avenue Tank

Opinions of probable cost for each option are included in Appendix E.

4.2 Option 1: No Action

The first option is to take no action. The system will remain undersized for daily use and fire flow. In case of damage or malfunction at the 56th Street tank, Niagara Falls will need to rely on the pumps at the water plant and the NCWD to maintain service. Also, pressure problems will persist in areas further away from the 56th Street Tank. Despite being the cheapest and least disruptive of the options, not acting does nothing to improve on the inadequacies of the system.

4.3 Option 2: Raise Existing Beech Avenue Tank

The second option is to rehabilitate and raise the abandoned Beech Avenue tank 40' to match the HWL of the 56th Street Tank. The advantage of the Beech Avenue tank site is that the NFWB already owns it and the infrastructure to connect the tank to the system is already installed. This eliminates the hassle of locating and purchasing a new property suitable for a water tank and the cost of installing new watermain to connect the new tank to the system. Raising the existing tank would increase the storage capacity in the system and address pressure and redundancy concerns. Appendix D contains a graphic showing the change in pressure after the addition of an elevated tank on Beech Avenue.

Although the location of the Beech Avenue tank is an advantage, rehabilitation of the existing tank and raising it to the correct hydraulic grade present a substantial amount of cost. The Beech Avenue tank has not been in service since the 56th Street tank was installed in 1996 and has sat abandoned with little to no maintenance. The tank would need to be repainted which likely would include the abatement of lead paint. Another thing to consider is water tanks typically have a service life of 75-100 years and the Beech Avenue tank is 71 years old as of 2018. Even with the necessary rehabilitation, the Beech Avenue tank would need to be replaced within the next 30 years.

A larger concern of raising the existing tank is structural adequacy. While the existing foundation would likely support the downward force of 2 MG of water, it was not designed to handle the additional overturning seismic and wind loads caused by raising the tank. With the necessary rehabilitation and structural reinforcement, raising the existing Beech Avenue tank would be more expensive than demolishing the existing tank and replacing it with a new one.

4.4 Option 3: Demolish and Replace Existing Beech Avenue Tank

The third option is to demolish the existing multi-leg tank on the Beech Avenue site and replace it with a new concrete shafted elevated tank (CET). Like Option 2, this option also has the benefit that the NFWB owns the site and the necessary infrastructure is already in place.

Demolition of the existing tank and construction of the new tank will create some disturbance to the adjacent homes and school. It would be best if construction were scheduled while school is out of session. Lead paint is a concern with the existing tank and abatement would be necessary during demolition if tests reveal it is present. It would cost approximately two hundred thousand dollars to dismantle and remove the existing tank.

The new CET would be installed to match the hydraulic profile of the 56th Street tank to maintain the current system's pressure. Adding 2 MG of storage to the system would decrease the deficit to 5.6 MG and provide a backup if something were to happen to the 56th Street tank. An additional benefit of CETs is a lower re-paint cost in the future. The concrete shaft eliminates approximately 50% of surface area that would need to be repainted. A lifecycle cost analysis of a multi-leg tank versus a CET is included in Appendix F. The cost of constructing a CET is approximately 4 million dollars.

5.0 RECOMMENDED IMPROVEMENTS

5.1 Selected Alternative

Considering the system needs and the cost of each option presented in Section 4.0, it is recommended that Option 3 be selected for further development. Although it does not entirely satisfy the storage deficit, Option 3 provides 2 MG of additional storage and adds redundancy to the system in case of emergency. A 2 MG tank at the Beech Avenue location will also help increase pressure in areas plagued by low pressure due to head loss. In total Option 3 will cost 6 million dollars.

6.0 CONCLUSION

As a legacy city, Niagara Falls is experiencing a steady decline in population which negatively impacts revenue and their ability to maintain aging infrastructure. The storage capacity of their water system is insufficient for daily use and fire flow according to 10 States Standards. It is recommended that the NFWB demolish the existing Beech Avenue tank and install a new 2 MG concrete shafted elevated tank in its place. After construction, the NFWB will then need to reevaluate their system to determine where it makes the most sense to install additional water storage to adequately serve their customers.

Appendix A

Analysis of Water Infrastructure for Midsize and Large Cities with Declining Populations

Feature Article

Abandoned in 1958, the buildings of this Packard automobile factory in Detroit, Mich., are characteristic of the deteriorating conditions in many US industrial cities.
Photo credit: Atomazul/Shutterstock.com

SWATI SHELADIA THOMAS AND SUSAN IOTT

Analysis of Water Infrastructure for Midsize and Large Cities With Declining Populations

A RECENT GAO REPORT DESCRIBES THE INFRASTRUCTURE CHALLENGES IN US CITIES WHERE POPULATIONS HAVE DECLINED SINCE 1980.

The 2015 discovery of lead in the drinking water in Flint, Mich., highlighted the risks that some US cities confront in maintaining drinking water and wastewater infrastructure in the face of declining populations and deteriorating economic conditions. Older industrial cities that have experienced steady, long-term population declines and job losses, called "legacy cities," also have diminished revenues and less ability to provide services, such as for drinking water and wastewater (Mallach & Brachman 2013, 110th American Assembly 2011). Many also face water and wastewater infrastructure problems, including the presence of lead pipes in drinking water service lines. In addition, many older US cities (primarily in the Midwest and Northeast) have wastewater systems constructed as combined sewer systems and face challenges controlling combined sewer overflows.

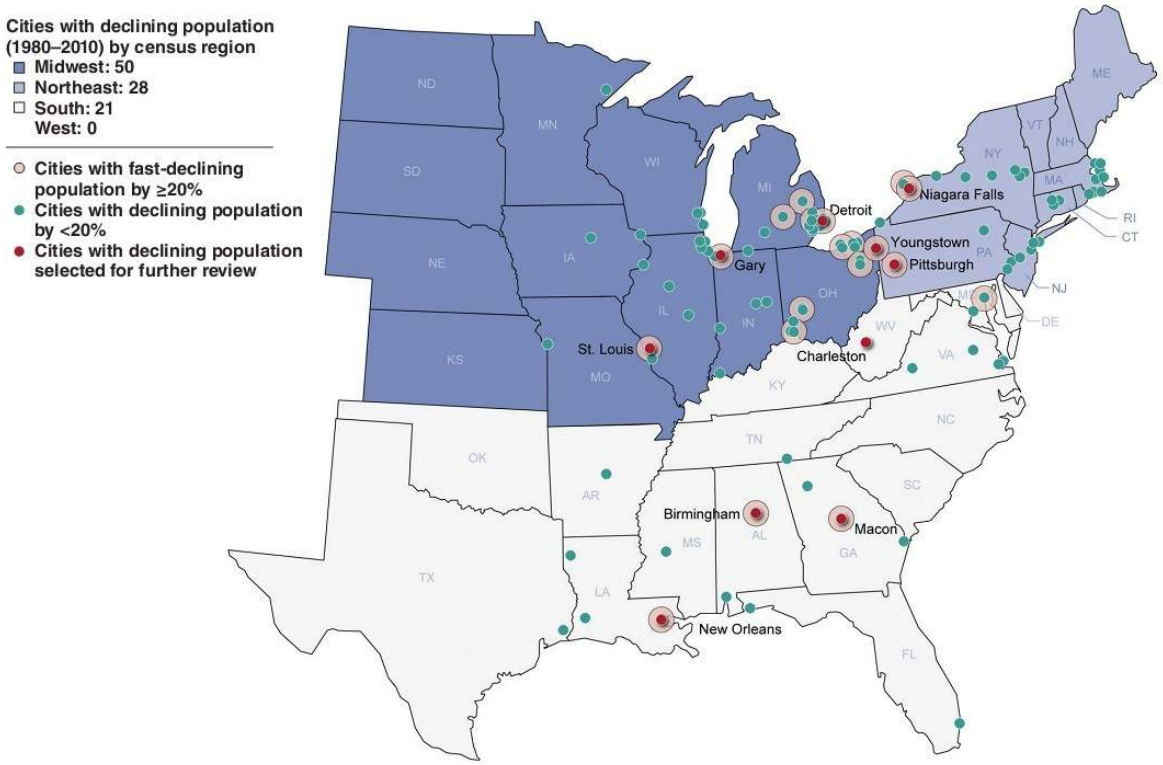
The US Government Accountability Office (GAO) was asked to review the water and wastewater infrastructure needs in midsize and large cities with declining populations. The result was the 2016 report, *Water Infrastructure: Information on Selected Midsize and Large Cities With Declining Populations* (GAO-16-785 2016). To compile the report, GAO analyzed decennial census and American Community Survey data, relevant studies, and utility financial statements for 10 cities with the largest population declines from 1980 through 2010 and the 14 water and wastewater utilities that serve those cities. The 10 cities selected were those with the greatest declines in population from 1980 to 2010, without repeating cities in any state to allow for geographic distribution. Cities were also selected for size to include five midsize and five large cities. GAO also reviewed laws, regulations, policies, and guidance for six federal programs; analyzed program and city and utility funding data; and interviewed agency and city officials and representatives from 12 of the 14 utilities willing to speak with us. This article describes some of the background and key findings presented in the full report.

CITIES WITH DECLINING POPULATIONS

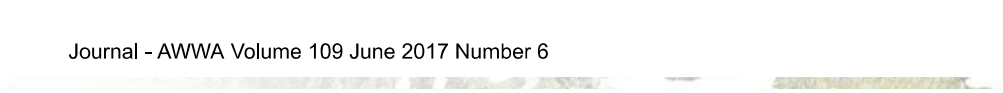
Many midsize and large cities—with populations of 50,000–99,000 and ≥100,000, respectively—have lost a substantial percentage of their populations. Based on GAO's analysis of decennial census data from 1980 through 2010, 674 midsize and large cities across the nation had a 2010 population greater than 50,000. Of those, 99 cities (15%) experienced population decline from 1980 to 2010. As shown in Figure 1, about half of these cities are in the Midwest, 28% are located in the Northeast, and 21% are located in the South. None are located in the western states. Michigan and Ohio each have 14 cities with declining populations.

Midsize and large cities with declining populations are generally more economically distressed and have higher poverty and unemployment rates and lower per capita income than cities with growing populations. The GAO's analysis showed that, compared with midsize and large cities that had growing populations from 1980 to 2010, cities with declining populations had higher estimated poverty rates and lower estimated median household

FIGURE 1 Location of US cities with 2010 populations of ≥50,000 that experienced a decline in population from 1980 to 2010



Source: GAO analysis of US Census Bureau data, GAO-16-785



income (Table 1). These communities also showed higher amounts of vacant housing, lower median home values, and larger numbers of households with food stamp benefits (Table 2).

Cities with declining populations also had some significantly different demographic characteristics from cities with growing populations. The 99 cities with declining populations had a higher estimated percentage of African-American residents and lower estimated percentage of the population with bachelor's degrees (Table 3).

NEEDS OF MIDSIZE AND LARGE CITIES

Although little research has been done on the water and wastewater needs of cities with declining populations, GAO found that their needs resemble water and wastewater needs nationally. GAO reviewed 14 water and wastewater utilities that provide service for 10 cities with declining populations from 1980 through 2010, comparing their needs to the needs evaluated by the US Environmental Protection Agency (USEPA). USEPA assesses water and wastewater needs at the national level every four years; its most recent survey estimated needs for the nation at $384.2 billion (in 2011 dollars) for drinking water infrastructure and $271 billion (in 2012 dollars) for wastewater infrastructure (USEPA 2016a, 2013).

The needs of the 14 utilities reviewed as part of the GAO report reflected USEPA's estimates for the nation. For drinking water infrastructure, the needs include two areas: distribution and transmission systems and drinking water treatment infrastructure. For example, representatives from one utility noted that its distribution pipelines were approximately 80 years old, and that within the next 15 to 20 years almost all of them will need to be updated. For wastewater infrastructure, the needs include three areas: combined sewer overflow correction, wastewater

TABLE 1 Estimated key economic characteristics of midsize and large cities with declining populations compared with cities with growing populations

Percentage of Population Change, 1980–2010	Total Cities With 2010 Population >50,000	Average Percentage of Poverty	Average Percentage of Unemployment	Average Median Household Income $
Growth				
>20.0	450	16.3	9.1	58,140
10.0 to 19.9	61	16.7	9.7	57,150
<9.9	64	17.4	9.6	55,390
All growth	575	16.5	9.2	57,729
Decline				
>–9.9	53	20.5	11.1	45,139
–10.0 to –19.9	27	24.5	12.7	38,689
<–20.0	19	31.4	16.5	32,242
All decline	99	23.6	12.5	40,993

Source: GAO analysis of US Census Bureau American Community Survey data (five-year estimates, 2010–2014) and decennial census data.

All five-year American Community Survey percentage estimates presented have margins of error at the 90% confidence level of ±10 percentage points or less, unless otherwise noted. All nonpercentage estimates presented using the five-year American Community Survey had data within 20% of the estimate itself, unless otherwise noted.

TABLE 2 Estimated housing characteristics of midsize and large cities with declining populations compared with cities with growing populations

Percentage of Population Change, 1980–2010	Average of Vacant Housing %	Average Median Home Value $	Average Median Year Housing Stock Was Built	Average of Household With Food Stamp Benefits %
Growth				
>20.0	8.5	242,703	1980	12.7
10.0 to 19.9	8.9	320,688	1961	14.4
<9.9	9.5	265,568	1958	16.4
All growth	8.6	253,522	1976	13.3
Decline				
>–9.9	11.7	169,931	1956	19.6
–10.0 to –19.9	12.9	109,268[a]	1953	23.7
<–20.0	19.7	83,066[a]	1948	31.0
All decline	13.5	137,263	1954	22.8

Source: GAO analysis of US Census Bureau American Community Survey data (five-year estimates, 2010–2014) and decennial census data.

All five-year American Community Survey percentage estimates presented have margins of error at the 90% confidence level of ±10 percentage points or less, unless otherwise noted. All non-percentage estimates presented using the five-year American Community Survey had data within 20% of the estimate itself, unless otherwise noted.

[a]The 90% confidence intervals for percentage estimates are within ±20 percentage points.

treatment, and conveyance system repair. For example, representatives from one utility said that 90% of the utility's original wastewater treatment plant, built in 1938, was still in place and required constant attention to keep running.

> Midsize and large cities with declining populations are generally more economically distressed and have higher poverty and unemployment rates and lower per capita income than cities with growing populations.

AFFORDABILITY OF CUSTOMER RATES

Representatives from more than half of the 14 utilities GAO reviewed said they were concerned about keeping customer rates affordable in the face of rate increases. Specifically, representatives expressed concern about the affordability of future rate increases for low-income households (i.e., those that have incomes in the lowest 20th percentile income level).

Consistent with increasing water and wastewater rates across the United States, most of the 14 utilities reviewed by GAO raise rates annually to help pay for increasing operations and maintenance costs and needed water and wastewater improvements. Most of the 14 utilities use a common rate structure—a modest base rate plus a variable rate per volume of water used—that produces reduced revenues when the amount of water used and sold declines. On the basis of a review of the utilities' financial statements, 11 of 14 utilities experienced a decline in revenues between 2012 and 2014 and raised their rates, which helped make up for lost revenues and cover increasing operations and maintenance costs. All but two of the utilities had raised rates at least once since 2012. Average annualized rate increases from 2012 through 2014 ranged from 1.60 to 11.10% per year.

In addition, the 14 utilities GAO reviewed face reduced water sales resulting from conservation devices and other factors. Nationally, many utilities are experiencing a decline in water use and revenues as a result of increased use of water conservation devices. According to a 2016 Water Research Foundation study, the average per household indoor water use has declined by 22% since 1999 with the increased use of water conservation devices, like low-flow toilets and clothes washers (DeOreo et al. 2016).

While affordability is commonly measured as the percent increase in the water bill for a household with median income, rate increases have a greater effect on those below

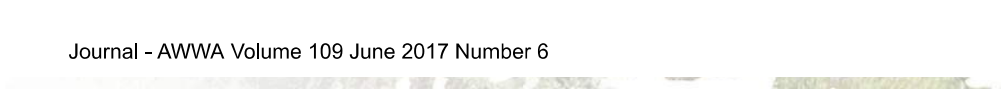
TABLE 3 Estimated demographic characteristics of midsize and large cities with declining populations compared with growing cities

Percentage of Population Change, 1980–2010	Total Number of Cities With 2010 Population >50,000	Average—%					
		White	African-American	Other Race	Over 65 Years of Age	With a High School Diploma	With a Bachelor's Degree
Growth							
>20.0	450	53.0	10.2	36.5	11.5	85.7	32.2
10.0 to 19.9	61	49.5	12.4	38.0	13.4	84.5[a]	32.8
<9.9	64	59.2	16.2	24.6	13.8	87.1[a]	34.6
All growth	575	53.3	11.1	35.4	12.0	85.8	32.5
Decline							
>–9.9	53	57.4	24.7	17.8	13.4	85.4[a]	27.0
–10.0 to –19.9	27	59.3	23.7	17.0	13.3	84.1[a]	21.9
<–20.0	19	42.1	46.9	10.9	12.9	82.9[a]	20.4
All decline	99	55.1	28.5	16.3	13.3	84.6[a]	24.4

Source: GAO analysis of US Census Bureau's American Community Survey data (five-year estimates, 2010–2014) and decennial census data.

All five-year American Community Survey percentage estimates presented have margins of error at the 90% confidence level of ±10 percentage points or less, unless otherwise noted. All nonpercentage estimates presented using the five-year American Community Survey had data within 20% of the estimate itself, unless otherwise noted.

[a]The 90% confidence intervals for percentage estimates are within ±36 percentage points.



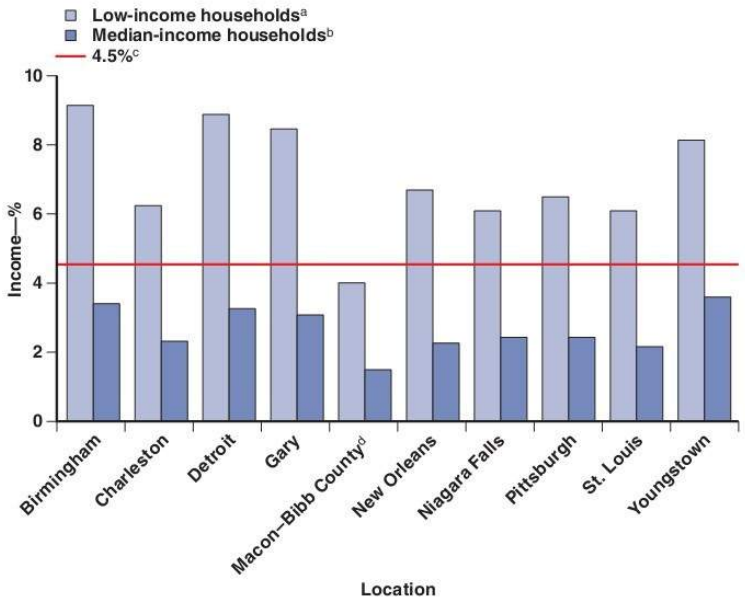
median household income (EFAB 2014, 2007). However, affordability is defined and used in a number of ways. When evaluating affordability of combined sewer overflow control projects, USEPA considers wastewater rates at or above 2.0% of median household income a high financial burden to residential customers. In evaluating the affordability of drinking water compliance technologies for small utilities, USEPA considers a rate at or above 2.5% of median household income nationally to be unaffordable. The US Conference of Mayors defines affordability as 4.5%, combining the two USEPA numbers. Many states also use affordability criteria to identify disadvantaged communities eligible for additional subsidies under the state revolving fund (SRF) programs. Most of the 10 states in which the 10 cities reviewed by GAO are located use median household income as one of the indicators for identifying disadvantaged communities for both Drinking Water and Clean Water SRF programs. Some states used additional indicators, such as poverty rate, unemployment data, and population trends.

GAO analyzed water and wastewater rates for the 10 cities it reviewed and the percent increase in bills for a household at the median income level versus a household considered low-income (20% of household income). Figure 2 shows that while the rate increases can be considered affordable for households with median income, they are not considered affordable for low-income households (US Conference of Mayors et al. 2013). Data on average water and wastewater bills used in the calculations were compiled from data contained in utility documents or described to GAO by the utilities serving these 10 cities, where available. For one city—Niagara Falls, N.Y.—these data were not available, and the average bill was estimated assuming a household with a ⅝-in. water meter and average usage of 9.24 hundred ft³ (about 6,920 gal) of water per month. All estimates, which are based on American Community Survey five-year estimates of household income, have 90% confidence intervals that are within ±0.6 percentage points. Furthermore, in four of the 10 cities, the average water and wastewater bill was more than 8% of income for low-income households.

Unaffordable rates can lead to financial capacity problems for a utility (EFAB 2014, 2007). In some of the cities reviewed by GAO, a proportion of residents had difficulty paying their bills, and utilities faced

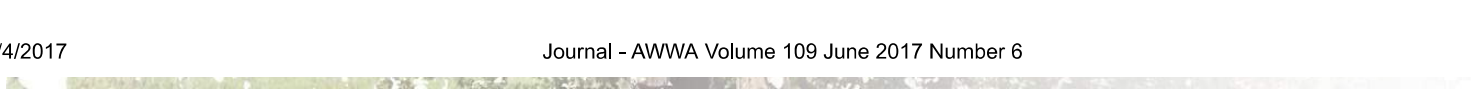
> Although little research has been done on the water and wastewater needs of cities with declining populations, GAO found that their needs resemble water and wastewater needs nationally.

FIGURE 2 Estimated 2015 combined water and wastewater bills as a share of household income for low- and median-income households in 10 selected cities



Source: GAO analysis of utility rate information and American Community Survey income data using five-year estimates, 2010–2014, GAO-16-785

[a]Average annual residential bill as a share of income for low-income households. Low-income households refer to households within the lowest income quintile (i.e., those that have incomes in the lowest 20th percentile income level) for the corresponding city.
[b]Average annual residential bill as a share of income for median-income households (i.e., those that have incomes in the 50th percentile income level) for the corresponding city.
[c]The US Conference of Mayors estimated a combined annual water and wastewater bill of more than 4.5% of income as unaffordable on the basis of US Environmental Protection Agency policies.
[d]Macon merged with Bibb County in 2014 to become Macon–Bibb County. Macon–Bibb County American Community Survey five-year estimates, 2010–2014 income data, are used in this graphic.



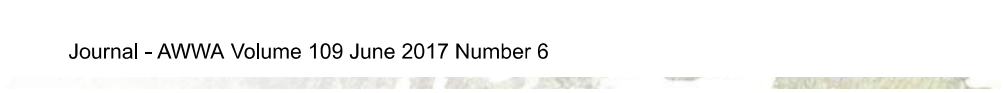
challenges with collections. More than 25% of the customers of five of the 14 utilities GAO reviewed were late in paying their bills. In addition, even with generally strong financial indicators and ratings, a few representatives interviewed said that they expect to have future challenges using bond funding because of the rate increases needed to pay for them. All of the utilities GAO reviewed use bond funding to help finance their water and wastewater infrastructure needs. Most (10 of the 14 utilities) had strong ability to pay long-term debt as indicated by debt service coverage calculated from 2014 financial statements. In addition, for most (eight of the 14 utilities), their bonds as of June 2016 were ranked within an A-level range by the ratings agencies, indicating that they were expected to be able to cover the annual payments for these bonds. However, according to the USEPA's Environmental Finance Advisory Board (EFAB), ratings do not indicate the system condition and repair and replacement needs, or whether a utility has affordable rates

TABLE 4 Customer assistance programs used by drinking water and wastewater utilities of 10 selected midsize and large cities with declining populations as of June 2016

City	Utility	Customer Assistance Programs				
		Payment plans or agreements	Discounted bills or assistance for low-income, elderly, or disabled customers in good standing	Short-term assistance for low-income, elderly, or disabled customers with unpaid bills	Short-term assistance for low-income, elderly, or disabled customers with minor plumbing repairs	Lifeline rates (fixed base rates that include a minimum amount of water to cover basic needs)
Birmingham, Ala.	Birmingham Water Works Board	●	○	●	●	●
	Jefferson County[a]	—	—	●[b]	●[b]	—
Charleston, W.Va.	West Virginia American Watera	●	●[c]	●	—	[d]
	Charleston Sanitary Board	●	○	○	○	[d]
Detroit, Mich.	Detroit Water and Sewerage Department	●	●	●	●	○
Gary, Ind.	Indiana American Water	●	○	○	○	○
	Gary Sanitary District	●	○	○	○	○
Macon, Ga.	Macon Water Authority	●	○	●	○	○
Niagara Falls, N.Y.	Niagara Falls Water Board	●*	○	○	○	○
New Orleans, La.	Sewerage and Water Board of New Orleans	●	●	○	●	○
Pittsburgh, Pa.	Pittsburgh Water and Sewer Authority	●	○	○	○	[d]
St. Louis, Mo.	St. Louis Water Divisions	●	○	○	○	○
	Metropolitan St. Louis Sewer District	●*	●	●	○	○
Youngstown, Ohio	City of Youngstown	●	○	○	○	○

Legend:
● = Customer assistance program used by the utility, includes formalized payment plans or policies
●* = Ad hoc use of payment plans, no formal program or policy
○ = Customer assistance program is not being used by the utility
— = Information was not provided by the utility
Source: GAO (US Government Accountability Office) analysis of city and utility information and interviews with city officials and utility representatives, GAO-16-785

[a]Information described is based on the GAO's review of the description of customer assistance on the utility's website.
[b]Jefferson County wastewater customers that are billed for both drinking water and wastewater service by Birmingham Water Works Board are eligible for assistance made available to Birmingham Water Works Board customers.
[c]A 20% discount on water bills for qualifying low-income customers is made possible through a state-based program. Under the program, the state reimburses the utility for special rates through a credit toward the utility's state business and occupation tax.
[d]Base rate includes a minimum amount of water but is not identified as a lifeline rate, a minimum amount of water at a specific rate to cover basic human needs.



or the ability to take on more debt (EFAB 2014). GAO's review of the 14 utilities indicates that the remaining useful life was less than 10 years for five utilities, and projected long-term debt per customer varied widely—from $8/customer account to $12,803/customer account—for utilities where data were available.

CUSTOMER ASSISTANCE PROGRAMS AND COST CONTROL STRATEGIES

All of the utilities GAO reviewed are taking steps to address affordability concerns. Each has developed one or more types of customer assistance program to help low-income customers pay their bills (Table 4). In addition, nearly all (13 of 14) of the utilities reviewed were using or had plans to use one or more cost control strategies to address their water and wastewater infrastructure needs.

Customer assistance programs. All 14 utilities had developed one or more types of customer assistance program as a strategy to make rates more affordable for customers who had difficulty paying their bills. At a minimum, nearly all (13 of 14) of the utilities reviewed entered into payment plans or agreements with customers with unpaid bills (Table 4). In addition, half of the utilities (seven of 14) offered direct assistance to low-income, elderly, or disabled customers through (1) bill discounts or assistance to eligible customers in good standing, (2) short-term assistance for customers with unpaid bills (e.g., credit for payment of outstanding water and wastewater bills), or (3) short-term assistance for eligible customers with minor plumbing repairs (e.g., for leaks that can increase water use and monthly bills), or (4) some combination of these three types of assistance.

Different rate structures, such as a lifeline rate or reducing fixed charges, can assist low-income or financially constrained customers, according to a 2010 Water Research Foundation Study (Cromwell et al. 2010) and USEPA's 2016 report on customer assistance programs (USEPA 2016b). For example, through a lifeline rate, a utility can provide its customers with a minimum amount of water to cover basic needs at a fixed base charge. However, few of the 14 utilities GAO reviewed used such structures. According to a few utility representatives (three of 12), charging special rates for low-income customers is not an option because of local or state laws that do not allow the utilities to differentiate rates among customers. None of the utilities reviewed provided special rates based on income.

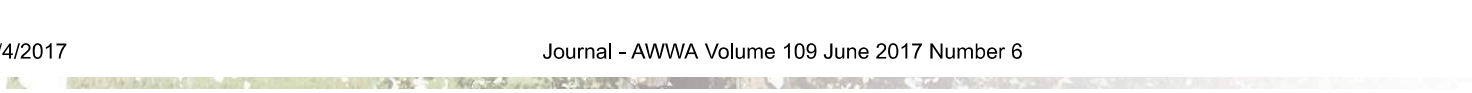
> Representatives from more than half of the 14 utilities GAO reviewed said they were concerned about keeping customer rates affordable in the face of rate increases.

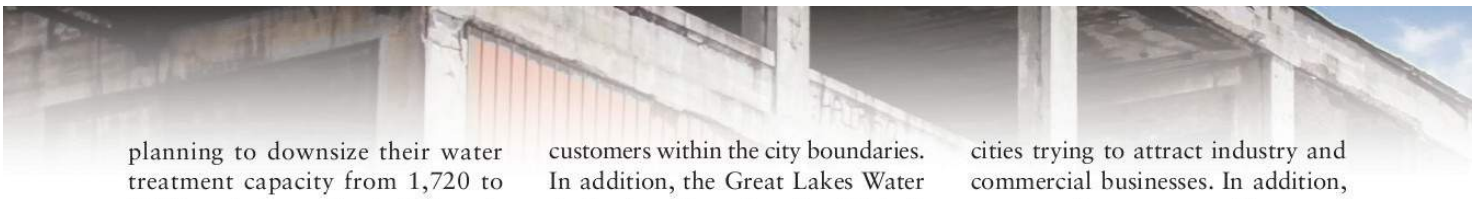
Cost control strategies. Most utilities GAO reviewed are using, or had plans to use, one or more cost control strategies to address their infrastructure needs and costs. The strategies include asset management, right-sizing, major reorganization, expanding the utility's customer base, and public–private partnerships.

Asset management. Overall, the most common cost control strategy used by the 14 water and wastewater utilities was asset management. Some of the utilities (four of 14) had asset management programs in place, and most of the remaining utilities had plans for or were in the initial stages of implementing the strategy. Representatives from one of the utilities, Macon Water Authority (Macon, Ga.), said that they had fully integrated the use of asset management in physical and financial management of the utility. For example, information from their asset management program is integrated into a 10-year, long-range planning model used to estimate needed income and revenue requirements to manage day-to-day operations; fund normal repairs, maintenance, and upgrades; and fund replacement of infrastructure.

Right-sizing. In contrast to asset management, only a few of the 14 utilities used, or planned to use, right-sizing—that is, reducing treatment capacity or decommissioning water lines and sewer lines in vacant areas—as a strategy to control costs and improve efficiencies. Many of the utility representatives interviewed said that right-sizing was not practical or feasible. For example, the representatives noted that they did not have entirely vacant blocks that would make decommissioning service lines possible—usually a few occupied houses remained. In addition, water and sewer lines must often be kept to maintain service to remaining houses that are farther away. During interviews, utility and city planning officials also noted the political challenges associated with any displacements necessary to decommission water or wastewater services to a neighborhood, or to reduce water infrastructure capacity in a way that might limit growth in the future. This is consistent with the findings from several studies and USEPA reports on right-sizing that studied the possibility of right-sizing utility infrastructure to lower costs (Faust et al. 2015; USEPA 2014a, 2014b, 2012; Hoornbeek & Schwarz 2009).

However, representatives of two utilities GAO reviewed—Detroit Water and Sewerage Department (Mich.) and Gary Sanitary District (Gary, Ind.)—said they were considering large-scale right-sizing of their water infrastructure to more appropriately meet current demands. Detroit officials said that they were





planning to downsize their water treatment capacity from 1,720 to 1,040 mgd at an estimated life-cycle cost savings of about $450 million. The reduced water treatment capacity will align with projected changes in water demand, which declined by 32% from 2000 through 2014, in part because of population decline in the region. Similarly, according to city and utility representatives, the city of Gary, Ind., in collaboration with the Gary Sanitary District, was in the process of developing a new land use plan and city rezoning that includes right-sizing. In particular, the planning effort will identify areas appropriate for decommissioning services, including wastewater services, to some neighborhoods with high vacancies and obvious need of right-sizing.

Nationally, many utilities are experiencing a decline in water use and revenues as a result of increased use of water conservation devices.

Major reorganization. Some utility representatives described undertaking a major reorganization to reduce costs and improve management efficiencies. Specifically, five utilities GAO reviewed undertook major reorganizations. Three of the utilities created entirely new organizations, independent from their city governments, to manage drinking water and wastewater infrastructure in cases where the cities faced financial challenge. For example, in September 2014 the city of Detroit and surrounding counties in Michigan entered into an agreement to establish the Great Lakes Water Authority to operate the regional water supply and sewage disposal system, which were owned by the city of Detroit and operated by the Detroit Water and Sewerage Department. Under the agreement, the Detroit Water and Sewerage Department will continue to operate and maintain the service to customers within the city boundaries. In addition, the Great Lakes Water Authority will pay the city of Detroit $50 million annually to lease the regional facilities it operates and will also dedicate 0.5% of revenues annually to fund a regional water assistance program for low-income residents throughout the authority's service area. Of the remaining two utilities, one reorganized and reduced staff by 30% to minimize operational costs and create efficiencies, and the other reorganized to facilitate collaborative management of water, sewer, and drainage replacement alongside the rebuilding of city roads.

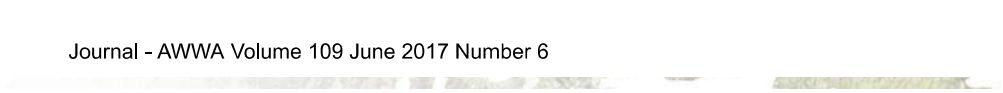
Expanding the utility's customer base. According to representatives, some of the utilities (five of 14) were looking to expand their customer bases by widening their service areas (e.g., regionalizing), to attract commercial or industrial businesses to locate within their existing service areas, or both. By expanding their customer bases, utilities can take advantage of excess treatment capacity to generate additional revenue. They can also take advantage of economies of scale to spread their costs across a greater number of customers, resulting in lower costs per customer and a stronger financial condition for the utility (Hughes et al. 2014). Specifically, two utilities were actively seeking opportunities to expand their service areas, taking steps such as setting aside funding for water and sewer packages to encourage businesses to locate operations within their service areas. One utility was using both approaches to expand its customer base.

Many utilities noted various limitations to doing so. For instance, a few utilities noted competition from other cities trying to attract industry and commercial businesses. In addition, surrounding communities may already have their own water and wastewater infrastructure and utilities, so expanding service areas means convincing existing utilities and their customers of the benefits of receiving services from another utility. For example, one utility representative told GAO that the utility's board was discussing the possibility of providing service to a neighboring area, but the cost of connection would be $12 million, more than the neighboring city wanted to pay. In another case, there was a lack of interest in consolidation of facilities and services.

Public–private partnerships. Public–private partnerships typically involve a government agency contracting with a private partner to construct, operate, maintain, or manage a facility or system, in part or in whole, that provides a public service. Public–private partnerships can take different forms—short of a private company purchasing the utility and its facilities—including long-term contractual agreements for day-to-day operational or management services of facilities or contracting for management consulting services. Of the 14 utilities, few used public–private partnerships as a strategy to help address infrastructure needs. Specifically, four had some experience with public–private partnerships:

- two had ongoing or past contracts with a private company to manage daily operations of their wastewater facilities;
- one hired a private company to work with the utility's management to identify cost-reduction opportunities; and
- one of the privately owned utilities had agreements with public entities for the construction and financing of utility infrastructure, which was leased to its public partners.

Of the remaining 10 utilities that did not have experience with public–private partnerships, a few shared varying perspectives on public–private



Vacant lots (left) and use of green infrastructure (right) in the City of Gary, Ind. *Source: GAO*

partnerships. Representatives from one utility said that the utility was open to using the strategy. However, representatives from two others said that their utilities preferred to be self-reliant because of public perception that private contractors would not take as great of care of the facility as the public utility.

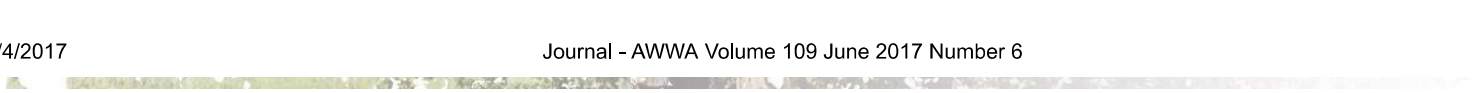
FEDERAL PROGRAMS

Federal funding programs. Six federal programs, while not specifically designed to address the water infrastructure needs of midsize and large cities with declining populations, can provide funding assistance to such cities and their related utilities. From fiscal year 2010 through fiscal year 2015, the 10 cities GAO reviewed received almost $984 million from the federal agencies.

Drinking Water and Clean Water SRF programs. Under the Safe Drinking Water Act and the Clean Water Act, USEPA provides annual grants to states to capitalize SRFs. States can use these grants to provide funding assistance to utilities, including low-or no-interest loans. Overall, the Drinking Water SRF and Clean Water SRF programs help reduce utilities' infrastructure costs, increase access to low-cost financing, and help keep customer rates affordable. Federal laws do not specifically address cities with declining populations, although states are generally authorized to use a percentage of the capitalization grants to provide additional subsidies to disadvantaged communities. States provide additional subsidies in the form of principal forgiveness or negative interest rates, which reduce loan repayment amounts. The amounts that states set aside for additional subsidies vary from year to year on the basis of requirements in annual appropriations acts and state funding decisions. Overall, most of the utilities (11 of 14) GAO reviewed received SRF program assistance most often from fiscal years 2010 through 2015. However, none of the 14 utilities received subsidies under the SRF programs as a disadvantaged community, although Birmingham Water Works Board (Birmingham, Ala.) received $1.7 million (out of $11.6 million) from the Drinking Water SRF program as an additional subsidy for a green project it was undertaking.

> Most utilities GAO reviewed are using, or had plans to use, one or more cost control strategies to address their infrastructure needs and costs.

Department of Housing and Urban Development (HUD) Community Development Block Grant program. HUD provides federal funding, through the Community Development Block Grant program, for housing, economic development, neighborhood revitalization, and other community development activities such as water and wastewater infrastructure. The department provides block grant funding to metropolitan cities and urban counties across the country, known as entitlement communities, and to states for distribution to non-entitlement communities. Federal law requires that not less than 70% of the total Community Development Block Grant funding will be used for activities that benefit low- and moderate-income people. In 2015, HUD provided $2.3 billion in block grant funding to entitlement communities, including midsize and large cities. However, officials said that entitlement communities chose to use only a small portion of the grant funding to support water and wastewater infrastructure projects. In fiscal year 2015, according to HUD, about $43.8 million, or 1.9%, of block grant funding provided to entitlement communities was used for water and wastewater infrastructure. Of the utilities GAO reviewed, only New Orleans Water and Sewerage Board (La.) reported receiving funding through the block grant program.



Economic Development Administration Public Works program. The administration's Public Works program awards grants competitively to economically distressed areas, including cities that meet the eligibility criteria, to help rehabilitate, expand, and improve their public works facilities. A Public Works grant is awarded if, among other things, a project will improve opportunities for the successful establishment or expansion of industrial or commercial facilities, assist in the creation of additional long-term employment opportunities, or primarily benefit the long-term unemployed and members of low-income families. In fiscal year 2015, the agency provided $101 million as Public Works grants, of which about $14.9 million, or 14.7%, was used for water or wastewater infrastructure projects. Agency officials said that the program's main priority is enabling distressed communities to attract new industry, encourage business expansion, diversify local economies, and generate or retain long-term jobs in the private sector. As a result, projects funded by the Public Works grants may include water infrastructure, but water infrastructure would be a secondary effect of an economic development project. None of the 14 utilities GAO reviewed reported receiving funding through this program.

Federal Emergency Management Agency (FEMA) Public Assistance and Hazard Mitigation grant programs. FEMA's Public Assistance and Hazard Mitigation grant programs may provide funding for water and wastewater infrastructure projects when the president has declared a major disaster, but these programs are not specifically designed to assist cities with declining populations. The agency's Public Assistance program provides grants to states and others for the repair, restoration, reconstruction, or replacement of public facilities such as water or wastewater infrastructure that are damaged or destroyed by such a disaster. In fiscal year 2015, FEMA provided about $6.5 billion for public assistance projects; however, the agency was unable to determine the portion of public assistance that was used for water and wastewater infrastructure.

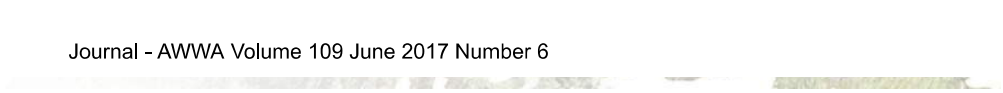
The agency's Hazard Mitigation grant program provides grants for certain hazard mitigation projects to substantially reduce the risk of future damage, hardship, loss, or suffering in any area affected by a major disaster. In fiscal year 2015, FEMA awarded about $1.2 billion in grants to states and communities for mitigation projects. Of that amount, about $8.1 million, or 0.7%, was awarded for water and wastewater mitigation projects. Four of 14 utilities GAO reviewed received funding from these FEMA programs from fiscal years 2010 through 2015. For example, the Sewerage and Water Board of New Orleans received about $400.5 million in hazard mitigation grants for permanent restoration of water, wastewater, and drainage systems and facilities damaged during Hurricane Katrina in 2005, Hurricane Gustav in 2008, and Hurricane Isaac in 2012.

> Six federal programs, while not specifically designed to address the water infrastructure needs of midsize and large cities with declining populations, can provide funding assistance to such cities and their related utilities.

USEPA's combined sewer overflow policy and use of green infrastructure. In addition to federal funding programs, USEPA's combined sewer overflow policy can help cities with declining populations. The policy, adopted in 1994, allows a city or utility to extend its implementation schedule—i.e., the period of time it has to build the necessary infrastructure to control combined sewer overflows—under consent decrees entered into with USEPA or the state or administrative orders issued by USEPA or state permitting authorities. An extended implementation schedule spreads the costs of planned infrastructure projects over time and helps make wastewater rate increases more affordable for a utility and its customers.

The policy, as described in subsequent USEPA guidance issued in 2012 and 2014 (Kopocis & Giles 2014, Stoner & Giles 2012), allows for integrated planning. Under integrated planning, cities and utilities prioritize the wastewater and stormwater infrastructure projects that should be completed first over a potentially longer time frame, helping to keep customer rates more affordable. None of the utilities GAO interviewed noted that they were using integrated planning; however, two were considering this option. Specifically, Gary Sanitary District (Ind.) and Pittsburgh Water and Sewer Authority (Pa.) said they are discussing use of integrated planning within their consent decrees with USEPA. Both are considering implementation of green infrastructure as a key aspect of an integrated planning approach.

Some utility representatives and city planning officials that GAO interviewed said that green infrastructure is an opportunity to help manage combined sewer overflows, as well as improve blighted and vacant areas within their cities. In all, representatives of five wastewater utilities said that they are planning on using vacant lands for green infrastructure to help control stormwater runoff that can lead to sewer overflows. The 10 cities GAO reviewed had housing vacancy rates averaging 21%. According to one study, placement of green



infrastructure on vacant properties can provide environmental, social, and economic benefits and help address problems created by vacant housing, which when left undemolished contributes to blight, crime, and the further abandonment of neighboring properties and adds debris to the sewer system and contributes to the combined sewer overflow problem (Heckert et al. 2015). Three of the five utilities had collectively committed more than $150 million for green infrastructure, including funding for demolitions in areas targeted for green infrastructure. The photographs on page 51 show vacant housing in Gary, and green infrastructure installed on other lots.

CONCLUSION

Overall, the utilities GAO reviewed in 10 cities have needs to upgrade and replace aging treatment facilities and pipelines that are similar to the needs of other systems identified in USEPA surveys. However, cities with declining populations face additional challenges, including economic distress in their communities and declining revenues from smaller ratepayer numbers. These utilities are using a variety of strategies to help maintain affordability of rates—an ongoing concern for many of the utilities GAO reviewed. Strategies ranged from customer assistance programs to cost-control strategies, such as rightsizing to meet demands to installation of green infrastructure. Although federal funding programs are available to provide some assistance, they are not targeted to these communities. Approaches used by these utilities may help inform others that face similar challenges. GAO has ongoing reviews of the use of green infrastructure for stormwater permits and combined sewer overflow consent decrees, as well as coordination of federal funding for water and wastewater infrastructure. It expects to issue reports on these topics in fall 2017.

ACKNOWLEDGMENT

This article is based on work of the GAO, directed under J. Alfredo Gómez. In addition to the authors, Mark Braza, John Delicath, Kaitlan Doying, Holly Halifax, John Mingus, Robert Sharpe, Jeanette Soares, Anne Stevens, Sara Sullivan, and Kiki Theodoropoulos made key contributions to the report. The full report, Water Infrastructure: Information on Selected Midsize and Large Cities with Declining Populations (GAO-16-785), can be accessed at GAO's website, www.gao.gov/products/GAO-16-785.

ABOUT THE AUTHORS

***Swati Sheladia Thomas** is a senior analyst who has worked for eight years at the US Government Accountability Office (GAO), 441 G St. NW, Washington, DC 20548 USA; thomass1@gao.gov. She has a background in water resources management and previously worked at the Rural Community Assistance Corporation, Portland, Ore., and the University of Maryland Environmental Finance Center, College Park, where she provided assistance to communities on drinking water, wastewater, and stormwater management issues. She received a master of environmental science degree and a master of public affairs degree from Indiana University, Bloomington, Ind., as well as a bachelor of science degree from Cornell University, Ithaca, N.Y.*

***Susan Iott**, assistant director at GAO and based in Denver, Colo., has worked with GAO for 25 years conducting evaluations of federal land and water policy. Over the last decade, she has led teams that conducted evaluations on a broad range of water topics, including Recovery Act funds for water and wastewater infrastructure, infrastructure needs and finance, USEPA's state revolving fund, and water quality issues such as total maximum daily loads, point, and nonpoint source pollution.*

https://doi.org/10.5942/jawwa.2017.109.0074

REFERENCES

Beecher, J., 2015. *Trends in Consumer Prices for Utilities Through 2014.* Michigan State University, Institute of Public Utilities, East Lansing, Mich.

Cromwell, J.E. III; Colton, R.D.; Rubin, S.J.; Herrick, C.N.; Mobley, J.; Reinhardt, K.; & Wilson, R., 2010. *Best Practices in Customer Payment Assistance Programs.* Sponsored by Water Research Foundation and US Environmental Protection Agency, Denver.

DeOreo, W.B.; Mayer, P.; Dziegielewski, B.; & Kiefer, J., 2016. *Residential End Uses of Water*, Version 2. Water Research Foundation, Denver.

EFAB (Environmental Finance Advisory Board), 2014. Analysis and Recommendations on: Draft Financial Capability Assessment Framework. Washington.

EFAB, 2007. Comments on EPA Document: Combined Sewer Overflows—Guidance for Financial Capability Assessment and Schedule Development. Washington.

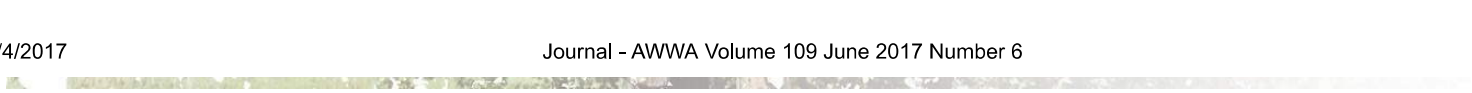
Faust, K.M.; Abraham, D.M.; & McElmurry, S.P., 2015. Water and Wastewater Infrastructure Management in Shrinking Cities. Public Works Management and Policy, 1-29.

GAO (US Government Accountability Office), 2016. Water Infrastructure: Information on Selected Midsize and Large Cities with Declining Populations. www.gao.gov/products/GAO-16-785 (accessed Mar. 29, 2017).

Heckert, M.; Schilling, J.; & Carlet, F., 2015. Greening Legacy Cities: Recent Research on Local Strategies for Reclaiming Vacant Land. Vacant Property Research Network Research and Policy Brief, No. One.

Hoornbeek, J. & Schwarz, T., 2009. *Sustainable Infrastructure in Shrinking Cities: Options for the Future.* Center for Public Administration and Public Policy and Cleveland Urban Design Collaborative, Kent State University, Kent, Ohio.

Hughes, J.; Tiger, M.; Eskaf, S.; Berahzer, S.I.; Royster, S.; Boyle, C.; & Batten, D., 2014. *Defining a Resilient Business Model for*



Appendix B

Existing System Layout

Pressurized Main Diameter

- 4 inch
- 6 inch
- 8 inch
- 10 inch
- 12 inch
- 14 inch
- 16 inch
- 18 inch
- 20 inch
- 24 inch
- 30 inch
- 36 inch
- 42 inch
- 72 inch
- Abandoned Water Main

0 0.375 0.75 1.5 Miles

N W E S

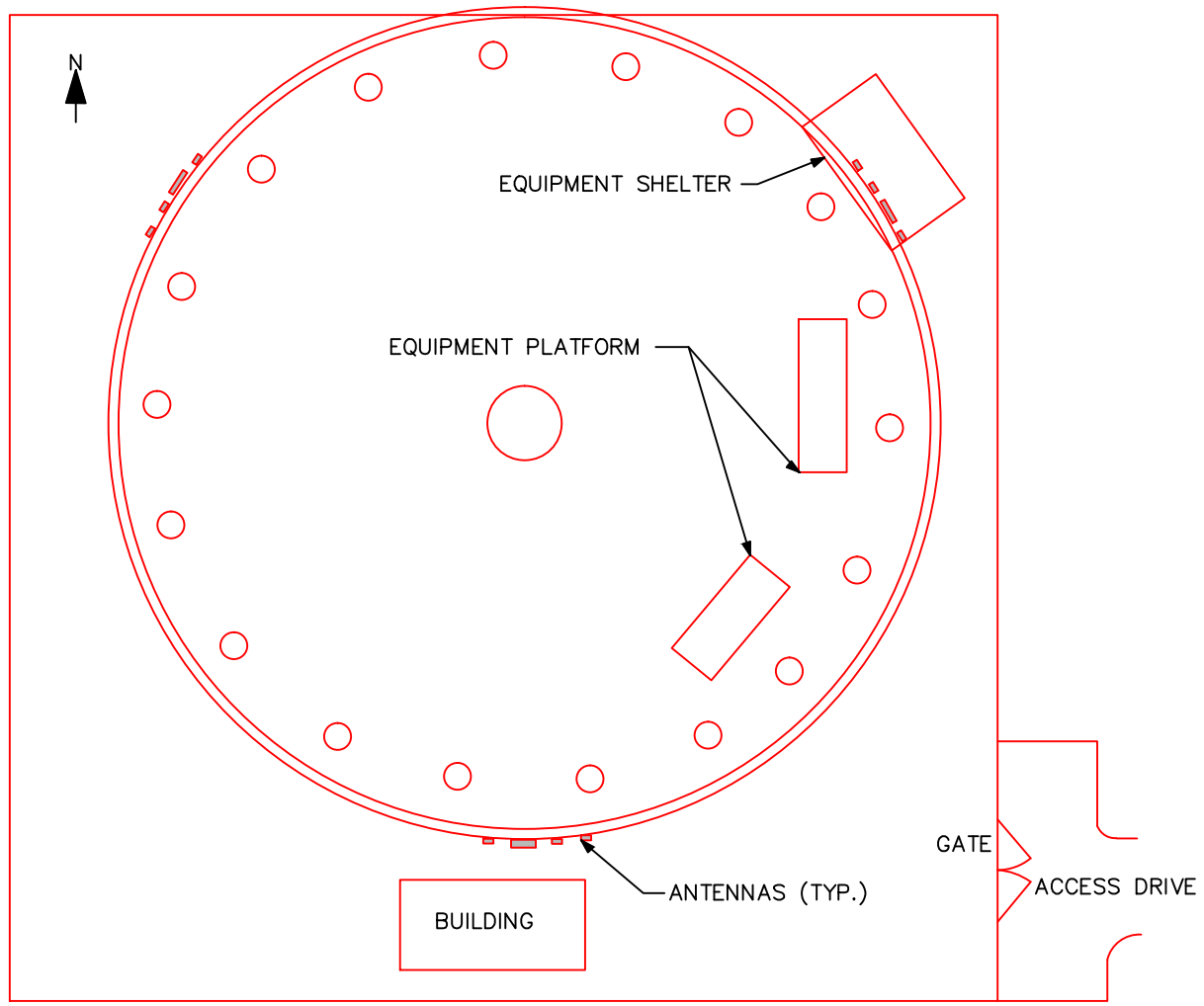
Water Mains & Streets

DISCLAIMER:
FOR IMFORMATION ONLY
ACCURACY OF THIS PLAN
SHALL BE CHECKED IN FIELD
NIAGARA FALLS WATER BOARD

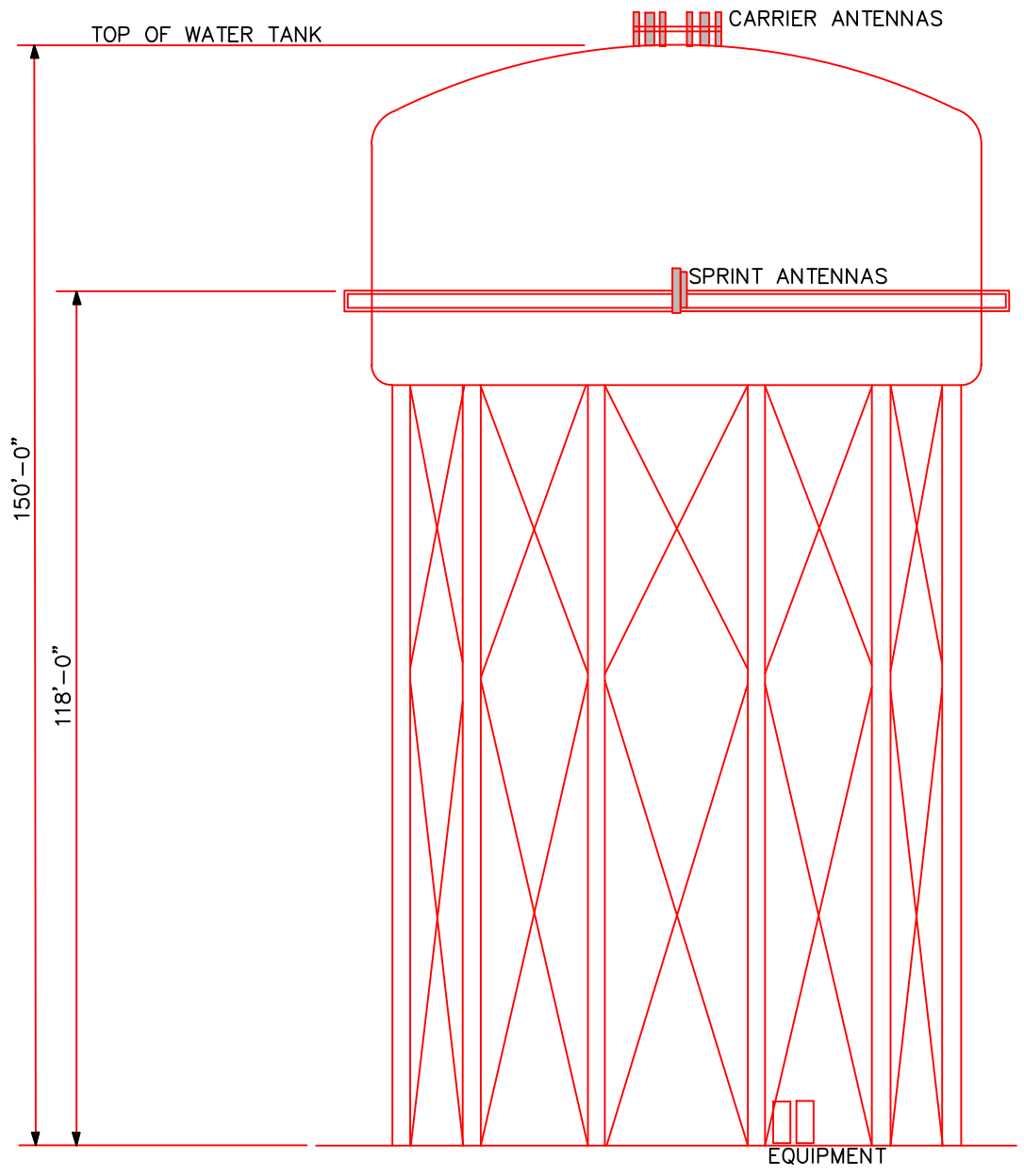
NIAGARA FALLS WATER BOARD

Appendix C

EXISTING TANK DRAWINGS

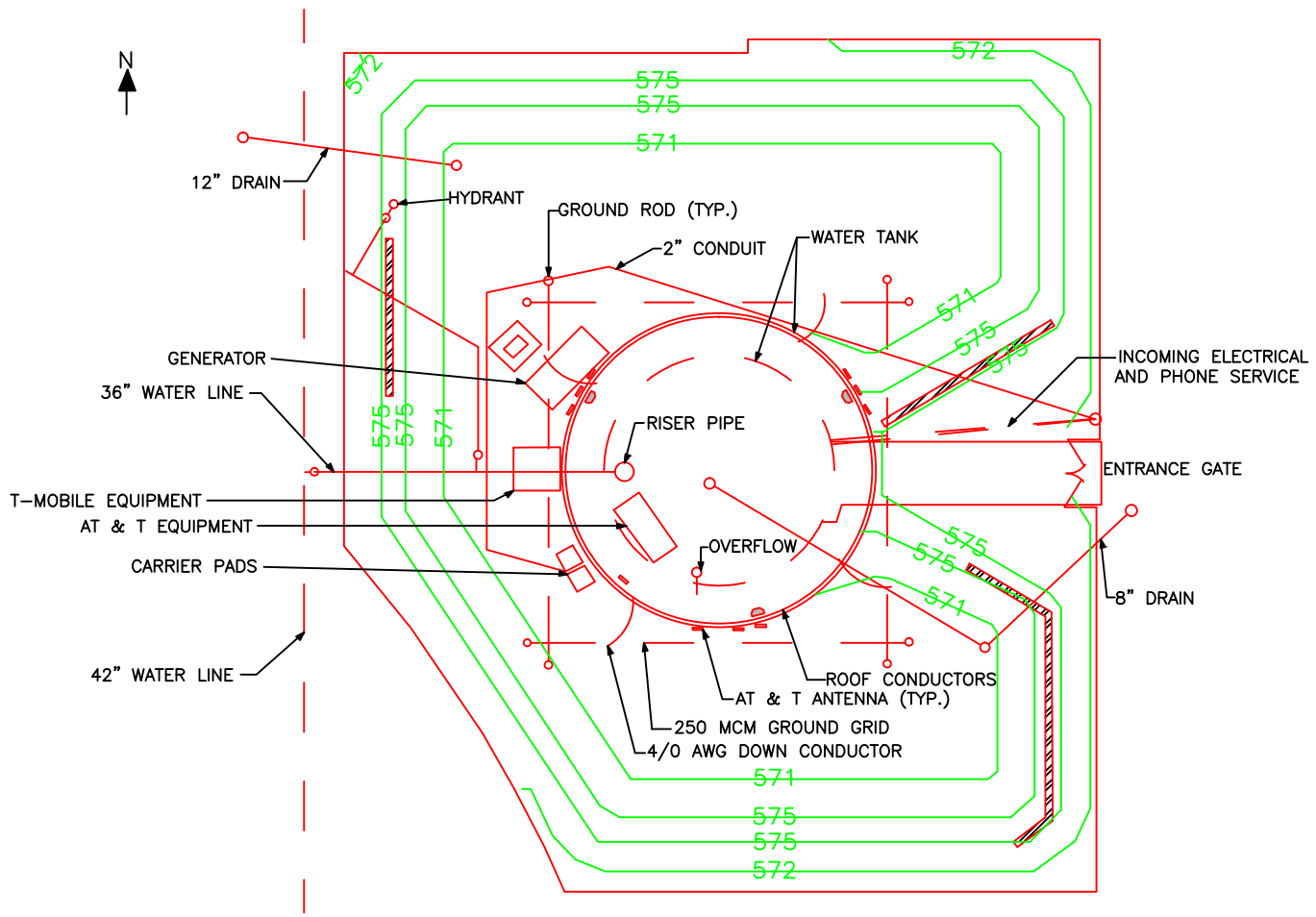


SITE PLAN

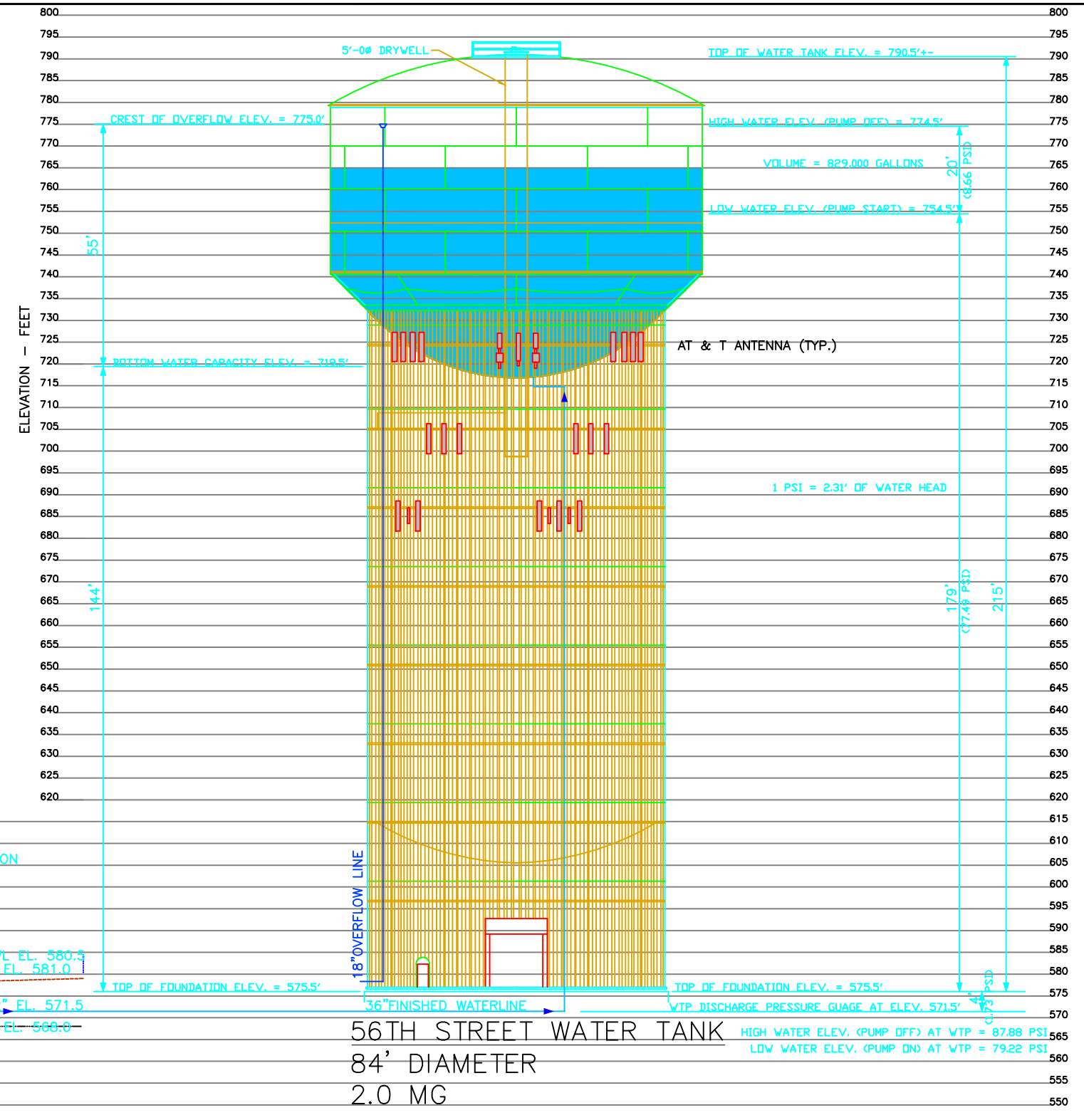


ELEVATION

Designed by DSW Checked by DSW Made by DSW	NIAGARA FALLS WATER BOARD	BEECH AVE. TANK	JOB: SITE PLAN AND ELEVATION	FILE NO. DATE 4/19/16	SHEET: 1

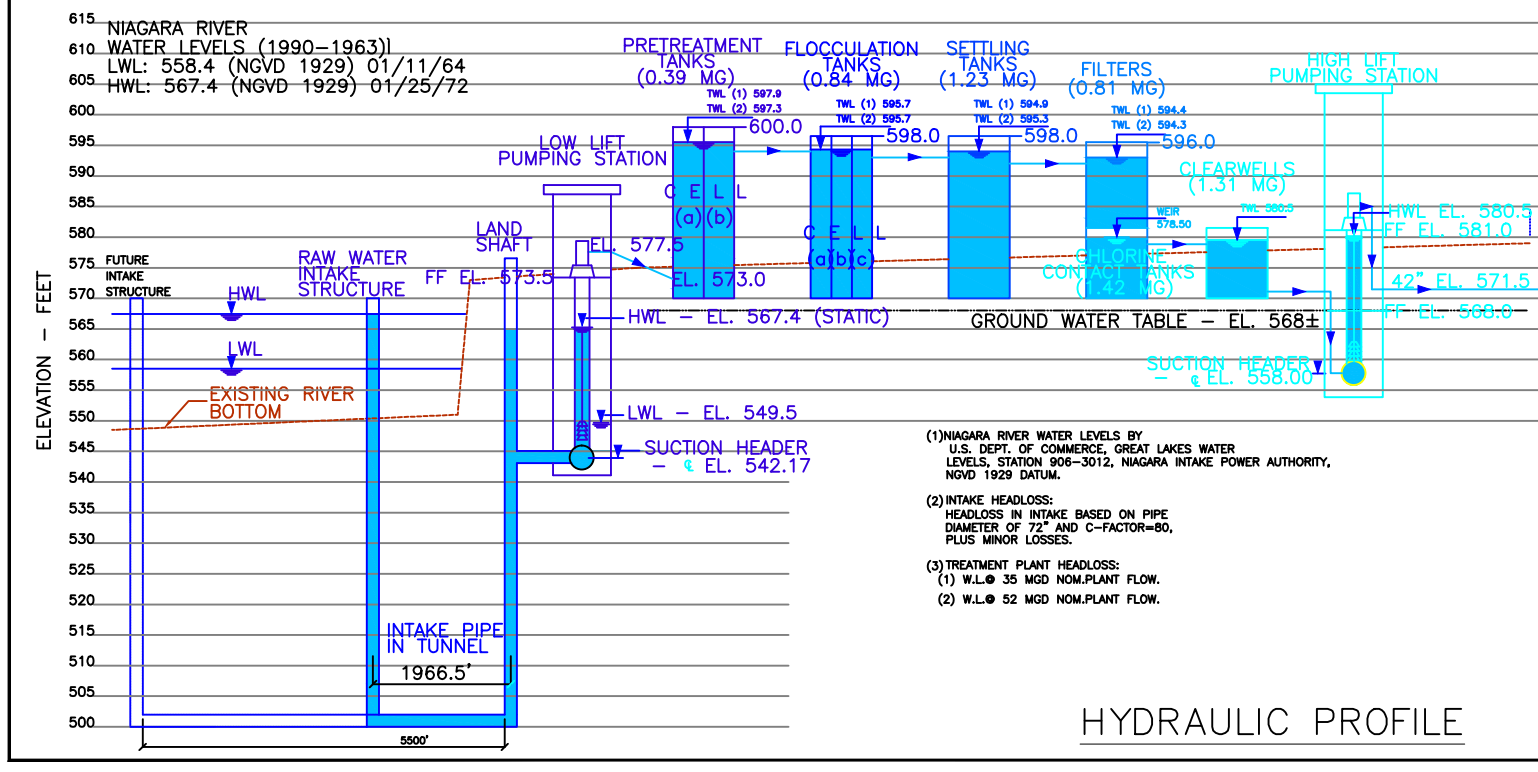


56TH STREET WATER TANK
SITE PLAN



56TH STREET WATER TANK
84' DIAMETER
2.0 MG

HIGH WATER ELEV. (PUMP OFF) AT WTP = 87.88 PSI
LOW WATER ELEV. (PUMP ON) AT WTP = 79.22 PSI



(1) NIAGARA RIVER WATER LEVELS BY U.S. DEPT. OF COMMERCE, GREAT LAKES WATER LEVELS, STATION 906-3012, NIAGARA INTAKE POWER AUTHORITY, NGVD 1929 DATUM.

(2) INTAKE HEADLOSS: HEADLOSS IN INTAKE BASED ON PIPE DIAMETER OF 72" AND C-FACTOR=80, PLUS MINOR LOSSES.

(3) TREATMENT PLANT HEADLOSS:
(1) W.L.@ 35 MGD NOM.PLANT FLOW.
(2) W.L.@ 52 MGD NOM.PLANT FLOW.

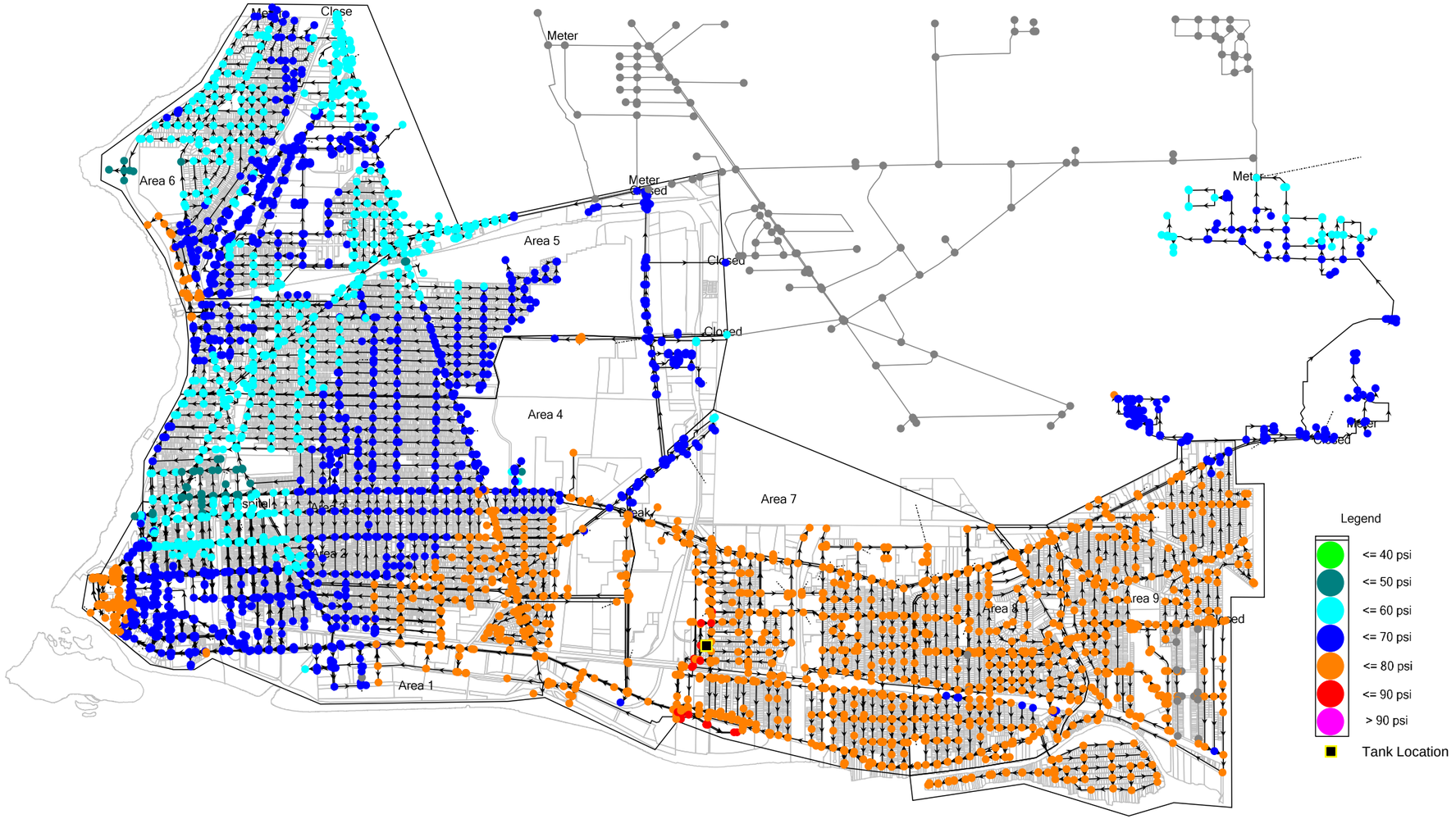
HYDRAULIC PROFILE

Designed by DSW Checked by DSW Made by DSW	NIAGARA FALLS WATER BOARD	MUNICIPAL WATER PLANT AND WATER TANK	JOB: HYDRAULIC PROFILE	FILE NO. DATE 4/19/16 SHEET: 1

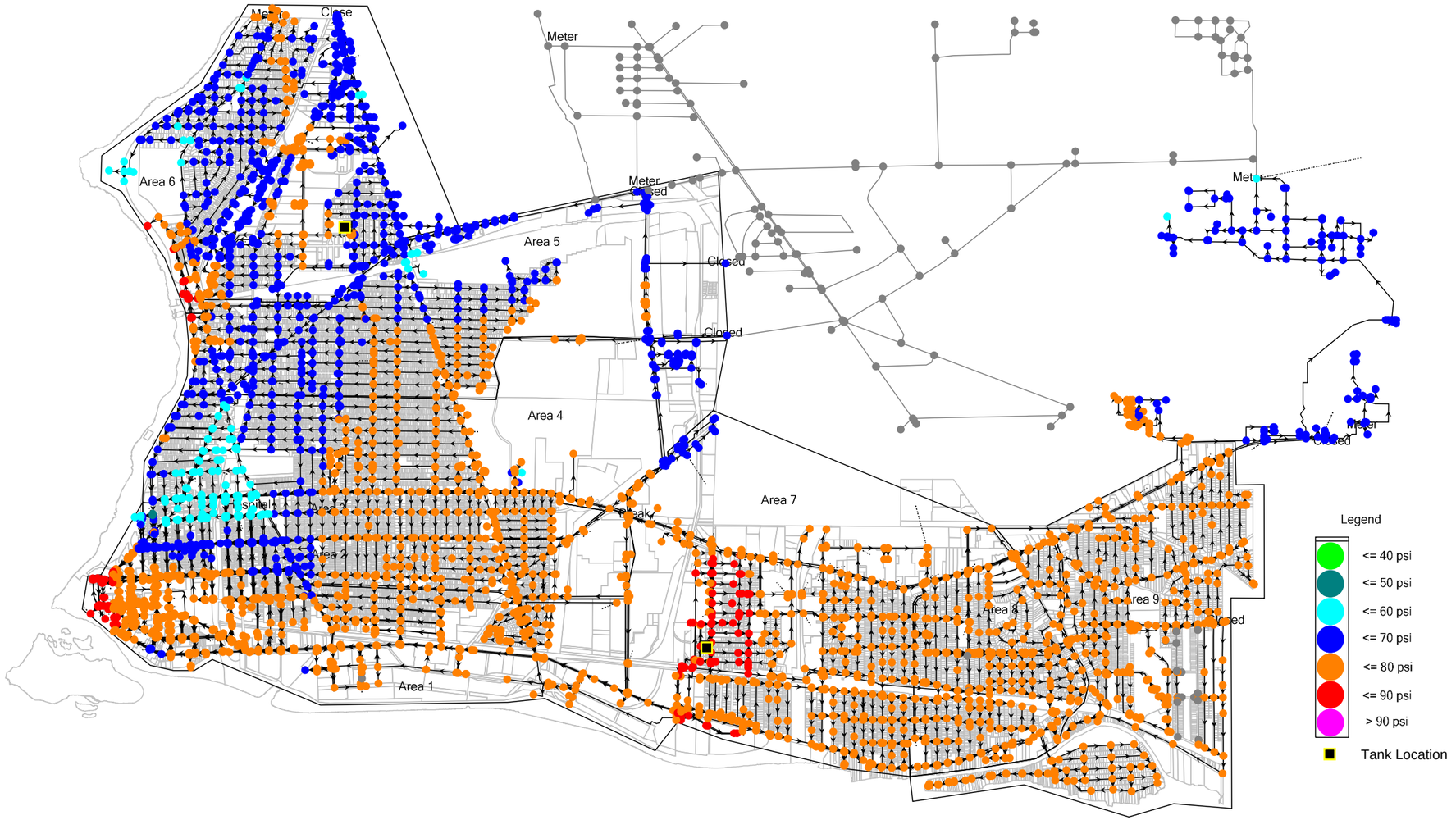
Appendix D

WATER MODEL PRESSURES

Existing System Pressures



System Pressures with Proposed Beech Ave Tank



Appendix E

PROBABLE COST ESTIMATES

Clark Patterson Lee
ARCHITECTURE | ENGINEERING | PLANNING

Niagara Falls Water Board
Opinion of Probable Cost
Option 2 - Raise Existing Beech Avenue Tank

Item Description	Unit	Price	Quantity	Total
Mobilization				
Survey stake-out	LS	$5,000	1	$ 5,000.00
Erosion control	LS	$5,000	1	$ 5,000.00
Site mobilization	LS	$10,000	1	$ 10,000.00
			Mobilization Subtotal	**$ 20,000.00**
Demolition				
Remove Existing Fence	LF	$5	520	$ 2,600.00
Misc excavation	LS	$20,000	1	$ 20,000.00
			Demolition Subtotal	**$ 22,600.00**
Site Work				
Asphalt Access Drive	SF	$5	1,750	$ 8,750.00
New Chain Link Fence	LF	$30	520	$ 15,600.00
Topsoil and turf	LS	$5,000	1	$ 5,000.00
			Site Work Subtotal	**$ 29,350.00**
Utilities				
Replace Waterline piping and appurtenances	LF	$400	280	$ 112,000.00
Misc drainage	LS	$5,000	1	$ 5,000.00
Electrical at tank location (controls, power, cathodic, control room)	LS	$50,000	1	$ 50,000.00
			Utilities Subtotal	**$ 167,000.00**
Rehabilitation				
Paint Existing Tank (Full recoat)	LS	$1,500,000	1	$ 1,500,000.00
Reinforce Existing Foundation	LS	$1,000,000	1	$ 1,000,000.00
Raise Existing Tank 40'	LS	$2,000,000	1	$ 2,000,000.00
			Rehabiliation Subtotal	**$ 4,500,000.00**
			Construction Subtotal	$ 4,738,950.00
			10% Construction Contingency	$ 473,900.00
			25% Soft Costs	$ 1,184,800.00
			Total Capital Cost	**$ 6,397,650.00**

* Note that these costs are based on prevailing wage rates. Private installation may reduce costs by up to 20%.

Prices shown do not include operation and maintenance costs.

Clark Patterson Lee
ARCHITECTURE | ENGINEERING | PLANNING

Niagara Falls Water Board
Opinion of Probable Cost
Option 3 - Demolish and Replace Existing Beech Avenue Tank

Item Description	Unit	Price	Quantity	Total
Mobilization				
Survey stake-out	LS	$5,000	1	$ 5,000.00
Erosion control	LS	$5,000	1	$ 5,000.00
Site mobilization	LS	$10,000	1	$ 10,000.00
			Mobilization Subtotal	**$ 20,000.00**
Demolition				
Remove Existing Tank	LS	$200,000	1	$ 200,000.00
Remove Existing Fence	LF	$5	520	$ 2,600.00
Misc excavation	LS	$20,000	1	$ 20,000.00
			Demolition Subtotal	**$ 222,600.00**
Site Work				
Asphalt Access Drive	SF	$5	1,750	$ 8,750.00
New Chain Link Fence	LF	$30	520	$ 15,600.00
Topsoil and turf	LS	$5,000	1	$ 5,000.00
			Site Work Subtotal	**$ 29,350.00**
Utilities				
Replace Waterline piping and appurtenances	LF	$400	280	$ 112,000.00
Misc drainage	LS	$5,000	1	$ 5,000.00
Electrical at tank location (controls, power, cathodic, control room)	LS	$50,000	1	$ 50,000.00
			Utilities Subtotal	**$ 167,000.00**
New Tank				
2.0-MG Concrete Shafted Elevated Tank	LS	$4,000,000	1	$ 4,000,000.00
			New Tank Subtotal	**$ 4,000,000.00**
			Construction Subtotal	$ 4,438,950.00
			10% Construction Contingency	$ 443,900.00
			25% Soft Costs	$ 1,109,800.00
			Total Capital Cost	**$ 5,992,650.00**

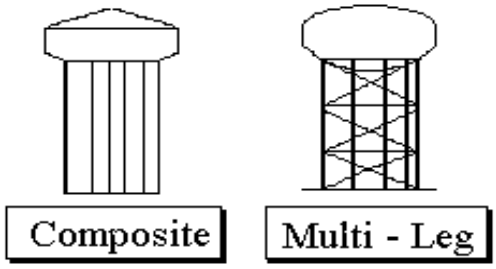
* Note that these costs are based on prevailing wage rates. Private installation may reduce costs by up to 20%.

Prices shown do not include operation and maintenance costs.

Appendix F

TANK LIFE CYCLE COST ANALYSIS

Comparative Elevated Tank Lifecycle Cost Analysis



Location: Niagra Falls, NY

Tank Capacity (MG) :	2,000
Height to TCL (feet) :	200
Cost of Capital Rate (APR):	4%
Inflation Rate (APR) :	3%
Evaluation Period (Years):	100

Estimated Original Tank Cost				
			Composite	**Multi-Leg**
Capacity MG:			2,000	2,000
Tank Cost, $:			$4,000,000	4,000,000
Cost $/Gallon			2.00	2.00

Coating Systems	**AWWA D102 Descriptions**	**Service Life**
Interior Wet Surfaces:	ICS-2: Epoxy / Epoxy /Epoxy (12 mils)	**15**
Interior Dry Surfaces:	ICS-1: Epoxy / Epoxy (8 mils)	**40**
Exterior Surfaces:	OCS-6: Zinc / Epoxy/ Polyurethane (6 mils)	**20**
Exterior Containment:	None	

General Maintenance Costs	**Area Requiring Touch Up**	**Expected Touch Up Cost (today) $/SF**	**Maintenance Repaint Cost (today) $/SF**	**Full Recoat Cost (today) ($/SF)**
Interior Wet:	**7.5%**	**$ 12.38**	**N/A**	**$ 6.29**
Interior Dry:	**7.5%**	**$ 11.47**	**$ 3.26**	**$ 4.09**
Exterior:	**7.5%**	**$ 12.95**	**$ 4.74**	**$ 5.57**

Paint Areas				
			Composite	Multi-Leg
Exterior (ft2):			25,700	76,075
Interior, Wet (ft2):			30,700	27,700
Interior, Dry (ft2):			2,200	0
Total (ft2):			58,600	103,775

Job Size Update Factors				
			Composite	Multi-Leg
Exterior:			1.1	1.0
Interior, Wet:			1.1	1.1
Interior, Dry:			1.2	1.2

Current Touch Up Costs				
			Composite	Multi-Leg
Exterior:			$27,453	$73,877
Interior, Wet:			$31,347	$28,284
Interior, Dry:			$2,271	$0

Current Maintenance Repaint Costs				
			Composite	Multi-Leg
Exterior:			$134,088	$360,832
Interior, Dry:			$8,615	$0
Note: Interior Wet Maintenance Recoats are not Recommended				

Current Full Recoat Costs				
			Composite	Multi-Leg
Exterior:			$157,410	$423,594
Interior, Wet:			$212,304	$191,558
Interior, Dry:			$10,793	$0

Total Cost of Ownership				
			Composite	Multi-Leg
Original Tank Cost			$ 4,000,000	$ 4,000,000
Exterior Repainting:			$ 365,243	$ 982,876
Interior, Wet Repainting:			$ 790,737	$ 713,466
Interior, Dry Repainting:			$ 10,836	$ -
Total Cost of Ownership:			**$ 5,166,816**	**$ 5,696,342**

The Total Cost of Ownership equals Original Tank Cost plus the investment today needed to meet all future repainting costs over the evaluation period.

Comparative Elevated Tank Lifecycle Cost Analysis

The following tables show the Present Value of the future repainting costs for the exterior, interior wet, and interior dry paint areas for each repaint year. Costs for exterior and Interior, dry altenate between maintenance repaint and full recoat for each cycle. Cost for wet interior assumes full recoat every cycle.

EXTERIOR			Composite	Multi-Leg
Sum of Present Values:			$365,243	$982,876
20			$110,526	$297,428
40			$106,952	$287,809
60			$75,097	$202,087
80			$72,668	$195,551
-				
-				
-				
-				

Interior Wet			Composite	Multi-Leg
Sum of Present Values:			$790,737	$713,466
15			$183,661	$165,714
30			$158,882	$143,356
45			$137,447	$124,015
60			$118,903	$107,284
75			$102,861	$92,809
90			$88,983	$80,288
-				
-				

Interior Dry			Composite	Multi-Leg
Sum of Present Values:			$10,836	$0
40			$5,853	$0
80			$4,982	$0
-				
-				
-				
-				
-				
-				

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-006

ADOPTING FIVE YEAR CAPITAL PLAN

WHEREAS, the Niagara Falls Water Board ("Water Board") is committed to maintaining and improving its drinking water and wastewater systems through fiscally prudent, well planned, and strategic investments in its capital infrastructure; and

WHEREAS, the Water Board has developed a five-year plan to implement projects necessary to continue to meet the water and wastewater needs of the City of Niagara Falls; and

WHEREAS, the Water Board desires to adopt a formal five-year capital plan to provide Water Board staff and the public with guidance on its future plans and the anticipated source of the funds for those capital improvements; and

WHEREAS, adoption of a five-year capital plan will assist the Water Board in setting appropriate rates, fees, and charges;

NOW THEREFORE BE IT

RESOLVED, that the Water Board hereby adopts the five-year capital plan that is attached to this resolution.

Water Board Personnel Responsible for Implementation of this Resolution:
Executive Director.

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:
Not applicable.

On July 30, 2018, 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 Forster	[ ]	[ ]	[ ]	[ ]
Board Member Kimble	[ ]	[ ]	[ ]	[ ]
Board Member Larkin	[ ]	[ ]	[ ]	[ ]
Board Member Leffler	[ ]	[ ]	[ ]	[ ]
Chairman O'Callaghan	[ ]	[ ]	[ ]	[ ]

Signed By: Vote Witnessed By:

_____ _____

Daniel T. O'Callaghan, Chairperson Sean W. Costello, Secretary to Board

ITEM	PROJECT NAME	Estimate Info				PROJECT DESCRIPTION	PROJECT JUSTIFICATION	PROJECT RATING						FORECASTED EXPENDITURES					
		Length Feet	Orig Project Estimate	2.0% Est Date	Cost Inflation Adj			LOCATION L = LaSalle, N = North of 62, S = South of 62, A = All	Infrastructure	Reg / Public Health / Env	Customer	Business	Rating Total	2018	2019	2020	2021	2022	Deferred
									Range 1-6 (6 is most important)										
COMBINED PROJECTS (WATER AND WASTEWATER)																			
C-1	IT Plan Implementation		1,000,000	2005	1,000,000	Develop & implement IT solution	Efficiencies and cost savings	A	4	3	4	6	17	$150,000	$30,000	$30,000	$30,000	$30,000	$25,000
C-2	Meter Replacement & Upgrades		$4,500,000	2005	4,970,000	Replace inaccurate & old meters	To insure meter accuracy and automated reading	A	6	1	5	6	18	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000
C-4	Rate Restructuring 60/40		150,000	2005	150,000	Evaluate rates and cost allocation	Better cost allocation & rate stability	A	2	1	6	6	15						
C-5	Fleet Replacement		700,000	2005	840,000	Replenish fleet	Replace aging and unsafe vehicle stock	A	6	2	3	4	15	$480,000	$80,000	$80,000	$80,000	$80,000	$80,000
C-6	Water/sewer GIS/GPS Mapping		$266,653	2005	270,000	Document system assets	Better asset management with CMMS	A	6	2	3	6	17	$75,000	$5,000	$5,000	$5,000	$5,000	$25,000
WASTEWATER INFRASTRUCTURE PROJECTS																			
WW-4A	WWTP Rehab Phase 4A - Sed. Basins & Scum							A	5	4	3	4	16	*$550,00+0* $1,100,000 *$550.000*	*$1,500,000* $3,000,000 *$1,500,000*	*$1,500,000* $3,000,000 *$1,500,000*	$1,650.000 $3,300,000 $1,650,000		$0
WW-4B	WWTP Rehab Phase 4B - GPS Rehabilitation							A	5	4	3	4	16	*$500,000* $1,000,000 *$500,000*	*$1,500,000* $3,000,000 *$1,500,000*	$200,000			$0
WW-4C	WWTP Rehab Phase 4C - Polymer & Dewatering Controls							A	5	4	3	4	16	*$900,000* $1,800,000 *$900,000*	$320,000				$0
WW-4D	WWTP Rehab Phase 4D - Carbon & Support Gravel							A	5	4	3	4	16		*$1.000.000* $2,000,000 *$1,000,000*				$0
WW-4E	WWTP Rehab Phase 4E - Electrical Improvements							A	5	4	3	4	16		*$625,000* $1,610,000 *$625,000*	$1,000,000			$0
WW-4F	WWTP Rehab Phase 4F - Chemical Improvements							A	5	4	3	4	16		*$1,800,000* $3,650,000 *$1,800,000*				$0
WW-4G	WWTP Rehab Phase 4G - HVAC Improvements							A	5	4	3	4	16		*$562,500* $1,160,000 *$562,500*				$0
WW-4H	WWTP Rehab Phase 4H - Backwash Blower & Piping							A	5	4	3	4	16	*$170,000* $300,000 *$170,000*					$0
WW-4I	WWTP Rehab Phase 4I - Piping Improvements							A	5	4	3	4	16		*$275,000* $640,000 *$275,000*				$0
WW-4J	Outfalls																		$8,000,000
WW-4X	2017 Discharge Incident/Order Expenses							A	5	4	3	4	16	*$500,000* $2,000,000 *$1,500,000*	$1,389,500				
WW-7	WWTP Roof Repairs					Replace & repair large sections of the WWTP roofs	Necessary for facility protection and longevity	A	5	3	3	4	15		$150,000	$1,350,000	$150,000	$150,000	

WW-9	WWTP/GPS Miscellaneous					Repairs / replacements not associated with Phased Projects	Necessary for continued operation	A	4	4	3	4	15	$160,000	$160,000	$160,000	$160,000	$160,000	$200,000
WW-9C	WWTP Sedimentation Basins					Replace mechanical components, concrete repairs	Necessary for continued operation	A	6	5	3	4	18						
WW-11	WWTP UV Disinfection Study					Evaluate changing disinfection process	Operational cost reduction	A	5	5	3	6	19						
WW-9D	WWTP Flood Damage Recovery					Repair/replace flood damaged equipment	Necessary for continued operation	A	6	6	3	5	20						
WW-9E	WWTP Structural/Masonry Repairs					Repair aging and failing structural components	Restore structural integrity	A	5	4	3	3	15			$80,000	$374,000	$100,000	
WW-9F	Flood Hazard Mitigation Grant Projects					Harden utility infrastructure against extreme weather	Prevent rainfall-related impacts and damage	A	5	4	4	4	17	*$156,053* $208,070 *$52,017*	*$2,277,225* $3,036,290 *$759,065*				
WW-9H	WWTP Mercury Reduction Project - SB#5 Effluent Flow Improvements					Treatment plant improvements	Regulatory requirement	A	3	6	4	2	15						
WW-12A	Sanitary Lift Station Electrical Upgrades		300,000	2005	300,000	Provide standby power generation to lift stations	Improve reliability	L	5	4	5	5	19	$280,000 $370,000 *$90,000*					
WW-12B	WWTP Standby Generator					Replace and upgrade WWTP power generator	Improve reliability	A	5	4	5	5	19	$300.000 $400,000 *$100,000*					
WW-15	Sewer Replacements & Repairs		3,250,000	2005	3,250,000	Replace / repair sewer lines, MH's, CB's	Lifecycle asset reinvestment	A	6	5	3	3	17	$250,000	$250,000	$250,000	$250,000	$250,000	$500,000
WW-15A	Belden Center Sewer Rehabilitation Work					Lining of Lockport Road Sanitary Sewer	Coordination withTown of Niagara project	N						$25,000					
WW-17	LaSalle Area Sewer Improvements (SSO)		1,000,000	2005	1,000,000	Sewer repairs to mitigate SSO's	DEC mandated regulatory requirement	L	4	6	5	4	19	$200,000	$170,000	$590,000	$355,000	$500,000	$4,000,000
WW-18	Combined Sewer Overflow Long Term Control Plan (CSO LTCP) Implementation		4,000,000	2005	4,160,000	Implement sewer improvements to mitigate CSO's	DEC mandated regulatory requirement	N/S	5	6	3	3	17	$10,000					
WW-19	CSO Outfall Structural Repairs					Repairs to CSO outfalls on lower river	Restore structural integrity	N/S	4	3	2	2	11			$300,000	$2,500,000		$4,000,000
WW-21	Tunnel Inspection					Inspect large diameter conveyance systems	Plan repairs prior to failures	S	3	3	2	3	11	*$70,000* $233,000 *$163,000*					$350,000
WW-23	Gorge Pumping Station Headworks		350,000	2005	350,000	Repair and protect GPS equipment	Necessary for facility protection and longevity	N/S	5	6	2	4	17						
WATER INFRASTRUCTURE PROJECTS																			
W-2	Ontario Ave - 13th to 18th Street		$250,969	2005	260,000		Very low flow 4" & breaks & service leaks, hydrant spacing issues	N	6	6	4	5	21	$400,000					$0

W-4	Military Road Main, between Jacob and Cayuga		$182,070	2005	180,000	Replace water mains and install new services	Frequent breaks on 4 inch line	L	6	5	4	5	20		$210,000				$0
W-5	97th Street - 98th to NF Blvd						Frequent breaks	L	6	3	6	5	20						
W-6	Bollier Avenue Main, between 82nd and Military	900	$210,000	2001	250,000		Victory pipe, Frequent breaks	L	6	3	5	4	18	*$250,000* $650,000 *$400,000*					
W-7	Buffalo Avenue Water Valves	28,600	$1,250,000	2004	1,330,000	Replace damaged valves : Combined with WW-16	Road reconstruction opportunity	L/S	6	4	3	4	17						
W-8	Hennepin Ave Main,- S. 86th to S.89th Street		$505,000	2005	540,000	Replace water mains and install new services	Dangerous excavation	L	6	6	3	4	19						$510,000
W-9	Rivershore Drive Main, - S.86th to 91st Street	1,700	$220,000	1994	300,000		Frequent breaks, poor excavation conditions	L	6	5	3	4	18						$280,000
W-10	10th St., Lockport to North						6 inch pipe with breaks, fire flow	N	6	5	3	2	16	$600,000					$0
W-11	Witkop Ave and 85th St Loop all 8"	2,100	$575,000	2001	670,000		Victory pipe frequent breaks	L	6	2	4	4	16			$670,000			
W-12	Laughlin Drive Main, - 82nd to Bollier Ave	1,800	$380,000	1994	510,000		Victory pipe frequent breaks	L	6	2	4	4	16			$500,000			
W-13	Willow Ave Main, 11th to 17th St - 8"	2,000	$410,000	2001	490,000		6 inch pipe with breaks	N	6	2	4	3	15						$460,000
W-14	Whitney Avenue, 18th Street to Hyde Park Blvd						Main breaks, service breaks	N	5	4	4	2	15		$850,000				$0
W-15	LaSalle Avenue, Hyde Park Blvd to 11th Street						Main breaks, service breaks	N	5	3	4	2	14						$1,600,000
W-16	Ontario Ave - 13th to Main Street						Main & service breaks, fire flow	N	5	5	3	2	15			$500,000			
W-17	Military Road Main, Jacob to Bollier Avenue						6 inch pipe with breaks	L	4	4	4	2	14			$150,000			
W-18	Pierce Ave Main, - 18th to Hyde Park with 8"		$501,939	2005	530,000		Many service breaks (not main)	N	5	2	3	3	13						$750,000
W-18A	Buffalo Avenue Point to City Docks						6 inch pipe with breaks	L	4	4	4	2	14	$450,000					$0
W-19	Pierce Ave Main, 11th to 18th Street 8"	4,400	$875,000	2001	1,050,000		Many service breaks (not main)	N	5	2	3	3	13						$570,000
W-20	Loop Niagara Avenue Main, to Parkview Dr	1,300	$80,000	1994	110,000	Install & loop with new main	Eliminate dead end and blow-off	N	3	3	3	4	13						$110,000
W-21	Whitney Avenue, 11th Street to 18th Street					Replace water mains and install new services	Main breaks, service breaks	N	4	4	3	2	13				$650,000		
W-22	Loop "D" St Main, - Falls St to Gill Creek	400	$50,000	1994	70,000	Install & loop with new main	Eliminate dead end and blow-off	S	4	2	2	2	10						$70,000
W-23	81st Street, Frontier Avenue to Pine Avenue					Replace water mains and install new services	Service leaks	L	3	3	3	1	10						$850,000
W-24	McKoon Ave Main, - DeVeaux to James Avenue	2,200	$500,000	1994	690,000		Occasional breaks	N	3	2	2	2	9				$670,000		
W-25	Welch Ave Main,, 19th to 24th Street 16"	1,500	$510,000	2001	610,000		Main breaks, service breaks	S	2	2	2	2	8						$600,000
W-26	Automation & Security Upgrades at WTP		$500,000	2005	530,000	Automate WTP operations and perform necessary	Maintain facility security	A		5	3	5	13						$500,000
W-28	Large Valve Replacement		$572,435	2005	600,000	Replace valves >12"	System reliability	A	6	2	5	4	17	$50,000	$50,000	$50,000	$50,000	$50,000	$100,000

W-29	Leak Detection / Distribution Modeling		$200,000	2005	220,000	Identify and control system losses	Resolve water quality & pressure issues; better asset	A	4	2	5	6	17					$200,000
W-30	Hydrant Replacement		$314,147	2005	310,000	Replace old and inoperable	Fire protection reliability	A	5	4	4	3	16	$191,950	$80,000	$80,000	$80,000	$80,000	$80,000
W-31	Water Miscellaneous Improvements		$1,200,000	2005	1,200,000	Water system repairs	Maintain infrastructure	A	5	3	3	3	14	$191,950	$120,000	$120,000	$120,000	$120,000	$100,000
W-32	WTP Vent Line Replacement					Replace corroding process vent piping	Maintain treatment plant integrity	A	4	2	2	3	11	$53,000					$100,000
W-33	Abandon 20" Victory Pipe WM					Abandon unnecessary and failing watermain	Victory pipe, potential for breaks	L	5	2	5	5	17	$170,000					$0
W-34	WTP Laboratory Instrumentation					New instruments for sample analysis	Regulation-driven water testing	A	3	5	2	5	15						$0
W-35	Beech Avenue Tank Replacement					Replace existing water storage tank	Distribution system operation & reliability	N	5	3	2	4	14		$3,000,000	$3,000,000			$0
W-36	77th Street from Lasalle Parkway to Niagara Falls Boulevard					Replace water mains and install new services											$875,000		$0
W-37	Michigan Avenue from Lockport Street to 10th Street					Replace water mains and install new services											$150,000		$0
											Total			$11,587,970	$25,030,790	$12,185,000	$9,869,000		$24,130,000
														$4,085,017	$10,246,565	$4,615,000	$3,374,000	$1,595,000	

Fund Sources	2018	2019	2020	2021	2022	Sum 2017 > 2021
Annual Coverage Transfer	$4,100,000	$12,752,617	$2,984,065	$3,165,000	$1,574,000	$24,575,682
Coverage Set-Aside						$0
NYPA-FST Settlement	$1,946,900	$0	$0	$0		$1,946,900
Bonded	$0	$3,000,000	$6,020,000	$3,995,000		$13,015,000
Grants	$976,053	$2,277,225	$0	$0		$3,253,278
Phase 1 NYS WWTP Funding	$2,120,000	$7,262,500	$3,150,000			$8,000,000
Interfund Transfer	$1,500,000	$1,389,500	$0	$0		$2,889,500
NYSEFC SRF Loan	$0	$0	$0	$2,500,000		$2,500,000
Totals :	$10,642,953	$26,681,842	$12,154,065	$9,660,000		$59,138,860

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-007

REQUIRING WEEKLY STAFF REPORTS TO BOARD MEMBERS

WHEREAS, the Niagara Falls Water Board ("Water Board") typically holds one working session and one regular meeting per month, but there often are multi-week gaps between meetings; and

WHEREAS, Water Board operations are complex, and Board Members desire and require timely information in order to aid in making decisions that best benefit the Water Board, its ratepayers, and its employees; and

WHEREAS, Board members are volunteers and it would be inefficient for each Board member to speak with each department head on a weekly basis to stay apprised of the department's principal activities, issues, and progress on initiatives;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that that effective immediately, the following Niagara Falls Water Board supervisory personnel are to provide to the Executive Director a written weekly update regarding their department's principal activities, issues, and progress on initiatives over the past week, and the Executive Director is to forward this information to the Board of Directors:

1. Supervisor Meters,
2. Supervisor of Pipes,
3. Microbiologist,
4. Chief Operator Water Treatment Plant,
5. Supervisor of Maintenance,
6. Chief Operator Wastewater Treatment Plant,
7. Director of Administrative Services,
8. Safety and Security Coordinator,
9. Director of Financial Services,
10. Director of Technical and Regulatory Services, and
11. Industrial Monitoring Coordinator

AND IT IS FURTHER RESOLVED, that any extraordinary developments reasonably believed to be newsworthy or of special urgency shall be communicated by the Executive Director or General Counsel to the Board of Directors as expeditiously as possible.

Water Board Personnel Responsible for Implementation of this Resolution:
Executive Director

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:
Not applicable.

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By:

_____
Daniel T. O'Callaghan, Chairperson

Vote Witnessed By:

_____
Sean W. Costello, Secretary to Board

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-008

DIRECTING STAFF TO REQUEST PROPOSALS FOR FORENSIC ACCOUNTING SERVICES

WHEREAS, the Niagara Falls Water Board ("Water Board") has a complex operating and financial structure that is influenced by particular agreements, statutes, bond covenants, and its legal relationship with the Niagara Falls Water Authority; and

WHEREAS, the Water Board has certain funds that have been designated as reserve or restricted that it wishes to employ for capital projects in order to minimize necessary rate increases if possible; and

WHEREAS, the Water Board has been unable to find satisfactory answers to questions regarding its use of reserve or restricted funds, which may depend on the original sources and dates of deposit of such funds; and

WHEREAS, the Water Board further wishes to review the 2016 findings of the New York State Comptroller's Office following an audit, including a review and confirmation of proper separation between Water Board and Niagara Falls Water Authority funds; and

WHEREAS, it is anticipated that a professional services firm with forensic accounting experience would be able to address these outstanding questions and to provide useful advice regarding internal controls;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that the Director of Financial Services and General Counsel hereby are directed to solicit proposals for the forensic accounting services requested above, and to prepare a recommendation, including a not-to-exceed dollar figure, for the Board following receipt of responses to the request for proposals.

Water Board Personnel Responsible for Implementation of this Resolution:
Director of Financial Services
General Counsel

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:
Not applicable.

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By:

_____
Daniel T. O'Callaghan, Chairperson

Vote Witnessed By:

_____
Sean W. Costello, Secretary to Board

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-009

SETTING WILLIAM WRIGHT'S SALARY
AFTER SIX-MONTH CONTRACTUAL REVIEW

WHEREAS, the Niagara Falls Water Board ("Water Board") entered into an employment agreement with William Wright that required the Water Board to review Mr. Wright's salary after he served in the position of Superintendent for six months; and

WHEREAS, Water Board staff reviewed Mr. Wright's performance, and Mr. Wright's performance as Superintendent after six months is rated "Superior"; and

WHEREAS, as an incentive for Mr. Wright's retention and continued Superior performance, the Water Board desires to provide Mr. Wright with a salary adjustment in conformity with the provisions of his contract;

NOW THEREFORE BE IT

RESOLVED, that the Salary of Superintendent William Wright hereby is increased by 8.5% over its current level, and that his annual salary rate after this increase shall be $75,350, effective on August 1, 2018.

Water Board Personnel Responsible for Implementation of this Resolution:
Director of Administrative Services

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

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By: Vote Witnessed By:

_____ _____

Daniel T. O'Callaghan, Chairperson Sean W. Costello, Secretary to Board

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-010

PURCHASE OF HYDRAULIC GUILLOTINE CUTTER WITH SAFETY FUNDS

WHEREAS, the Niagara Falls Water Board ("Water Board") has an active Safety program, and the Safety Department and Outside Pipes have identified as a desired and significant improvement in worker safety the purchase of a diamond wire hydraulic guillotine cutter for the cutting of main pipes, to replace the use of hand-held tools; and

WHEREAS, existing Water Board equipment will supply the hydraulic power required to operate such a cutter; and

WHEREAS, Water Board staff have obtained a quote in the amount of $10,665 from E.H. Wach for the purchase of a diamond wire hydraulic guillotine package for 4" to 16" diameter pipes; and

WHEREAS, funds for this procurement are available in the Safety Department budget;

NOW THEREFORE BE IT

RESOLVED, that Water Staff hereby are authorized to procure a diamond wire hydraulic guillotine package for 4" to 16" diameter pipes using Safety Department funds at a total cost not to exceed $10,665.

Water Board Personnel Responsible for Implementation of this Resolution:
Director of Operations

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

On July 30, 2018, 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 Forster	[ ]	[ ]	[ ]	[ ]
Board Member Kimble	[ ]	[ ]	[ ]	[ ]
Board Member Larkin	[ ]	[ ]	[ ]	[ ]
Board Member Leffler	[ ]	[ ]	[ ]	[ ]
Chairman O'Callaghan	[ ]	[ ]	[ ]	[ ]

Signed By:

_____
Daniel T. O'Callaghan, Chairperson

Vote Witnessed By:

_____
Sean W. Costello, Secretary to Board

E.H.WACHS®
A Division of ITW
Superior Equipment. Complete Support.™

Water Utility Products
600 Knightsbridge Pkwy | Lincolnshire IL 60069
T +1 847 537 8800 | F +1 847 520 1147
ehwachs.com

Quotation

TO: **Bill Wright**
Niagara Falls Water Board
5815 Buffalo Ave.
Niagara Falls, NY 14304

Date:	**7/11/2018**
Quotation Number:	KR113091
Payment Terms:	Net 30
Shipping Terms:	FOB Destination
Valid Through:	9/9/2018
Estimated Delivery:	6 Weeks ARO

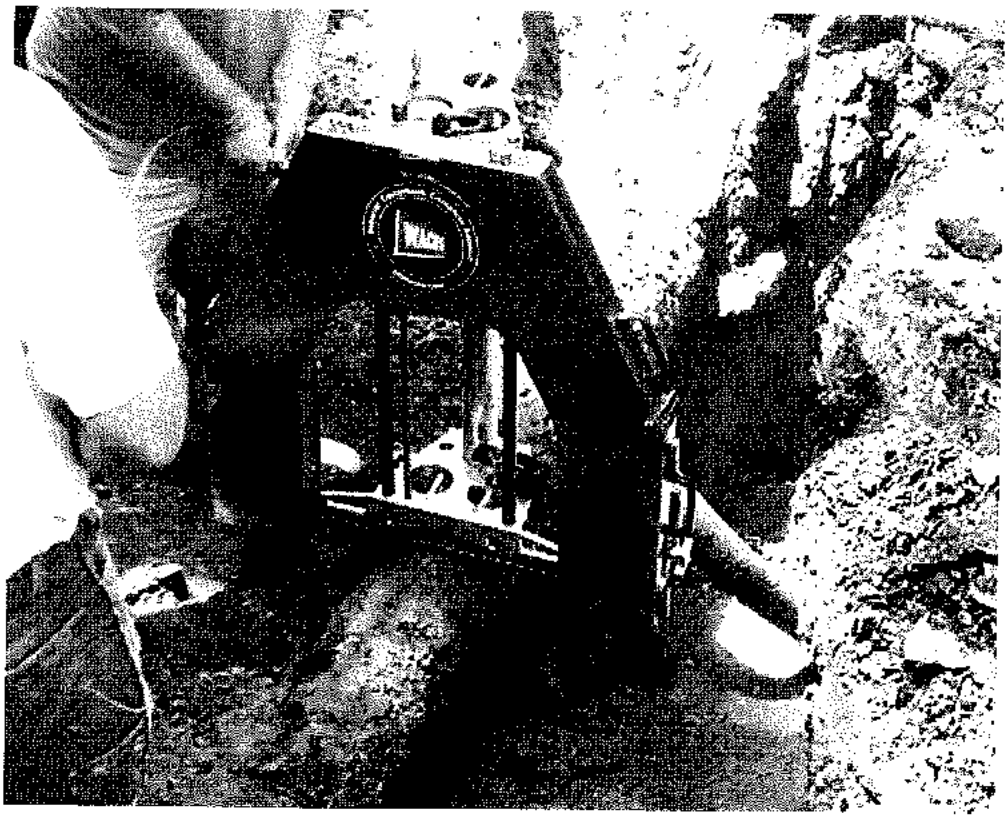
E.H. Wachs is pleased to offer the following quotation.

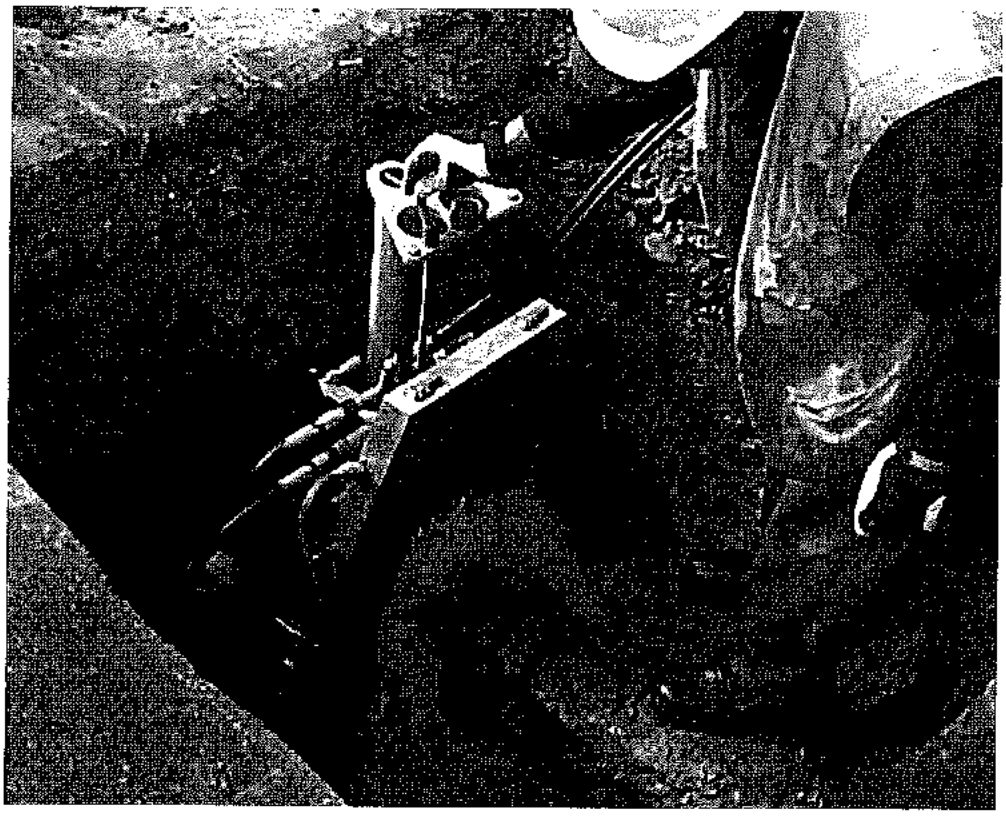
	Item Number	Description	Qty	U/M	Unit Price (USD)	Line Total (USD)
1	29-000-10	416 Diamond Wire Hydraulic Guillotine Package for 4"-16" outside diameter. Includes (1) Cutting Wire, Shipping/Storage Skid & Water Delivery System. Contiguous US destination and freight charges included (when sold to end user). Est. Shipping Wt. /Dims (190# - 48"x 40"x 25") w/o Accessories.	1	EA	9,995.00	9,995.00
2	29-602-10	High Density pretwisted, Diamond Wire Loop assembly with swivel crimp utilizing 46 beads per meter.	1	EA	545.00	545.00
3	29-010-04-03	Spare Drive Wheel Liner, for Wachs Model "Diamond Wire"	1	EA	125.00	125.00
					Total (USD)	**$10,665.00**

Thank you for the opportunity to quote your application needs. If you have any questions or if I may be of any further assistance to you please do not hesitate to notify me.

(SALES TAX!!!!) We collect sales tax in all but the following states: AK, DE, MT, OR and NH. If you are tax exempt please supply your identification number and certificate with your order. If your exempt number is not on file, tax will be added to your order.

Ken Redding
Utility Technical Sales Rep
815-943-4785 x2773
kredding@ehwachs.com





NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-011

REQUIRING IT DEPARTMENT REVIEW OF PURCHASES FOR POSSIBLE INTEGRATION WITH WATER BOARD SYSTEMS

WHEREAS, the Niagara Falls Water Board ("Water Board") actively is upgrading its technology to more efficiently and effectively fulfill its mission to provide safe and reliable water and wastewater management services to our community; and

WHEREAS, it is desired by the Water Board that where possible newly-purchased systems will integrate with existing technology and systems, such as the Lucity enterprise asset management software; and

WHEREAS, the IT Department's opinion regarding technology upgrades is relevant to the Water Board's decisions regarding such upgrades;

NOW THEREFORE BE IT

RESOLVED, that for procurements that may involve integration of software or technology with existing Water Board systems, the IT Department's opinion regarding the feasibility and utility of such integration shall be provided to the Water Board in connection with the procurement request.

Water Board Personnel Responsible for Implementation of this Resolution:
Director of Administrative Services

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:
Not applicable.

On July 30, 2018, 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 Forster	[ ]	[ ]	[ ]	[ ]
Board Member Kimble	[ ]	[ ]	[ ]	[ ]
Board Member Larkin	[ ]	[ ]	[ ]	[ ]
Board Member Leffler	[ ]	[ ]	[ ]	[ ]
Chairman O'Callaghan	[ ]	[ ]	[ ]	[ ]

Signed By:

_____
Daniel T. O'Callaghan, Chairperson

Vote Witnessed By:

_____
Sean W. Costello, Secretary to Board

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-012

ADOPTING NYS DEPARTMENT OF LABOR GUIDANCE REGARDING *JANUS* CASE

WHEREAS, much of the Niagara Falls Water Board ("Water Board") workforce is covered by collective-bargaining agreements; and

WHEREAS, the Union workforce plays a crucial and appreciated role in Water Board operations, and the Water Board wishes to maintain an open, productive, and mutually-respectful relationship with the Unions representing Water Board workers; and

WHEREAS, the United States Supreme Court decision in *Janus v. AFSCME Council 31* has changed established law and practice relating to the right of a union to receive the payment of fair share agency fees from public-sector employees who decline union membership; and

WHEREAS, the New York State Department of Labor has issued a document entitled "Guidance for Public-Sector Employers and Employees in New York State" that discusses the impact of *Janus* on collective bargaining, agency fees, Union member access, and Union member personal information;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that the Water Board hereby adopts a policy to follow the New York State Department of Labor's guidance on the *Janus* decision, as may from time to time be issued and amended.

Water Board Personnel Responsible for Implementation of this Resolution:
Director of Administrative Services

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:
Not applicable.

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By:

_____
Daniel T. O'Callaghan, Chairperson

Vote Witnessed By:

_____
Sean W. Costello, Secretary to Board

Guidance for Public-Sector Employers and Employees in New York State

New York State has a long and important tradition of supporting the organized labor movement and the fundamental right of workers to organize. Public-sector employees play a crucial role in communities across New York State. Each day they work hard to ensure public safety, protect public health, and to provide other critical services to New York residents.

The Supreme Court of the United States issued a decision in *Janus v. AFSCME Council 31,* 585 U.S. ____, 138 S.Ct. 2448 (2018) on June 27, 2018. The *Janus* decision overturned decades of established law and practice relating to the right of a union to receive the payment of fair share agency fees from public-sector employees who decline union membership. As a result, there has been much confusion and this Guidance is intended to provide clarity to employers and employees. The only change under *Janus* is that public employers may not deduct agency fees from a non-member's wages, nor may a union otherwise collect agency fees from a non-member, without the non-member employee's affirmative consent. All other rights and obligations of public-sector employers and employees under state law remain unchanged. For example, unions have, in the past, presented dues deduction cards, or other similar evidence of union membership such as membership lists, to public employers and those employers previously collected union dues from its employees on that basis. The decision in *Janus* does not require a union to obtain new dues deduction cards or obtain other evidence of union membership or remove a public employer's obligation to collect dues from members of a union. Public employee unions are not required to produce dues authorizations cards for members from whom the employer has previously deducted dues.

Collective Bargaining

- Under New York law, the rights of public-sector employees to collectively bargain are unaffected by the decision in *Janus*. Employees maintain the right to:
    - organize;
    - form, join, or assist any employee organization for the purpose of bargaining collectively through representatives of their own choosing on questions of wages, hours, and other terms and conditions of employment; and
    - engage in lawful, concerted activities for the purpose of collective bargaining.
- Employees also continue to have the right to be free from threats, interference or coercive statements when exercising their protected rights to engage in concerted activity.
- Public employers are forbidden from interfering in the formation of a union, discriminating against or terminating an employee based on union membership or activity, and refusing to bargain in good faith with a union.

Union Dues & Agency Fees

- The *Janus* decision does not impact any agreements between a union and its members to pay union dues, and existing membership cards or other agreements by union members to pay dues must be honored. The *Janus* decision only impacts the mandatory collection of an agency fee by individuals who decline union membership.
- Employees who are non-members and paying agency fees may choose to become dues paying union members.
- Employees may pay dues through a payroll deduction.

Member Access & Personal Information

- Under many collective bargaining agreements, and under Civil Service Law § 208, public employers are required to provide in a timely manner, the collective bargaining representative with the names and contact information of any newly hired employees.
- Public employees have the right to keep their personal information protected by their employer. An employee's personal information, such as home address, personal email address, home or mobile telephone numbers, and other contact information is protected from disclosure (with limited exceptions).

Employees who believe their rights have been violated should contact their employer or their union.

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-013

AUTHORIZING SETTLEMENT AGREEMENT WITH JONI CIMINO

WHEREAS, Joni Cimino disputed certain Niagara Falls Water Board ("Water Board") charges for service at 1414-16 Main Street; and

WHEREAS, to resolve that dispute, Ms. Cimino and the Water Board previously entered into a payment plan for those disputed charges that provided that Mr. Cimino would make monthly payments and keep her water bills current, and that outstanding interest and penalties would be removed from the bill upon repayment of all outstanding principal; and

WHEREAS, Ms. Cimino has made more than the minimum agreed payment each month but earlier in 2018 received two large and unexpected water bills that she was unable to pay when due; and

WHEREAS, Ms. Cimino has requested a new agreement to the Water Board to extend the period for her prior settlement agreement and to address the new charges; and

WHEREAS, the Water Board under its general authority to compromise and settle claims arising from contracts may waive the imposition of penalties arising from a claimant's nonpayment of water rents when compromising a claim asserted by the claimant; and

WHEREAS, Section 1230-f, Title 10-B, Article 5 of the Public Authorities Law authorizes the Water Board to negotiate, compromise and settle claims when there is sufficient consideration for the compromise of a claim and if the parties in good faith advance opposing contentions; and

WHEREAS, as of July 1, 2018 the outstanding balance for 1414-16 Main Street was $10,318.32 for water and sewer charges plus $3,321.12 for penalties;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that the Water Board's Director of Financial Services hereby is authorized to execute an agreement with Joni Cimino for the payment of the outstanding charges for service to 1414-16 Main Street, in a form approved by General Counsel and containing the following substantive terms:

1. Ms. Cimino will make an initial good-faith payment of $1,318.32 by August 15, 2018;
2. Ms. Cimino will make 15 monthly payments of $600, with the first such installment due on October 1, 2018;
3. All new bills shall be paid on time;
4. Upon satisfaction of the foregoing conditions, the accrued interest and penalties for 1414-16 Main Street shall be waived; and
5. Should Ms. Cimino default on the agreement, all outstanding charges, interest, and penalties immediately shall come due and water service may be terminated.

Water Board Personnel Responsible for Implementation of this Resolution:
Director of Financial Services
General Counsel

Water Board Budget Line or Capital Plan Item with Funds for this Resolution:
Not applicable.

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By:

_____
Daniel T. O'Callaghan, Chairperson

Vote Witnessed By:

_____
Sean W. Costello, Secretary to Board

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-014

STRATUS SERVER MIGRATION SERVICES

WHEREAS, pursuant to resolution 2018-02-005, the Niagara Falls Water Board ("Water Board") previously awarded a bid for the purchase of a Stratus ftServer following a public bid; and

WHEREAS, professional software development, integration and testing, documentation, and training services are required in order to put that Stratus ftServer into service; and

WHEREAS, Water Board staff has received a quote from Applied Sciences Group, Inc., for these professional services, in a total amount of $31,065;

NOW THEREFORE BE IT

RESOLVED, that the Niagara Falls Water Board hereby authorizes the Director of Administrative Services to enter into an agreement with Applied Sciences Group, Inc., for professional software development, integration and testing, documentation, and training services that are required in order to put the Stratus ftServer into service, for a total amount not to exceed $31,065.

Water Board Personnel Responsible for Implementation of this Resolution:
Director of Administrative Services

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

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By:

_____
Daniel T. O'Callaghan, Chairperson

Vote Witnessed By:

_____
Sean W. Costello, Secretary to Board

Applied Sciences Group, Inc.
We Integrate Software with the People who use it.

2495 Main St., Suite 470 • Buffalo, NY 14214 • 716-626-5100 • www.asgrp.com

7/25/18
Proposal No: NIW-17374-3

James Brixius
Email: jbrixius@nfwb.org
Ph: 283-9770, extension 241
Niagara Falls Water Board
5815 Buffalo Avenue
Niagara Falls, NY 14304

Dear James,

I am pleased to provide you with the following ***3rd revised proposal.***

ASG Overview:
Applied Sciences Group (ASG) is a software development firm that is Woman-Owned and CSIA quality-certified. We provide engineering services on a project-by-project basis to augment your engineering team to complete tasks on-time and on-budget. We develop software solutions for manufacturing automation, machine control (e.g. PLC/HMI), custom applications, and software embedded into our customer's products. Our team will provide technically superior engineering, project management, and training services for your application.

Client Overview:

The Niagara Falls Water Board (NFWB) will be purchasing a Stratus server to replace their existing iFIX server and are in need of a vendor to migrate software to the new Stratus server.

Scope of Work:

ASG has been asked to submit a proposal to migrate the NFWB iFix v5.5 files (currently on a Windows 7 Workstation with redundancy and Historian Collector) to a new Stratus server with Terminal Services. The Historian will be configured and the XLReporter files will be migrated as well. The Thin Clients will also be configured for communications to the new Stratus server.

Engineering Services include the following:

A. Software Development	• SCADA application migration to Stratus • Client configuration (Thin Manager, RDS) • XLReporter file and archived report migration • Real Time Information Portal with IIS configuration • Interactive SQL installation • Historian data collection configuration and migration of archives (up to 400 tags) • NIW's Software installation and server configuration • Domain Controller configuration
B. Integration and Testing	• Installation work support • Provide startup, commissioning, testing and debug * • Demonstration and customer acceptance *
C. Documentation	• Standard application backups and electronic copies on CD/DVD
D. Training	• One day (8 hours) of operator/maintenance training of the HMI/ SCADA systems and an overview of how the system functions *

**This proposal includes five (5) onsite days (40 hours) for integration and testing as well as 8 hours for training. If additional time is needed, an approved ECO, revised or new PO will be required for additional time at an hourly rate.*

Notes and Assumptions:

This proposal only covers items explicitly outlined in this proposal. It does not cover items or topics discussed or inferred in previous conversations, meetings or emails that are not explicitly called out in the task descriptions.

All equipment, procedures and documentation made available to ASG and its representatives shall be considered proprietary to Niagara Falls Water Board, and treated appropriately.

Niagara Falls Water Board shall retain a non-exclusive, perpetual license to all source code created on their behalf. ASG reserves the right to reuse all non-proprietary source code as part of its development library.

Personal safety issues with regard to any on-site work will be determined and addressed prior to the start of the on-site work. ASG employees will be made aware of all safety requirements, documentation and/or personal protective equipment (PPE) that may be necessary to insure their safety while on site.

Please note the following list of potential out of scope effort. Any effort, which fits into the following categories, will be billed to Niagara Falls Water Board at an hourly rate.

- Any time on site at customer's facility during which the system is not available for ASG personnel to perform the quoted work will be billed as out of scope.
- Any delays to the schedule that are caused by mechanical failures, repairs or maintenance will be billed as out of scope.
- Any delays that are caused by testing of the system during which normal operation of the system is not permitted will be billed as out of scope.

The following terms apply:

Billing:	Firm, Fixed Price Contract; • 25% of the Labor Fees shall be invoiced upon contract award. • Progress Payments will be invoiced weekly for the duration of contract. • Equipment procured for the project will be invoiced 50% on contract award and 50% upon delivery.
Payment:	2% 10 Net 30 days upon receipt of invoice. A 1.5% late fee will be assessed beyond net 30 days and every 30 days thereafter.
Terms:	See Attachment B & C, This proposal is valid for 30 days.
Engineering Total:	$ 31,065
Equipment:	$ N/A
Grand Total:	$ 31,065

Attachment A: Applied Sciences Group, Inc. Overview

Applied Sciences Group (ASG) is a software development firm that is Woman-Owned and CSIA quality-certified. We provide engineering services on a project-by-project basis to augment your engineering team to complete tasks on-time and on-budget. We develop software solutions for manufacturing automation, machine control (e.g. PLC/HMI), custom applications, and software embedded into our customer's products. Our team will provide technically superior engineering, project management, and training services for your application.

As a provider of engineering solutions since 1993, our company's mission:

We Integrate Software with the People Who Use It

ASG delivers more than 100 completed projects a year. During the past 20+ years, we have grown from a three person company to one that employs more than 40 people. Many staff engineers are dual-degreed, with at least one of those degrees being electrical engineering, software engineering, or computer science. ASG's staff members have very diverse backgrounds in biology, mechanical engineering, physics, education and other disciplines. The variety of work we perform and our stability has helped to foment a strong employee allegiance to the company. ASG uses the experience gained from its many projects to help understand and solve analogous problems in other, not necessarily related business sectors.

Some of ASG's business sectors include:

- Scientific programming
- Modeling and simulation
- Database development
- Graphical user interfaces
- Automation
- Process control
- Web and Mobile applications
- Medical devices
- Pharmaceutical applications
- Embedded programming
- Environmental applications
- Military and space applications

ASG has expertise in the following hardware and software platforms:

PLC & Design Development	MES/SCADA/HMI	Custom Software	Embedded Systems	Instrumentation & Hardware
• Siemens • Allen-Bradley • GE • Schneider Electric • Omron • Mitsubishi • Phoenix Contact • Automation Direct • Electrical Design /AutoCAD • Control Panel Design & Construction ** ***Note: Control Panel construction services are performed by our preferred UL Electrical Panel Subcontractors*	• GE Proficy Plant Applications / Historian / Portal / Cimplicity / iFIX • AB Factory Talk / RSView 32 • NI - LabView • Wonderware • Vision Systems (Cognex/DVT) • Microsoft Office Integration • Custom Reporting Solutions	• Visual Basic, C, C++, C#, JAVA, Perl, PHP, Web Dev., ASP.NET, Visual Studio.NET ADA, Assembler, • Windows OS, Windows Mobile, Apple's iOS, Android, Linux, Unix • Database Development SQL Server, Oracle, MySQL • Project Life-Cycle Management	• System design for the: • Controller or Microprocessor (ARM, DSP, TI, Motorola, Intel) • Communications RF, Ethernet, USB • Prototype to production development • Single Board Computers	• Variable Frequency Drives • Miscellaneous electrical components (limit switches, pushbuttons, pilot lights, etc.) • Pressure, Level, Vibration Transmitters • RTDs, Thermocouples • AC/DC Motors and Motion

Certifications:

CSIA Certified Member - Applied Sciences Group employs CSIA Best Practices to achieve successful management of our business which led to certification in 2014. The following description of the program was obtained from the CSIA website.

CSIA Certification demonstrates our commitment to meeting the highest standards for business and management. Successful system integration businesses – the ones that clients can be confident will meet their current and future needs – combine technical proficiency with sound business practices. Certification proves that our company has met or exceeded CSIA Best Practices in nine key areas:

- General Management
- Human Resources
- Marketing, Business Development, Sales, and Opportunity Management
- Financial Management
- Project Management
- Supporting Activities
- System Development Lifecycle
- Quality Assurance
- Service and Support

Attachment B: Applied Sciences Group, Inc.

Standard Terms & Conditions

The following terms and conditions constitute a part of all Applied Sciences Group, Inc. ("ASG") quotations or proposals and shall apply to any resulting purchase orders or contracts unless otherwise acknowledged in writing by Applied Sciences Group. The Purchaser, by placement of an order, acknowledges their agreement to these Terms and Conditions.

1. **Scope of Work**. Any changes to the scope of the work post-award may be subject to additional charges and must be approved, in writing, by ASG. Any items not expressly included in the proposal are excluded. Any changes in drawings and/or specifications as to any material and/or work covered by Purchaser's Order, resulting in a difference in price or time for performance resulting from such changes shall be equitably adjusted and the order and/or schedule shall be modified in writing accordingly.

2. **Billing.** Progress payments will be invoiced at specified intervals for the duration of the contract, as outlined in the proposal. Changes must be agreed to in writing by ASG. In the event Purchaser suspends or cancels a project after the start of work, Purchaser shall be responsible for all work performed and costs incurred by ASG prior to such suspension or cancellation.

3. **Payment**. Unless otherwise agreed in writing, payment for goods and services delivered by ASG shall be net 30 days after the invoice date for such goods and services. A 1.5% late fee will be assessed beyond net 30 days and every 30 days thereafter. Should ASG obtain the services of a collection agency or attorney to resolve payments over 90 days late, any collection agency or attorney fees will be the responsibility of the Purchaser.

4. **Schedule**. Quoted schedules are subject to change at the time of order placement based on current ASG backlog. Quoted schedules exclude weekends or holidays unless otherwise stated and exclude customer review time unless otherwise stated. Every effort will be made to hold delivery dates. ASG shall not be liable for delays or defaults in deliveries due to causes beyond its control and without its fault or negligence. If at any time ASG has reason to believe that delivery will not be made as scheduled, written notice setting forth the causes of the anticipated delay will be given immediately to the Purchaser and project team. Any delay due to fault of subcontractors will be excusable, if beyond the control and without the fault or negligence of both ASG and its subcontractor and if ASG established that it could not obtain supplies or services from any other source in time to meet the delivery schedule.

5. **Acceptance.** This quotation does not constitute an acceptance by ASG of any terms and conditions not stated herein. References in this quotation or resulting contract or purchase order, to any offer, counter offer, or other document shall in no way constitute a modification of any of the terms and conditions of this quotation. ANY ATTEMPTED ACKNOWLEDGEMENT OF THIS QUOTATION CONTAINING TERMS AND CONDITIONS INCONSISTENT WITH, OR IN ADDITION TO, THE TERMS AND CONDITIONS PRESENTED HEREIN IS NOT BINDING UPON ASG UNLESS EXPRESSLY ACCEPTED BY ASG IN WRITING.

6. **Warranty for Engineering and Programming Design Services, Limitation of Liability**. ASG warrants that the services it provides shall be performed in a competent and professional manner and in conformance with agreed upon standards. Purchaser's sole remedy shall be the reperformance of services to provide corrective action or refund amounts paid, as determined by ASG. IN NO EVENT WILL ASG BE RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES EVEN IF THE COMPANY WAS AWARE OF THE POTENTIAL FOR SUCH DAMAGES. ALL OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED.

7. **Warranty for Commercial Goods, Limitation of Liability**. ASG warrants that all goods sold by the Company shall be of good quality and free from defects in workmanship and materials as of the date of delivery to the F.O.B. point. IN NO EVENT WILL ASG BE RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES EVEN IF THE COMPANY WAS AWARE OF THE POTENTIAL FOR SUCH DAMAGES. ALL OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED. Warranty claims must be made in writing within 90 days from the date of delivery to the F.O.B. point. ASG shall repair, replace or refund amounts paid, at its discretion, for any claims covered by this warranty. This warranty is limited to the sale of goods and materials only and does not apply to services. This warranty does not apply to product deficiencies resulting from designs or specifications which have been approved or provided by the Purchaser. ASG will not be held responsible for 3rd party warranties.

8. **Assignment** – No contract or any interest therein, resulting from this quotation, shall be assigned or transferred by either party except as expressly authorized in writing by the other party, and any attempted assignment without such consent shall be void.

9. **Federal, State, and Local Taxes** – Except as expressly provided in this quotation, prices exclude Federal, State and Local taxes and duties. Such taxes or duties, if collected by ASG, will appear as a separate charge on the invoice.

10. **Disputes** – In the event that any dispute, arising under or relating to a contract resulting from this quotation, cannot be resolved by settlement between the parties or by an Alternative Dispute Resolution technique agreed to by all parties, either party may litigate any such dispute. Purchaser agrees to the exclusive jurisdiction and venue of the courts presiding in Erie County, New York for all disputes arising hereunder.

11. **Applicable Law** – It is agreed that contracts associated with this quotation shall be construed, interpreted and governed by the internal Laws of the State of New York, without regard to principals of conflicts of law.

12. **Permits and Compliance to Applicable Rules/Regulations** – Except as otherwise agreed to by ASG, the Purchaser shall procure all necessary permits or licenses required due to the special nature of services requested by the Purchaser, and abide by all applicable laws, regulations and ordinances of the United States and the State, territory and political subdivision in which the work under contract is performed.

13. **Intellectual Property** – It is the responsibility of the Purchaser to ensure that products or services provided by ASG at the Purchaser's request or direction do not violate any patents existing or pending. Moreover, the Purchaser assumes full liability for any such patent infringements, and agrees to indemnify and defend ASG against any such liability.

14. **Insolvency** – If Purchaser ceases to conduct its operations in the normal course of business, including inability to meet its obligations as they mature, or if any proceeding under the bankruptcy or insolvency laws is brought by or against Purchaser, or a receiver for Purchaser is appointed or applied for, or an assignment of creditors is made by the Purchaser, ASG, to the extent permitted by law, may terminate the contract without liability.

15. **Cancellation** – If the Purchaser chooses to cancel any contract or order associated with this quotation, written notice must be given to and acknowledged by ASG during normal work hours. ASG will stop work in progress, whereupon it will invoice the Purchaser for all applicable services rendered, including labor, materials, outside services, and fees, up to the time of cancellation. Labor charges will be calculated based on ASG's standard hourly rates. Payment shall be due within 15 working days.

16. **Order of Precedence** – In the event of an inconsistency between the provisions of these terms and conditions and the provisions of any other documents exchanged, or agreements made between the parties, these terms and conditions shall supersede any inconsistent provision in such other documents or agreements, unless expressly amended by a written agreement making specific reference to the provisions being amended.

17. **Attorneys' Fees and Costs** – In connection with any litigation arising out of the Agreement, ASG shall be entitled to recover all of its costs and expenses incurred including actual attorneys' fees for services rendered in connection with such litigation, including its proceedings and post-judgment proceedings. As used herein, the term "attorneys' fees" shall be deemed to include charges for paralegal law clerks and other staff members operating under the supervision of an attorney and for all sales and/or use taxes imposed thereon by an appropriate governmental authority.

18. **LIMITATION OF WARRANTIES** – THE WARRANTIES STATED IN PARAGRAPHS 6 AND 7 OF THESE TERMS AND CONDITIONS ARE GIVEN IN PLACE OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR USE, OR OTHERWISE. NO PROMISE OR AFFIRMATION OF FACT MADE BY ANY AGENT OR REPRESENTATIVE OF ASG SHALL CONSTITUTE A WARRANTY BY ASG OR GIVE RISE TO ANY LIABILITY OR OBLIGATION. ASG SHALL NOT BE LIABLE IN ANY EVENT FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES AS THOSE TERMS ARE DEFINED IN ARTICLE 2 OF THE NEW YORK UNIFORM COMMERCIAL CODE. The warranties granted by ASG are terminated and ASG shall not be liable to Purchaser or any other person for any damage, injury or loss arising out of the use of any goods or services, whether by reason of any defect in the goods or services furnished hereunder or otherwise, if, prior to such damage, injury or loss, the goods or services are (a) damaged or misused after tender of delivery, (b) repaired, altered or modified without ASG's written consent, or (c) not used, maintained, operated or applied in strict compliance with instructions supplied by ASG.

19. **Force Majeure** - ASG shall not be liable for nonperformance or delay in performance due wholly or partly to commercial impracticability or any cause not wholly or exclusively in its control or which it could not by reasonable diligence have avoided. Upon the occurrence of any such contingency, ASG shall have the right to suspend or reduce deliveries during the period of such contingency, and the total quantity deliverable under this contract shall, at ASG's election, be reduced by the quantities so omitted. The following shall not be considered wholly or exclusively within ASG's control: fire; flood; earthquake; storm; acts of God; labor controversies; court decrees; inability to use the full capacity of plants or facilities as a result of government action, machinery malfunction or breakdowns; and inability to obtain fuel, power, raw materials, labor, containers or transportation facilities, without litigation or the payment of penalties or unreasonable prices, or the acceptance of unreasonable terms and conditions.

20. **NON-Recruitment Clause:** When Seller and Buyer enter this contract, in which various employees of the Seller will be performing services at the Buyers premises and/or other such locations, Buyer recognizes and agrees that such employees of the Seller are of great value to the Seller and that the loss of their services to the Seller would cause substantial damage to the Seller for which there would be no adequate remedy at law. Buyer therefore agrees that during the time the Seller is performing services for the Buyer, and for a period of one year thereafter, the Buyer will not:
    - solicit for employment (directly or through a third party), as the Buyer's employee or as an independent consultant, any the Seller's employee who provided services to the Buyer;
    - Employ any Seller's employee as the Buyer's employee or an independent consultant.

    Buyer further agrees that in the event this agreement is violated, Seller shall be entitled to an injunction restraining any further violation – in addition to any other right or remedy to which the Seller might be entitled in law or in equity. However, in the event that both the Buyer and the Seller agree that it is in the Seller's employee's best interest to entertain a job offer from the Buyer. Then the Seller will be compensated by the Buyer as follows:
    - When a job offer is accepted by the Seller's employee, the Buyer shall pay a lump sum equal to 35% of the employee's first year's salary, plus any training and recruitment costs incurred by the Seller in the 12 months prior to the offer being accepted.

21. **Personal Safety** - issues with regard to any on-site work will be determined and addressed prior to the start of the on-site work. ASG employees will be made aware of all safety requirements, documentation and/or personal protective equipment (PPE) that may be necessary to insure their safety while on site.

22. **Safety Risk Assessment** - Applied Sciences Group recommends that the purchaser perform a Safety Risk Assessment on this machine to analyze, evaluate and mitigate any safety concerns. This proposal does not include a safety risk assessment.

23. **Entire Agreement** – This Contract constitutes the entire agreement between the parties and may be modified only in writing and the agreed to by both parties. Neither ASG nor the customer will be bound by any oral agreement or representation irrespective of whom or when made.

Attachment C: Applied Sciences Group, Inc.

Standard Engineering Conditions

1. **Engineering Billing Rates.**

Standard Rates	Monday thru Friday (excluding Holidays *), eight (8) hours per day or less, *Standard Rates* shall be invoiced.
Standard Overtime Rates	Monday thru Friday Overtime (excluding Holidays *), more than eight (8) hours per day or forty (40) hours per week, shall be invoiced at 1.5 times the *Standard Rates*. Saturday, eight (8) hours per day or less, shall be invoiced at 1.5 times the *Standard Rates*.
Double-time Rates	Saturday Overtime, more than eight (8) hours per day, shall be invoiced at 2 times the *Standard Rates*. Sunday or Holiday *, eight (8) hours per day or less, shall be invoiced at 2 times the *Standard Rates*.
Sunday or Holiday * Overtime	Hours worked in excess of eight (8) hours per day, shall be invoiced at 2.5 times the *Standard Rates*.
On site	For days wherein Applied Sciences Group Engineering Personnel must remain near the job site, with no work actually performed at the job site, will be invoiced for eight (8) hours per day at the applicable rate (standard or premium).

2. **Travel Charges per person, per trip.**
   - All ASG travel will be billed at the applicable rate.

3. **Equipment** shall be provided as quoted in the proposal; any shipping charges will be invoiced at cost plus 15%.

4. **Holidays**. Special work arrangements must be negotiated for the following Holidays:

   - ➔ *New Year's Eve Day*
   - ➔ *New Year's Day*
   - ➔ *Good Friday*
   - ➔ *Easter Sunday*
   - ➔ *Memorial Day*
   - ➔ *Fourth of July*
   - ➔ *Labor Day*
   - ➔ *Thanksgiving Day*
   - ➔ *Friday after Thanksgiving*
   - ➔ *Christmas Eve Day*
   - ➔ *Christmas Day*

SIGNATURE PAGE

Should you have any questions, or require additional information, please feel free to contact me at your convenience at (716) 626-5100, extension 201. Thank you.

Respectfully,

Please indicate acceptance of this proposal and authorization to proceed with signature below.

Don Laux

Applied Sciences Group, Inc.
Don Laux, Senior Account Executive
2495 Main Street, Suite 470
Buffalo, NY 14214

7/25/18
Date

_____

Niagara Falls Water Board
James Brixius
5815 Buffalo Avenue
Niagara Falls, NY 14304

____/____/____
Date

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-015

AWARDING CONTRACT FOR SANITARY SEWER MANHOLE REPLACEMENT PROJECT AT 66TH STREET AND GIRARD AVENUE

WHEREAS, the Niagara Falls Water Board ("Water Board") sewer manhole at 66th Street and Girard Avenue is in poor condition and in danger of a collapse; and

WHEREAS, the functional condition of this manhole is important to the sewer system in the LaSalle area, as it is the meeting point of a 24" and a 30" sewer main through which much of that area's wastewater passes; and

WHEREAS, the manhole repair will require deep excavation under difficult conditions, bypass pumping to maintain sewer performance while repairs are completed, and significant traffic maintenance and protection work; and

WHEREAS, Water Board staff worked with City of Niagara Falls Engineering to prepare specifications to seek bids to perform the required sewer manhole reconstruction; and

WHEREAS, to minimize the inconvenience associated with the repair, the Water Board desires to complete the manhole reconstruction before school starts, as the location is near an Elementary school and Board of Education offices; and

WHEREAS, the contract specifications provide that the winning contractor will have sole responsibility for completion of all aspects of the project, including bypass pumping and maintenance and protection of traffic; and

WHEREAS, City Engineering solicited competitive bids for the work; and

WHEREAS, 4th Generation Construction, Inc., is the only contractor that submitted a bid for the project, with a base bid total price of $98,000; and

WHEREAS, Water Board staff recommends that the contract for the project be awarded to 4th Generation Construction, Inc.;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that on behalf of the Niagara Falls Water Board, its Executive Director hereby is authorized to enter into a contract with 4th Generation Construction, Inc., to complete the sanitary sewer manhole replacement project at 66th Street and Girard Avenue, for a total base bid price not to exceed $98,000.

Water Board Personnel Responsible for Implementation of this Resolution:
Executive Director

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

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By: Vote Witnessed By:

_____ _____

Daniel T. O'Callaghan, Chairperson Sean W. Costello, Secretary to Board

PROPOSAL

TO: Executive Director
Niagara Falls Water Board

Dear Sir:

The undersigned hereby declare that they are the only persons interested in this bid; that it is made without connection with any person or firm making another bid for the same contract; that the bid is in all respects fair and without collusion or fraud; that no official or officer of the Niagara Falls Water Board, nor any person in the employ of said Water Board is directly or indirectly interested in this bid, in the supplies or work to which it relates, or in any portion of the profits thereof.

Accompanying this proposal is a **CERTIFIED CHECK OR BID BOND** for not less than **FIVE (5) PERCENT** of the total bid which shall become the property of the Niagara Falls Water Board, if, in case this proposal shall be accepted by the Water Board, the undersigned should fail or neglect to execute a contract with and give bonds to said Water Board; otherwise, the said bond is to be returned to the undersigned.

The undersigned also declare that they will commence work within **THREE (3) WORK DAYs** after **NOTICE TO PROCEED** and will complete the work in accordance with the terms of the contract.

The undersigned also declare that they have carefully examined the form of contract and specifications herein referred to on file with the Water Board, and will provide all the necessary equipment, safety supplies, tools, materials, appliances, storage area, and means of transportation called for by said contract and specification, and, in accordance with their requirements.

For furnishing all materials, labor, supervision and services necessary for the following project:

SANITARY SEWER MANHOLE REPLACEMENT PROJECT
66th Street and Girard Avenue

S.C. 1651

For the following price to wit:

BASE BID TOTAL PRICE : Ninety-Eight Thousand Dollars And No Cents
(the amount entered here must be written in legible words only)

PROPOSAL

Post Office Address:

4M Construction Construction Inc

5650 Simmons Avenue

Niagara Falls, New York

14304

4M Construction Construction Inc

(Name of firm or signature of individual making bid)

Elizabeth Yanni

(Signature of person authorized to make bid for firm)

Date: July 25, 2019

Names of Officers of Firm or Corporation: Elizabeth Yanni President

Andy Yanni Secretary

Treasurer

Street Address: 5650 Simmons Avenue

City: Niagara Falls New York 14304

Federal ID# 82-1902850

Affix Seal if a Corporation:

PROPOSAL

The figure entered here is the bid amount per each "LINEAR FOOT of NEW GRANITE STONE CURB. ie. THIRTY-FIVE & 00/100. Enter price in "LEGIBLE WORDS ONLY."

The figure entered here must be the same as that entered in words under "BID ITEM DESCRIPTION", except it shall be entered in "NUMBERS ONLY."

The figure entered here is the "UNIT BID PRICE" multiplied by the "APPROXIMATE QUANTITY." Ie. $35.00 X 1000 = $35,000.00. Price must be entered in "NUMBERS ONLY."

NOTE: THIS IS A BID PROPOSAL SAMPLE COPY ONLY — **DO NOT SUBMIT THIS SHEET**

BID ITEM #	BID ITEM DESCRIPTION (enter price in words only)	UNIT BID PRICE (enter price in numbers only)	TOTAL (enter price in numbers only)
1	For installation of **NEW GRANITE STONE CURB** Required & done as per plan(s) & specification(s) for the unit price of **THIRTY-FIVE & 00/100**_____ dollars per **LINEAR FOOT** **Approximate Quantity – 1000 Linear Feet**	35.00	35,000.00
2	For installation of **12" PVC SEWER PIPE** Required & done as per plan(s) & specification(s) for the unit price of **ONE HUNDRED & 00/100**_____ dollars per **LINEAR FOOT** **Approximate Quantity – 50 Linear Feet**	100.00	5,000.00
3	For installation of **ASPHALT CONCRETE TOP COURSE - TYPE 7** Required & done as per plan(s) & specification(s) for the unit price of **FIVE & 00/100**_____ dollars per **SQUARE YARD** **Approximate Quantity - 100 Square Yards**	5.00	500.00
4	For all **MOBILIZATION** Required & done as per plan(s) & specification(s) for the unit price of **ONE THOUSAND SIX HUNDRED TWENTY & 00/100** ___dollars per **LUMP SUM** **Approximate Quantity - One Lump Sum**	1,620.00	1,620.00

TOTAL BID PRICE FOR ITEMS 1 – 3_____ **$ 40,500.00**

TOTAL BID PRICE FOR BID ITEM 4_____ **$ 1,620 .00**
(figure entered here shall be a maximum of 4% of the total of bid items 1 – 3)

TOTAL BID PRICE FOR ITEMS 1 - 4_____ **$ 42,120.00**
(figure entered here must also be entered on page 1 of Proposal)

PROPOSAL

BID ITEM NO.	BID ITEM DESCRIPTION (enter price in words only)	UNIT BID PRICE (enter price in numbers only)	TOTAL (enter price in numbers only)
01SS	For PROJECT SURVEY & STAKEOUT Required & done as per plan(s) & specification(s) for the unit price of: One Thousand Dollars And No Cents dollars Approximate Quantity – ONE LUMP SUM	1,000.00	1,000.00
02S	For NEW PRECAST REINFORCED CONCRETE SEWER MANHOLE (5' DIA.) Required & done as per plan(s) & specification(s) for the unit price of: Sixty Thousand Dollars And No Cents dollars Approximate Quantity – 1 EACH	60,000.00	60,000.00
03S A	For NEW PVC SEWER PIPE – 24" DIA. Required & done as per plan(s) & specification(s) for the unit price of: Ten Thousand Dollars And No Cents dollars Approximate Quantity – ONE LUMP SUM	10,000.00	10,000.00
03S B	For NEW PVC SEWER PIPE – 30" DIA. Required & done as per plan(s) & specification(s) for the unit price of: Eight Thousand Dollars And No Cents dollars Approximate Quantity – ONE LUMP SUM	8,000.00	8,000.00
04S	For PAVEMENT RESTORATION Required & done as per plan(s) & specification(s) for the unit price of: Six Thousand Dollars And No Cents dollars Approximate Quantity ONE LUMP SUM	6,000.00	6,000.00
05S	For MAINTENANCE & PROTECTION OF TRAFFIC Required & done as per plan(s) & specification(s) for the unit price of: Ten Thousand Dollars And No Cents dollars Approximate Quantity – ONE LUMP SUM	10,000.00	10,000.00
06S	For MOBILIZATION Required & done as per plan(s) & specification(s) for the unit price of: Three Thousand Dollars And No Cents dollars Approximate Quantity – ONE LUMP SUM	3,000.00	3,000.00

PROPOSAL

TOTAL BID PRICE FOR ITEMS 01S – 05S $ 95,000.00
(NUMERALS ONLY)

TOTAL BID PRICE FOR ITEM 06S - MOBILIZATION $ 3,000.00
(NUMERALS ONLY)

TOTAL BID PRICE FOR ITEMS 01S – 06S $ 98,000.00
(NUMERALS ONLY)

NOTE: BASIS OF CONTRACT AWARD WILL BE THE LOWEST RESPONSIBLE BASE BID

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-016

AUTHORIZING LIFT STATION SCADA CONTROL

WHEREAS, the Niagara Falls Water Board ("Water Board") has seven lift stations that currently are manually activated; and

WHEREAS, adding supervisory control and data acquisition ("SCADA") control to those lift stations will allow them to be activated more rapidly when needed, and will reduce certain labor expenses; and

WHEREAS, pursuant to a previously awarded indefinite quantity/indefinite delivery ("IDIQ") contract, Ferguson Electric Service Co., Inc., will install SCADA control panels in the seven lift stations for an estimated cost of $45,000 (on a time and material basis), and will procure from Zeller AC&E the required pump control panels compatible with the Water Board's lift station pumps for an estimated cost of $145,750; and

WHEREAS, Clark Patterson Lee and Water Board staff have prepared a proposal for these services plus 10% contingency ($20,000) and 15% engineering and administration ($30,000); and

WHEREAS, the total estimated cost to complete the project is $240,000;

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that on behalf of the Niagara Falls Water Board, its Executive Director hereby is authorized to direct Ferguson Electric Service Co., Inc., to add SCADA control to seven lift stations, with the total cost of the project including engineering services provided by Clark Patterson Lee not to exceed $240,000.

Water Board Personnel Responsible for Implementation of this Resolution:
Executive Director

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

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By: Vote Witnessed By:

_____ _____

Daniel T. O'Callaghan, Chairperson Sean W. Costello, Secretary to Board

Sean Costello

From: Jay Meyers <JMeyers@CPLteam.com>
Sent: Friday, July 27, 2018 7:04 AM
To: Sean Costello
Cc: Bob Drury; Jean M. Syverson
Subject: Lift Station SCADA
Attachments: KamanQuote.docx; FergusonQuote.pdf

Sean,
The job will be run under Fergusons Contract, they will contract with Kaman to build the panels. Ferguson will install them.

Ferguson price $45,000.00
Kaman price $145,750.00
10% contingency $20,000.00
15% Engineering and administration $30,000.00
Total 240,000.00
Rolfe asked me to put the contingency and engineering at those percentages.
Let me know if you need anything else. Thanks.

Jay Meyers, P.E.
Direct: 716.880.1264
ARCHITECTURE. ENGINEERING. PLANNING.
CPLteam.com

ferguson electric
your connection to quality

May 15, 2018

Service Division
Your exclusive NFG Service provider

- Electrical inspection, installation & upgrades
- 24-hour emergency service
- Troubleshooting and repair

Niagara Falls Water Board
Municipal Water Plant
5815 Buffalo Avenue
Niagara Falls, NY 14304

Attention: Mr. Jay Meyers

Re: Labor contract 2018: FES #PL19034
Lift Station SCADA

Dear Mr. Meyers,

We are pleased to submit this proposal for the installation of a new control panel (provided by others) in the 7 lift stations.

We will:

- Furnish and install a temporary motor starter to allow the lift station continued operation.
- Disconnect and remove the existing pump controller.
- Install the new customer supplied pump controller.
- Re-work the conduits and conductors into the new controller.
- Make all necessary connections.
- Verify operation of system.

Our budgetary price for the above is **FORTY-FIVE THOUSAND DOLLARS ($45,000.00).** Our price is subject to all applicable sales tax unless otherwise directed by your order to proceed. Our price is based on performing the work during straight-time hours, 7:00 a.m. – 3:30 p.m., Monday through Friday, excluding Sundays or holidays.

Notes:

- We will perform all work strictly according to Article 70E of the NFPA dealing with the Arc Flash Protection.
- We will require access to the buildings.

We appreciate the opportunity to work with the **Niagara Falls Water Board.**

ferguson electric
your connection to quality

We await your written authorization of acceptance so that we may begin work on this project in a timely, satisfactory manner.

If there are questions, please do not hesitate to contact me.

Respectfully Submitted,

FERGUSON ELECTRIC SERVICE CO., INC.

Daniel R. Schultz
Electrical Services Specialist

KAMAN
Automation trol & Energy

MMARK ZELLER | CEO

P 585.254.8840
www.zellercorp.com

Zeller AC&E Proposal 180602 April 26, 2018

Subject: Niagara Falls Pump Stations

Clark Patterson Lee

Jay Meyers

Jay:

We are submitting the following Zeller AC&E proposal #1180602 for the Niagara Falls Pump Station project. Our proposal addresses specific elements of the following specifications:

a. Xylem Meeting with Niagara Falls.
b. Lift station drawing provided by CPL.
c. There are no formal specifications for this project and are based upon typical Xylem control panels.

The following Work Scope identifies deliverables associated with the above listed specifications.

Work Scope

Engineering Submittal will be provided covering the following:

1. Pump Control Panel for Lift stations(1,2,3,4,6,7 and 8)
    a. Engineering Submittal for this Section will consist of the following:
        i. Pump Control Panel
        Wall mount carbon steel enclosure (sized to meet application needs), NEMA 12 Carbon steel, equipped with the following:
            - Qty. (1) Square D Main Circuit Breaker
            - Qty. (2) Square D Motor Circuit Breaker
            - Qty. (1) Square D Control Transformer
            - Qty. (2) Square D 230VAC IEC Motor Starters
            - Qty. (2) Mini Cas Pump Monitoring Relay
            - Qty. (1) MultiSmart Pump Controller
            - Qty. (1) Pumpview Cloud gate SCADA System
            - Square D 22mm Selector Switches
            - Square D 22mm Pilot Lights
            - Qty. (2) Elapsed Time Meter
            - Qty. (1) 230VAC Surge Suppressor
            - Qty. (1) Fan and filter
            - Qty. (1) Heater with Thermostat
            - Qty. (2) Phoenix Contact Intrinsically Safe Relay

- Qty. (1) Phoenix Contact Intrinsically Safe Barrier
- Qty. (1) 20A Receptacle
- Qty. (1) Uninterruptable Power Supply
- Qty. (1) Xylem transducer
- Qty. (2) Floats
- Ancillary equipment for a functional panel including but not limited to wire, wire duct, din rail, mounting hardware etc.

2. Engineering Submittal Format
    a. All control system drawings and BOM will be submitted for approval prior to procurement of materials and start of manufacturing.
    b. All control panel documentation will be developed using AutoCAD software.
    c. Engineering Submittal and Final Drawing Documentation will be supplied on 11" x 17" paper and in electronic.dwg formats.
    d. NFPA Ladder format schematic documentation will be provided on customer title block.
    e. All documentation will be provided on Standard Zeller AC&E title block unless an alternate title block is provided.
    f. Manufacturers cut sheets will be provided for the material being provided with red box identification or specific component model numbers and certifications (i.e. UL listing, etc.), where applicable.
3. Enclosure Manufacturing
    a. Procure materials, assemble, tag and wire per customers drawings.
        i. Manufacturing to take place in our Rochester, NY manufacturing facility
        ii. Engraved Lamacoid tags for exterior enclosure components
        iii. Brady adhesive wire and device labels
        iv. MTW rated control wiring
        v. Standard wire end terminations (no ferrules or other end preparation)
        vi. UL698A labeling
4. Factory Acceptance Testing of Enclosures
    a. Point-To-Point continuity testing of all connections will be performed prior to power-up testing procedures.
    b. Power-Up Testing will consist of power and control voltage level verification for all devices.
    c. Verification of the programming after completion of the Power-Up Testing.
5. Startup
    a. One (1) eight (8) hour day for Zeller AC&E personnel to travel to the installation site and perform startup on the material being supplied is included in this proposal for each station.
6. Final Documents to include the following:
    a. Updated engineering submittal incorporating all changes made over the course of the project, if any.

Exceptions and Clarifications

1. Installation of the Panel is by others.
2. Supply and installation of miscellaneous mounting hardware, brackets and supports is by others.

3. In the event that the Panel is not immediately installed, it is understood that they will be safely stored in a clean, dry and temperature controlled facility.
4. Interconnecting conduit, junction boxes, wire and other miscellaneous wiring materials are to be supplied by others.
5. This proposal includes a 1 year service package for the Pumpview. After the first year of service it is the owner's (end users) responsibility to pay for the service.

Pricing Summary

- Schedule of Values (SOV)

Item	Description	Qty.	Price Ea.	Ext. Price
1	Proposal Price 5 HP (PS 2, 7 and 8)	3	$19,750.00	$59,250.00
2	Start Up	3	$1,000.00	$3,000.00

Item	Description	Qty.	Price Ea.	Ext. Price
1	Proposal Price 7.5 HP (PS 3 and 4)	2	$19,800.00	$39,600.00
2	Start Up	2	$1,000.00	$2,000.00

Item	Description	Qty.	Price Ea.	Ext. Price
1	Proposal Price 20 HP (PS 1 and 6)	2	$19,950.00	$39,900.00
2	Start Up	2	$1,000.00	$2,000.00

Terms & Conditions

- Full Terms and Conditions of Sale listed in Appendix A.
- Shipping: FOB KIT Zeller AC&E, Rochester, NY 14607
- Freight: Pre-Pay and Add
- Invoicing: Net. 30 days
    - Invoicing to follow an agreed Schedule Of Values determined at time of Purchase Order
- Delivery:
    - Engineering Submittal: 4 - 6 weeks after receipt and acceptance of purchase order
    - Control Panels: 6 - 8 weeks after approved Engineering Submittal
- Purchase order acceptance is expressly based upon Zeller AC&E. standard terms and conditions
- Cancellation Policy:
    - Please note that the products and services listed in this proposal are custom, made to order items, and cannot be returned. In the event this order is cancelled or modified for any reason, the Contractor is obligated for cost and expenses incurred by Zeller AC&E as a result of the cancellation, modification, returns, progress being stopped or other changes from proposed quantities and conditions specified herein.

- Warranty:
    - Zeller AC&E guarantees all workmanship for a period of 12 months from date of shipment. Component Warranties are limited to that provided by the manufacturers—component warranties will be transferred to the owner.
- Proposal is Valid for: 30 days

Please let me know of any questions or need for additional information.

Best regards,

Tom McDonough

Appendix A

1. TERMS AND CONDITIONS. Seller's willingness to offer goods or services ("Products") for sale or accept an order for Products is expressly subject to the terms and conditions contained herein and published online at https://ec.kamandirect.com/us/content/terms/termsofsale.htm. Seller rejects any different or additional terms or conditions in any order, other document or other communication issued by Buyer.

2. SHIPMENT; DELIVERY; TITLE AND RISK OF LOSS. All unconfirmed delivery dates are approximate. Seller is not responsible for damages resulting from shipping delays caused by circumstances outside Seller's control. Regardless of the manner of shipment, delivery occurs and title and risk of loss or damage pass to Buyer, upon placement of the Products with the shipment carrier at Seller's facility.

3. WARRANTY.

A. Warranty for Distributed or Third-Party Products. Please note that products, supplies, components or devices manufactured by a third party ("Third Party Product") may constitute, contain, be contained in, incorporated into, attached to, distributed by, or packaged together into, Seller's Value Added Products. Seller's warranties do not cover Third Party Products. In the case of Third Party Products, Seller's sole obligation shall be limited to making any existing applicable manufacturer's warranties pertaining to such products available to Buyer to the extent Seller can legally do so. Buyer's sole remedy for breach of this warranty, and subject to Seller's sole discretion, is either repair or replacement.

B. Warranty for Seller Designed, Engineered, Built, or Assembled Products ("Value Added Products"). Seller warrants that the Value Added Products sold hereunder shall be free from defects in material or workmanship for a period of twelve (12) months from the date of shipment. Buyer's sole remedy for breach of this warranty, and subject to Seller's sole discretion, is either repair or replacement.

C. Warranty for Seller Services (including Repairs and Build-To-Print). Seller warrants to Buyer that it shall perform the Services using personnel of required skill, experience and qualifications and in a professional and workmanlike manner in accordance with generally recognized industry standards for similar services and that the Product will materially conform to Specifications. Buyer's sole remedy for breach of this warranty, and subject to Seller's sole discretion, is either repair or reperformance.

D. Disclaimer. All prices are based upon the exclusive limited warranties stated above and upon the following disclaimer: THE WARRANTIES LISTED ABOVE ARE THE SOLE AND ENTIRE WARRANTIES PERTAINING TO PRODUCTS PROVIDED. ALL OTHER WARRANTIES ARE EXCLUDED, WHETHER EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, INCLUDING BUT NOT LIMITED TO ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Warranties do not extend to any losses or damages due to misuse, accident, abuse, neglect, normal wear and tear, negligence, unauthorized modification or alteration, use beyond rated capacity, unsuitable power sources or environmental conditions, improper installation, repair, handling, maintenance or application or any other cause not the fault of Seller. To the extent that Buyer or its agents have supplied specifications, information, representation of operating conditions or other data to Seller in the selection or design of the Product and the preparation of Seller's quotation, and in the event that actual operating conditions or other conditions differ from those represented by Buyer, any warranties or other provisions contained herein that are affected by such conditions shall be null and void.

4. CLAIMS; COMMENCEMENT OF ACTIONS. Buyer agrees to inspect Products within five calendar days of receipt and agrees to immediately notify Seller of any defects, nonconformities or shortages. Buyer waives any right to object to such defects, nonconformities or shortages after such time. Any claim or action against Seller based upon breach of contract or any other theory, including tort, negligence, or otherwise must be commenced within twelve (12) months from the date of the alleged breach or other alleged event, without regard to the date of discovery.

5. CANCELLATION/CHANGES. Buyer may cancel orders only upon reasonable advance written notice and upon payment to Seller of Seller's cancellation charges which include, among other things, all costs and expenses incurred, and, to cover commitments made, by the Seller and a reasonable profit thereon. Seller's determination of such cancellation charges shall be conclusive. Buyer may request changes or additions to the Products consistent with Seller's specifications and criteria. In the event such changes or additions are accepted by Seller, Seller may revise the price, license fees, and dates of delivery and/or performance dates. Seller reserves the right to change designs and specifications for the Products without prior notice to Buyer, except with respect to made-to-order Products.

6. PAYMENT. Seller's prices do not include any sales, use, or other taxes or duties unless specifically stated. Seller reserves the right to negotiate escalation fees as warranted. Payment for all purchases is due thirty (30) days from the mailing date of invoice. Unpaid invoices beyond the specified payment date incur interest at the maximum allowable rate under applicable law.

7. RETURNS. Product may not be returned without prior authorization. A ten percent (10%) restocking charge, after inspection and in the opinion of the Seller, shall be made upon all Products returned for credit. Products returned for credit must be returned within five (5) business days after receipt, accompanied by Seller's invoice number and date of purchase, and be unopened in the original packaging. Custom, made-to-order or special Products including nonstandard components are not returnable.

8. BUILD-TO-PRINT. Where the Seller is responsible for manufacturing or servicing Product to Buyer's specifications, engineering data, drawings, schematics, materials, components, data or requirements ("Specifications"), the Buyer is solely responsible for determining the suitability and sufficiency of those Specifications, and assumes sole responsibility for the outcome and performance of Product based upon those Specifications. Additionally, Buyer is responsible for making the final selection of Product and assuring that all performance, endurance, maintenance, safety and warning requirements are met.

9. BUYER'S OBLIGATION; RIGHTS OF SELLER. To secure payment of all sums due or otherwise, Seller retains a security interest in all Products delivered to Buyer and this agreement is deemed to be a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect its security interest.

10. FORCE MAJEURE. Seller does not assume the risk and is not liable for delay or failure to perform any of Seller's obligations by reason of events or circumstances beyond its reasonable control (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation: accidents, strikes or labor disputes, acts of any government or government agency, acts of nature, delays or failures in delivery from carriers or suppliers, shortages of materials, or any other cause beyond Seller's control.

11. WAIVER AND SEVERABILITY. Failure to enforce any provision of this agreement will not invalidate that provision; nor will any such failure prejudice Seller's right to enforce that provision in the future. Invalidation of any provision of this agreement by legislation or other rule of law shall not invalidate any other provision herein. The remaining provisions of this agreement will remain in full force and effect.

12. DELAY. Seller reserves the right to invoice for all items purchased, all work completed or in progress, and for any other commitments made by Seller on behalf of the Buyer if Buyer delays contract progress for a period exceeding six (6) weeks.

13. GOVERNING LAW. This agreement and the sale and delivery of all Products are deemed to have taken place in, and shall be governed and construed in accordance with, the laws of the State of Connecticut without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of Hartford County, Connecticut with respect to any dispute, controversy or claim arising out of or relating to this agreement.

14. INDEMNITY. (a) Seller agrees to hold Buyer harmless from all loss, liability, claims or expenses (including reasonable attorney's fees) awarded in a final judgment by a court of competent jurisdiction arising from bodily injury or property damage (including death) to any person caused directly by the recklessness or willful misconduct of Seller in the performance of this Agreement; (b) Buyer shall indemnify, defend, and hold Seller harmless from any losses, claims, liabilities, damages, lawsuits, judgments and costs (including attorney fees and defense costs), whether for personal injury, property damage, patent, trademark or copyright infringement or any other claim, brought by or incurred by Buyer, Buyer's employees, or any other person, arising out of: (i) improper selection, application, design, or other misuse of Products purchased by Buyer from Seller; (ii) any act or omission, negligent or otherwise, of Buyer; (iii) Seller's use of patterns, plans, drawings, or specifications furnished by Buyer to manufacture Products; or (iv) Buyer's failure to comply with these terms and conditions. Seller shall not indemnify Buyer under any circumstance except as otherwise provided.

15 INSURANCE. Seller agrees to procure and maintain, at its sole cost and expense, the following insurance underwritten by reputable insurance companies licensed to do business in the states in which the work or any portion of the work is performed for the entire term of this Agreement: Workers' Compensation insurance with statutory limits in accordance with the laws of the state in which the work or any portion of the work is performed; Employers' Liability insurance with limits of $1 million each accident for bodily injury by accident or $1 million each employee for bodily injury by disease. Commercial General Liability insurance with a limit of $2 million each occurrence. Business Automobile Liability insurance with a limit of $2 million any one accident or loss for injuries, including accidental death, and property damage covering all owned, non-owned and hired vehicles. Upon Buyer's written request: 1) Seller shall provide Buyer with certificates of insurance as evidence that the policies providing such coverage and limits are in full force and effect; 2) shall provide Buyer with renewal certificates of insurance within ten business days following the inception of the new policy period; 3) shall name Buyer as a "Certificate Holder" for each of the above policies. For its part, Buyer shall require its insurer to waive all rights of subrogation against Seller's insurers and Seller.

16. LIMITATION OF LIABILITY. NEITHER PARTY SHALL BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS, DIMINUTION IN VALUE OR REPUTATION, OR LOST OPPORTUNITY), SPECIAL, PUNITIVE OR LIQUIDATED DAMAGES, DIRECTLY OR INDIRECTLY, ARISING OR RESULTING FROM THE BREACH OF ANY OF THE TERMS HEREOF OR FROM THE SALE, HANDLING OR USE OF THE PRODUCTS SOLD. SELLER'S LIABILITY HEREUNDER, FOR BREACH OF WARRANTY, NEGLIGENCE OR OTHERWISE, IS EXPRESSLY LIMITED AT SELLER'S OPTION TO: (A) TO THE REPLACEMENT AT THE AGREED POINT OF DELIVERY OF ANY PRODUCTS FOUND TO BE DEFECTIVE OR NOT TO CONFORM TO THE SPECIFICATIONS SET FORTH HEREIN, (B) TO THE REPAIR OF SUCH PRODUCTS, OR (C) TO THE REFUND OR CREDITING TO BUYER OF THE PRICE OF SUCH PRODUCTS.

17. COMPLIANCE WITH LAWS. Buyer agrees to comply with all applicable laws, regulations, import and export laws and regulations of the Buyer's country and the United States of America, including but not limited to the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR). Buyer further agrees that for any EAR or ITAR controlled product, it shall not directly or indirectly, sell, export, re-export, transfer, divert or otherwise dispose of in any other country, or to any prohibited party, any such controlled product, either in its original form or after being incorporated into another end-item, without the prior written approval of the relevant U.S. Government authority.

18. DISPUTE RESOLUTION. If a dispute arises out of or relates to this these terms or their breach, the parties shall attempt to resolve such dispute through the dispute resolution procedures set forth herein ("Resolution Procedures"). If any dispute arises under this agreement, either party may notify the other in writing of the existence of such dispute and the commencement of the Resolution Procedures. Within twenty (20) business days after receipt of the commencement notice the parties shall conduct a hearing at a mutually agreed upon location and time. The hearing shall be conducted before a hearing panel of one senior executive of from each party ("Hearing Executives"). During the hearing each party shall presents its position, and each party shall be entitled to a rebuttal. The Hearing Executives will reach agreement on the order of presentations and other procedural issues regarding the hearing. At the conclusion of the hearing, the Hearing Executives shall meet to attempt to resolve the dispute. The Resolution Procedures shall be deemed terminated if the parties have not executed a written settlement of the dispute on or before the tenth (10th) business day following the conclusion of the hearing. Unless a written settlement is executed, any promises or agreements made by the parties at the hearing shall not be binding on the parties. All discussions, offers, promises, statements, or conduct made in the course of the Resolution Procedures are privileged, confidential, inadmissible, and not discoverable for any purpose. If the Hearing Executives are unable to resolve the dispute within forty-five (45) days of the date of the commencement notice, either party may institute litigation.

19. MISC. Unless otherwise agreed in writing this agreement contains the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale. All prior or contemporaneous written or oral agreements or negotiations are herein merged. These terms may only be amended, modified or supplemented by an agreement in writing signed by each party. If any term or provision of this Agreement is determined to be invalid, illegal or unenforceable, such invalidity, illegality or unenforceability shall not affect any other term herein.

NIAGARA FALLS WATER BOARD RESOLUTION # 2018-07-017

AUTHORIZING FUNDS TO PROCURE TWO ADDITIONAL SETS OF SEDIMENTATION BASIN SCRAPER BLADES

WHEREAS, at its June 2018 meeting and pursuant to Resolution 2018-06-011, as amended, the Niagara Falls Water Board ("Water Board") authorized funds to fabricate two stainless steel scraper blade assemblies for wastewater treatment plant sedimentation basins; and

WHEREAS, a total of three sedimentation basins needed new scraper blade assemblies; and

WHEREAS, with the fabrication of two more stainless steel scraper blade assemblies in addition to those authorized in June 2018, stainless-steel assemblies will be available for all basins currently in need of scraper blade assemblies and the Water Board will have one extra stainless steel scraper blade assembly on hand in order to reduce the time required for future repairs, improving efficiency, reducing cost, and helping the wastewater plant function as well as is possible given the plant's other limitations and outdated treatment technology; and

WHEREAS, the estimated cost to prepare two additional stainless steel scraper blade assemblies is $120,000, with said assemblies to be fabricated using pre-bid indefinite delivery/indefinite quantity contracts and/or Water Board personnel, as appropriate

* CONTINUED ON NEXT PAGE *

NOW THEREFORE BE IT

RESOLVED, that on behalf of the Niagara Falls Water Board, its Executive Director hereby is authorized expend up to $120,000 in Water Board funds to procure two additional wastewater treatment plant sedimentation basin stainless steel scraper blade assemblies.

Water Board Personnel Responsible for Implementation of this Resolution:
Executive Director

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

On July 30, 2018, 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 Forster	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Kimble	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Larkin	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Board Member Leffler	**[ ]**	**[ ]**	**[ ]**	**[ ]**
Chairman O'Callaghan	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Signed By:

_____
Daniel T. O'Callaghan, Chairperson

Vote Witnessed By:

_____
Sean W. Costello, Secretary to Board