

**TOWN OF BYRON
INFORMATIONAL MEETING**

WASTEWATER TREATMENT PLANT IMPROVEMENTS

May 31, 2023

The Public Information Meeting was called to order by Supervisor Yasses at 7:00 p.m. at the South Byron Fire Hall with the following people present:

Supervisor.....Peter Yasses
Councilmen.....Jeff Thompson
Tom Felton
Josh Kent
Eric Zuber
Highway Superintendent.....David Leaton
Wastewater Operator, Camden Group.....Shaun Dempsey
Town Clerk.....Debra Buck-Leaton

Invited Guests:

Attorney Paul Boylan.....Boylan Law Office
Scott Mattison.....MRB Group
Mark Bailey.....MRB Group
Bill Davis.....MRB Group

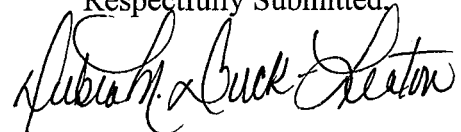
Public:

Don Yaxley
Darla Barnum
Charlene and Dan Boas
George Squires
Michelle and Dwane Weatherell
Candy Hensel

MRB Group made a Power Point presentation reviewing the attached information regarding the Wastewater Treatment Plant Improvements Preliminary Engineering Report.

The floor was opened to the public for a question and answer session.

Respectfully Submitted,



Debra M. Buck-Leaton
Town Clerk

Town of Byron

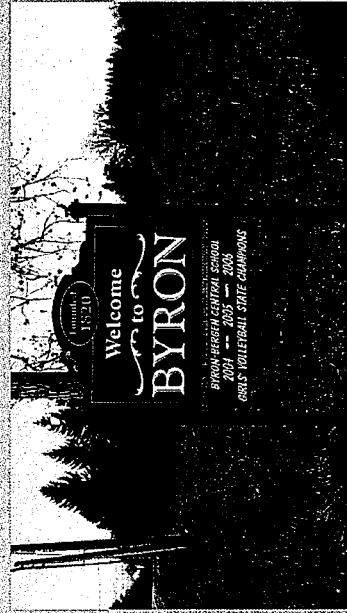
Wastewater Treatments Plant

Improvements

Preliminary Engineering Report (PER)

Presented by:

MRB Group



MRB | *group*

Town Board

Town Supervisor

Peter Yasses

Town Board

Josh Kent

Eric Zuber

Thomas Felton

Jeff Thompson

Support to Town Board

Town Clerk

Debra Buck-Leaton

Town Attorney

Paul Boylan

Town Engineer – MRB Group

Bill Davis, Director of Water Resources Engineering

Scott Mattison, PE

Mark Bailey, PE

MRB *group*

Public Information Meeting Purpose

- *Explain Preliminary Engineering Report (PER) developed and it's role in pursuing grant funding opportunities for the Town*
- *Review work completed to date*
- *Review next steps*
- *Answer residents questions*

Goals and Objectives

- Provide affordable sanitary sewer service.
- Maximize potential grants and provide best funding package to Town
 - WQIP (Water Quality Improvement Program) Grant awarded early 2023 - \$1 million for disinfection
 - Hardship financing eligible - 0% interest loan for the Consolidated Sewer District over 30 years through the Clean Water State Revolving Fund (CWSRF)
 - WIIA (Water Infrastructure Improvement Act) Grant application
 - BIL (Bipartisan Infrastructure Law) Funding application
- Create a long-term plan for the Town's sanitary sewer system that will position the Town to meet current and future NYSDEC discharge requirements to State waterbodies

Background

- Town Wastewater Treatment System consists of three (3) outfalls:
 - Central Byron (Outfall 001)
 - South Byron (Outfall 002)
 - North Byron (Outfall 003)
- One (1) State Pollutant Discharge Elimination System (SPDES) permit issued to Town thru NYSDEC gives Town the right to discharge from the 3 outfalls to Black Creek (Central and South) and Spring Creek (North)
- Current facilities were built in the mid-1980s

Current Wastewater Infrastructure

- All three (3) wastewater treatment plant sites are similar:
 - Residences/businesses have septic tanks
 - Septic tank effluent ("gray water") flows to sanitary sewer collection system
 - Collection system brings gray water to either North, Central or South Byron wastewater treatment plants which consist of:
 - Lift station
 - Septic tank
 - Flow meter
 - Dosing pumps and valves
 - Sand filter beds for treatment of the gray water (i.e. community leach fields)
 - Outfall to either Black Creek or Spring Creek

Problem Identification

1. Seasonal Effluent Disinfection Requirement by NYSDEC
2. Age of Infrastructure and Ammonia SPDES Limit Compliance
3. Future Concerns – Total Phosphorous

Problem Identification

1. Seasonal Effluent Disinfection Requirement by NYSDEC
 - Statewide effort requiring effluent disinfection prior to entering waterbody
 - Town SPDES permit compliance timeline requires this to be complete by May 1, 2025, and the Town must be able to comply with a fecal coliform limit
 - Town petitioned NYSDEC for disinfection waiver for North Byron outfall based on low fecal coliform numbers in existing configuration. NYSDEC granted waiver, but noted this waiver "does not guarantee disinfection will not be required in the future"

Problem Identification

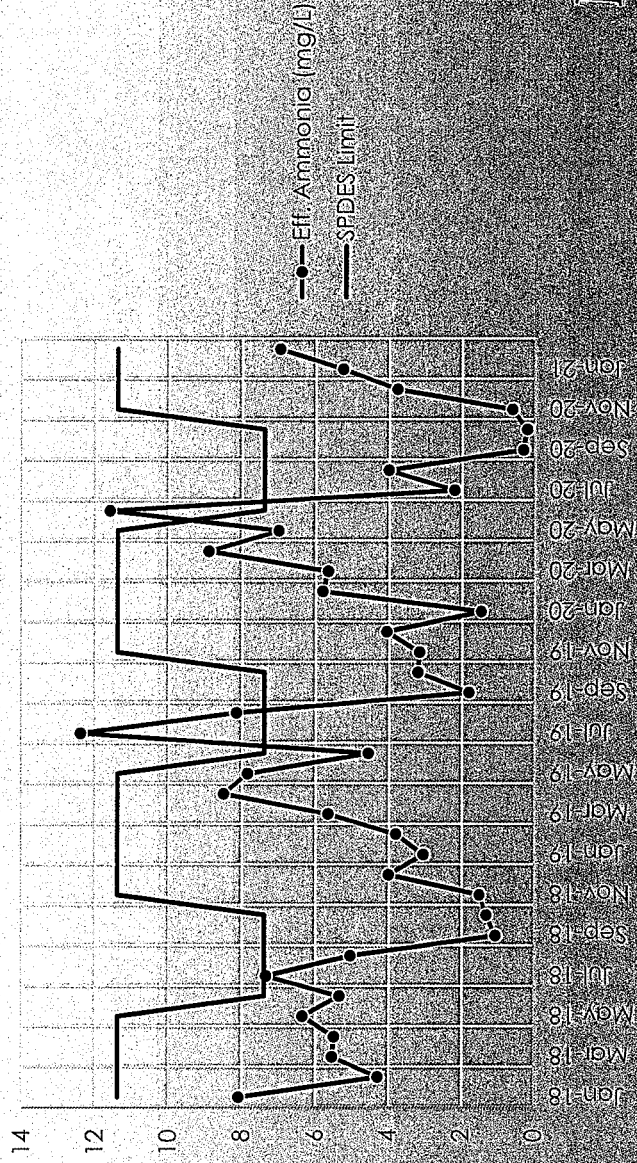
- 2. Age of Infrastructure and Ammonia SPDES Limit Compliance
 - Similar to residential leach fields, community sand filter beds have a useful life
 - Sand filter beds are +/- 40 years old
 - Sewer District-wide - Septic tanks require replacement now
 - Equipment at both Central and South Byron require replacement
 - South Byron sand filter beds currently have operational issues - sections with minimal or no flow capacity

Problem Identification

2. Age of Infrastructure and Ammonia SPDES Limit Compliance (continued)

- Central Byron sand filter bed has highest flows and loading
- Central Byron (below) has experienced issues meeting seasonal NYSDEC permit limits for Ammonia during peak loading events (flow and BOD)

Outfall 001 (Central) Ammonia



Problem Identification

3. Potential Future modifications to SPDES Permit
 - Phosphorous - Draft Total Maximum Daily Load (TMDL) – Black Creek
 - Current SPDES permit does not have a limitation for total phosphorous for any of the three (3) Town outfalls
 - DEC has indicated to the Town that a phosphorous limit is a possibility in the future, most recently in Dec. 2021 when SPDES permit and fact sheet was issued
 - Draft TMDL produced by NYSDEC identifies large reductions in total phosphorous from South Byron specifically

DRAFT

Total Maximum Daily Load (TMDL) for Phosphorus in Upper Black Creek and Bigelow Creek

Prepared by:
New York State Department of Environmental Conservation
625 Broadway, 4th Floor
Albany, NY 12233



September 2013

MRB *group*

Alternatives Evaluation

1. Disinfection Improvements Only
2. Rehabilitation of Sand Filtration Beds at Central and South Byron ^{1,2}
3. New Wastewater Treatment Plants at Central and South Byron ^{1,2}
4. Consolidation of Central and South Byron into one (1) new Wastewater Treatment Plant ^{1,2}
5. Pump Station and Forcemain Conveyance to Monroe County Sewer System ^{1,2}

1) Includes Disinfection Improvements

2) Includes Septic Tank Replacements

Alternatives Evaluation

1. Disinfection Improvements Only

- Town is required to comply with a disinfection limit by May 1, 2025 (fecal coliform based limit)
- Ultraviolet disinfection recommended
- Would require projects to occur at Central and South Byron
- Addresses immediate regulatory requirements, however other significant infrastructure issues not addressed:
 - Sand Filter Beds will require a project within 1-3 years based on age and performance, and current operational issues
 - Future modifications to SPDES permit (e.g. phosphorous) would need to be provided at each outfall

Estimated Project Cost: \$1.68 million
(\$533 annually per EDU)**

Alternatives Evaluation

2. Rehabilitation of Sand Filtration Beds at Central and South Byron (*includes Disinfection Improvements*)

- Excavation and removal of sand filter beds, subsurface piping, liners, etc.
- Alternative would be to replace in-kind
- Pros: Long-term solution assuming no changes to SPDES permit
- Cons: Requires 2 separate disinfection projects; Labor intensive; Significant disposal costs of used sand - DEC would need to approve reuse; Future modifications to SPDES permit would require multiple projects

**Estimated Project Cost: \$13.02 million
(\$1,101 annually per EDU)**

Alternatives Evaluation

3. New Wastewater Treatment Plants at Central and South Byron (*includes Disinfection Improvements*)

- Abandon sand filter beds
- Construct two (2) new "package plants" at Central and South Byron
- Pros: High quality effluent exceeding SPDES permit (e.g. ammonia); easily accommodate a future phosphorous limit
- Cons: Cost-prohibitive – requires twice the effort for:
 - Required disinfection projects;
 - Any future improvement projects going forward;
 - Operation and maintenance costs;
 - SPDES compliance sampling costs and labor;

Estimated Project Cost: \$13.09 million
(\$1,105 annually per EDU)

Alternatives Evaluation

4. Consolidation of Central and South Byron into one (1) new Wastewater Treatment Plant (*includes Disinfection Improvements*)

- Abandon sand filter beds
- Construct one (1) new "package plant" at Central Byron
- New Pump Station at South Byron with forcemain to Central Byron
- Size new wastewater plant to accept North Byron when needed in future
- Pros: Simplifies all future modifications to Town wastewater infrastructure; high quality effluent exceeding SPDES permit (e.g. ammonia); easily accommodate a future phosphorous limit

**Estimated Project Cost: \$11.83 million
(\$1,037 annually per EDU)**

Alternatives Evaluation

5. Pump Station and Forcemain Conveyance to Monroe County Sewer System (*Disinfection Requirements met by Monroe County SPDES permit*)
- Abandon Central and South Byron (North Byron remains as/is)
 - Construct three (3) new pump stations (Central Byron, South Byron, intermediate pump station) and send to Monroe County Collection System
 - Assumed connection point would be Churchville Pump Station
 - Pros: Removes 2 outfalls from SPDES permit, along with disinfection requirements
 - Cons: Approx. 10 mile forcemain is cost-prohibitive, crosses several jurisdictions and would require land acquisition, would require approval of Monroe County Pure Waters

**Estimated Project Cost: \$17.16 million
(\$1,375 annually per EDU)**

Recommendations

- Alternative #4 - Consolidation of Central and South Byron into one (1) new Wastewater Treatment Plant (including Disinfection Improvements)
- Note: PER recommendation is submitted to NYSEFC in mid-June
- This submittal is for consideration by NYSEFC to provide a funding package to the Town for the project
- Many programs available right now for water infrastructure - great time to achieve long-term solutions (e.g. BIL funds)
- Anticipated to know best available funding by December 2023

Summary of Estimated Costs

Total Estimated Project Cost	\$	11,825,000
Assume 25% WIIA Grant Award	\$	2,706,250
WQIP Disinfection Grant Award	\$	1,000,000
Assume BIL Grant	\$	2,706,250
Remaining Project Costs	\$	5,412,500
<i>Assume Hardship Financing:</i>		
Yearly Debt Service @ 0%, n=30 years	\$	180,417
Current Sewer EDUs		312.5
Yearly Debt Service Cost per EDU	\$	577
Annual Sewer Rate per EDU	\$	\$115 x 4 = \$460
Estimated Annual Cost per EDU	\$	1,037

Project Schedule

July 2023 – Complete Funding Applications

August 2023 - Receive DEC/EFC PER Approval

December 2023 - Notice of WIIA/BIL Grant Awards

Spring 2024 - Survey/Geotech work

Begin Engineering Design and Bidding Documents

Spring 2025 - Start Construction

Spring 2027 - Construction Completion

Thank You

QUESTIONS?

MRB | *group*

Item #	Item description	Chlorination	UV
		Dechlorination	Disinfection
		Total	Total
1	Mobilization/demobilization	\$70,000	\$70,000
2	Site Grading	\$80,000	
	UV Disinfection Equipment w/pre-manufactured heated enclosure		\$400,000
3	Excavation and Backfill	\$100,000	
	Post-aeration		\$100,000
4	Site Piping	\$80,000	
	Electrical		\$200,000
5	Metering Pumps	\$60,000	
6	Chemical Skid	\$40,000	
7	Chlorine Contact Tank System	\$100,000	
	Site restoration		\$50,000
8	Chemical Tank System	\$100,000	
9	Chemical Tank Storage	\$125,000	
10	Effluent Pump Stations/Piping	\$300,000	\$300,000
11	Effluent Pump and Piping	\$40,000	\$40,000
12	Dissolved Oxygen Mixing Manhole/Equip	\$100,000	
13	Electrical/Controls	\$200,000	
	Subtotal Cost	\$1,395,000	\$1,160,000
	(+) 20% Construction contingency	\$279,000	\$232,000
	(+) 5% Legal, Administration	\$69,750	\$58,000
	(+) 20% Engineering	\$279,000	\$232,000
	(=) Total project cost	\$2,022,750	\$1,682,000
	(-) WQIP Disinfection Grant Award	\$1,000,000	\$1,000,000
	(=) remaining project cost	\$1,022,750	\$682,000
	Yearly debt service cost per EDU (0% for 30 years)	\$109	\$73
	(+) Annual sewer rate	\$460	\$460
	(=) Estimated Annual Cost per EDU	\$569	\$533

Item #	Item description	OPTION #1	OPTION #2	OPTION #3	OPTION #4
		Sand Filter Bed Replacement Total	New WWTP at South and Central Total	New WWTP consolidated at Central Total	Pump Station & foreman to Monroe County Total
1	Mobilization/demobilization	\$30,000	\$150,000	\$150,000	\$300,000
2	Excavation of Sand Filter beds (includes piping & liner removal)	\$1,460,000			
	Maintenance and Protection of Traffic			\$30,000	\$100,000
	Duplex Prepackaged Grinder Pump Station (w/new lift & Dosing pumps)		\$600,000	\$300,000	\$600,000
3	Disposal/Hauling of sand filtration material to landfill	\$2,838,240			
	6" DR-11 San. Sewer FM-incl. excavation and backfill			\$1,125,000	\$5,400,000
	Gas Services		\$50,000	\$50,000	\$75,000
4	New sand filter media, liner, piping installed	\$1,168,000			
	Directional drilling			\$100,000	\$800,000
5	New lift and dosing pumps, piping	\$600,000			
	Asphalt/Gravel repair			\$25,000	\$120,000
6	UV Disinfection/Post aeration	\$500,000			
	Fencing			\$15,000	\$45,000
	Abandonment of South and Central sand beds		\$100,000	\$100,000	\$100,000
7	Effluent Pump and Piping	\$40,000	\$40,000	\$40,000	\$40,000
	Smith and Loveless Package Plant (with excavation)		\$3,300,000	\$1,650,000	
8	Septic Tank replacement	\$2,300,000	\$2,300,000	\$2,300,000	\$2,300,000
	Pole barn for blowers, Electric/Control Panel		\$700,000	\$360,000	
9	Site restoration	\$40,000	\$10,000		
	Lawn restoration			\$30,000	\$144,000
	UV Equipment		\$300,000	\$200,000	
10	Post aeration		\$100,000	\$35,000	
	Air/vacuum release valve manholes			\$75,000	\$375,000
11	Site piping		\$500,000	\$250,000	\$250,000
	Piping/launch station			\$20,000	\$60,000
19	Base slab and UV and Post aeration tankage			\$150,000	
21	Electrical Contract		\$500,000	\$750,000	\$600,000
22	Generator		\$200,000	\$200,000	\$300,000
23	Electrical Services		\$50,000	\$50,000	\$75,000
24	HVAC Contract		\$75,000	\$100,000	\$100,000
25	Plumbing Contract		\$50,000	\$50,000	\$50,000
	Subtotal Cost	\$8,976,240	\$9,025,000	\$8,155,000	\$11,834,000
	(+) 20% Construction contingency	\$1,795,248	\$1,805,000	\$1,631,000	\$2,366,800
	(+) 5% Legal, Administration	\$448,812	\$451,250	\$407,750	\$591,700
	(+) 20% Engineering	\$1,795,248	\$1,805,000	\$1,631,000	\$2,366,800
	(=) Total project cost	\$13,015,548	\$13,086,250	\$11,824,750	\$17,159,300
	(-) WQIP Disinfection Grant Award	\$1,000,000	\$1,000,000	\$1,000,000	\$0
	(-) WIIA Grant	\$3,004,000	\$3,021,750	\$2,706,250	\$4,290,000
	(-) BIL Grant	\$3,004,000	\$3,021,750	\$2,706,250	\$4,290,000
	(=) remaining project cost	\$6,007,548	\$6,042,750	\$5,412,250	\$8,579,300
	Yearly debt service cost per EDU (0% for 30 years)	\$641	\$645	\$577	\$915
	(+) Annual sewer rate	\$460	\$460	\$460	\$460
	(=) Estimated Annual Cost per EDU	\$1,101	\$1,105	\$1,037	\$1,375

CONCERNS ADDRESSED:

required disinfection
new or elimination of aged (troubled) sand filter beds
new septic tanks in sewer district
new generators
ready for future phosphorous treatment (when required)
eliminate duplication of equipment/operating expenses