

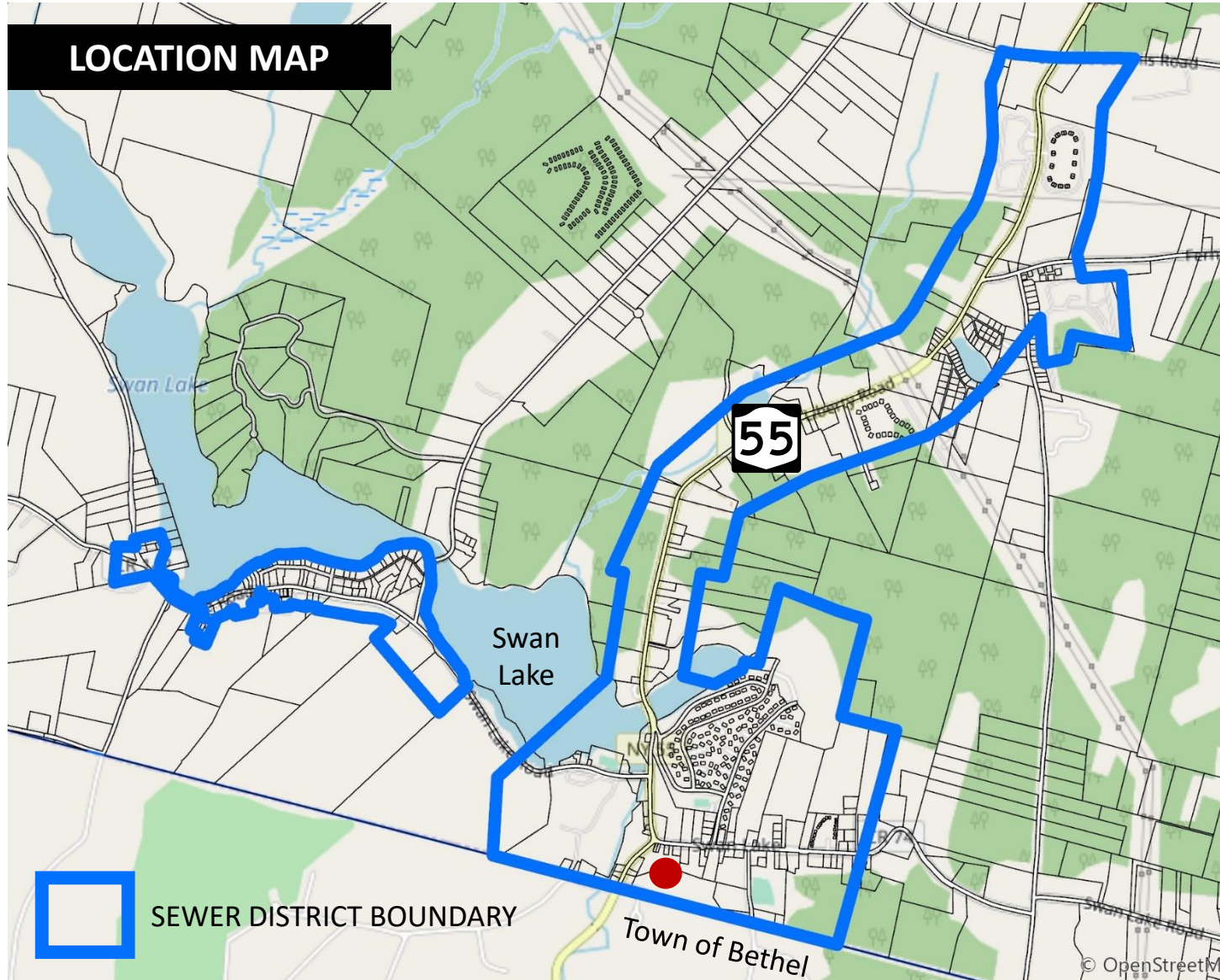


TOWN OF LIBERTY
SWAN LAKE TREATMENT PLANT UPGRADE

PUBLIC HEARING
Tuesday, April 20, 2021



DELAWARE
ENGINEERING, D.P.C.



QUICK FACTS

District area: 1.15 square miles

Service connections: 371

Population served: approx. 1,500

Capacity: 425,000 gallons per day

Year Built: 1986

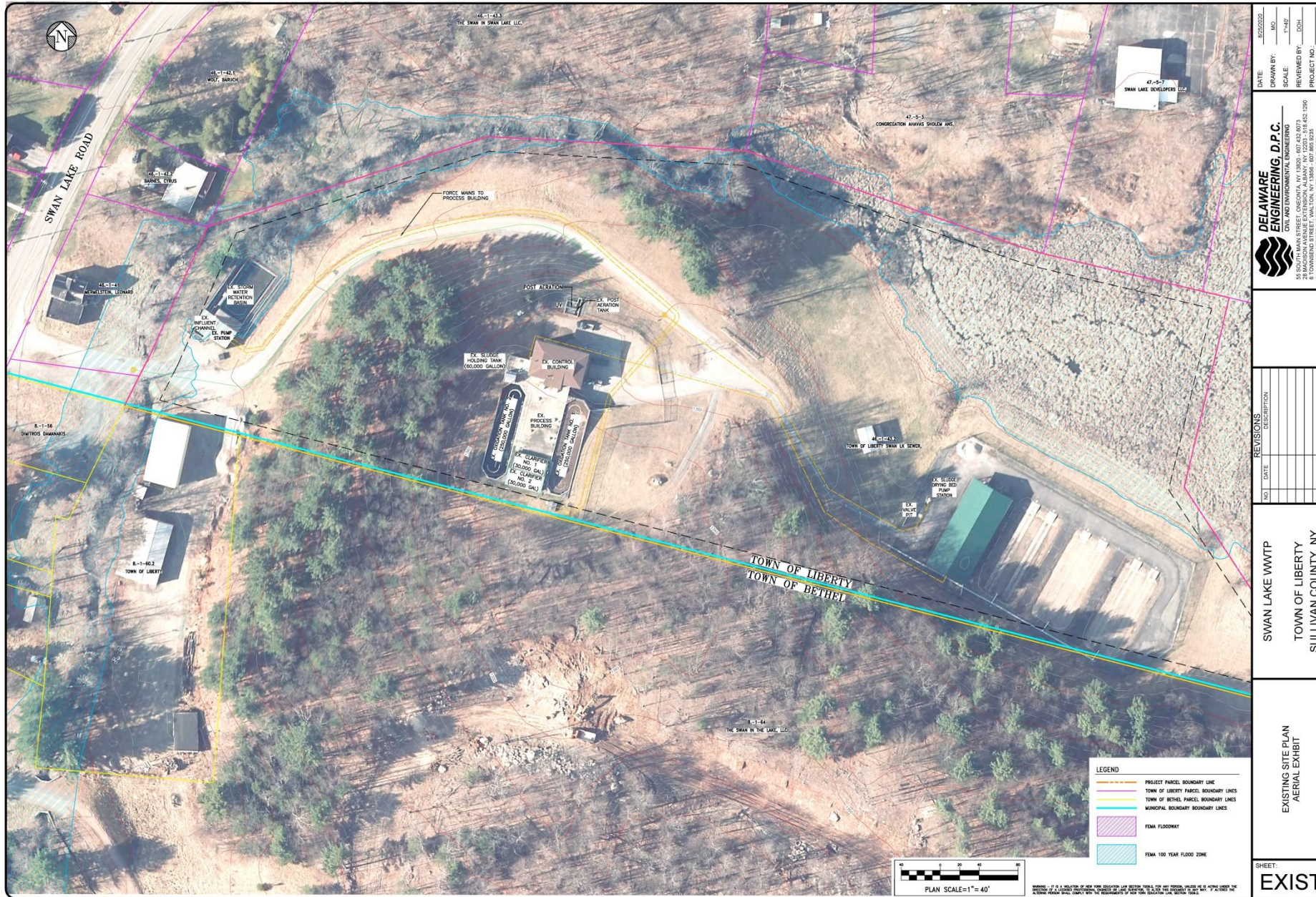
A public hearing is required by law in accordance with **New York State Town Law 202b** whenever a town resolves to undertake a project to improve or reconstruct existing facilities on behalf of a sewer district.



**DELAWARE
ENGINEERING, D.P.C.**

Swan Lake Treatment Plant Upgrade

EXISTING PLANT



The Swan Lake WWTP utilizes an extended aeration, activated sludge, biological treatment system and seasonally required UV disinfection. Waste sludge is dewatered (via gravity) in open-air sludge drying beds and removed from the site and disposed of by a contracted hauler.

The primary system components of the WWTP are:

- Headworks building
- Influent Pump Station
- Oxidation Ditches
- Secondary Clarifiers
- Sludge Holding Tank
- UV Disinfection
- Post-aeration
- Sludge Drying Beds

WHY UPGRADE NOW?

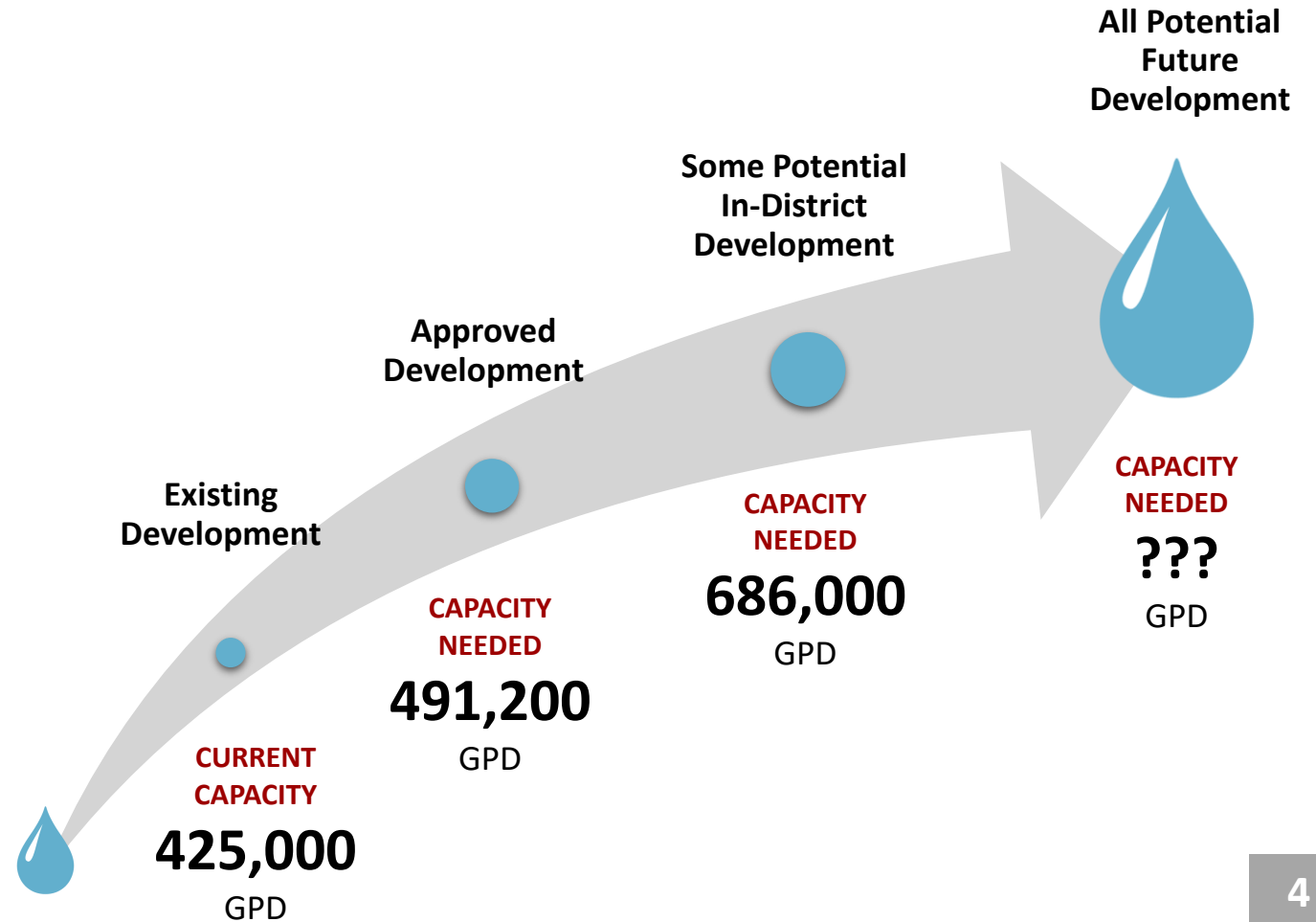
- The existing plant is 35 years old and is approaching the **end of its life expectancy** (typically 35-40 years)
- The town needs to address several **operations & maintenance (O&M)** and **regulatory compliance** issues including:
 - *Excessive rags that impact equipment and performance*
 - *Process call-outs to fix emergency problems resulting in staff overtime costs*
 - *Biological process limitations*
 - *Biosolids (sludge) processing limitations*
 - *Flow capacity limitations*
- Liberty needs to act now to take advantage of a **0% financing** offer from New York State EFC to allow a project finance agreement to be in place by December 2021.
- **DEC regulatory permit limits** may change in the future as more growth happens in the region.



WHY MORE CAPACITY?

- The plant experiences **seasonal capacity limitations**.
- The Planning Board has already approved some new developments that when they are connected to the sewer system, will put the plant **at or over its current permitted capacity**.
- **There is no room to accommodate additional growth** and future growth helps spread the cost of maintaining and operating the sewer system among more users.

The design capacity of a sewer plant is based on how much flow is generated from existing development in the district, plus anticipated future development.





TOWN BOARD CONSENSUS ON RECOMMENDED PLAN:

- Increase plant capacity to 686,000 GPD to provide additional capacity to address currently approved developments and some future growth
- Address existing problems (aging equipment, rags, sludge processing limitations) through a combination of repurposing and upgrading existing facilities and adding new facilities
- Employ advanced waste treatment to meet stricter effluent limits



RECENT ACTIONS TAKEN BY TOWN BOARD:

MARCH 31, 2021

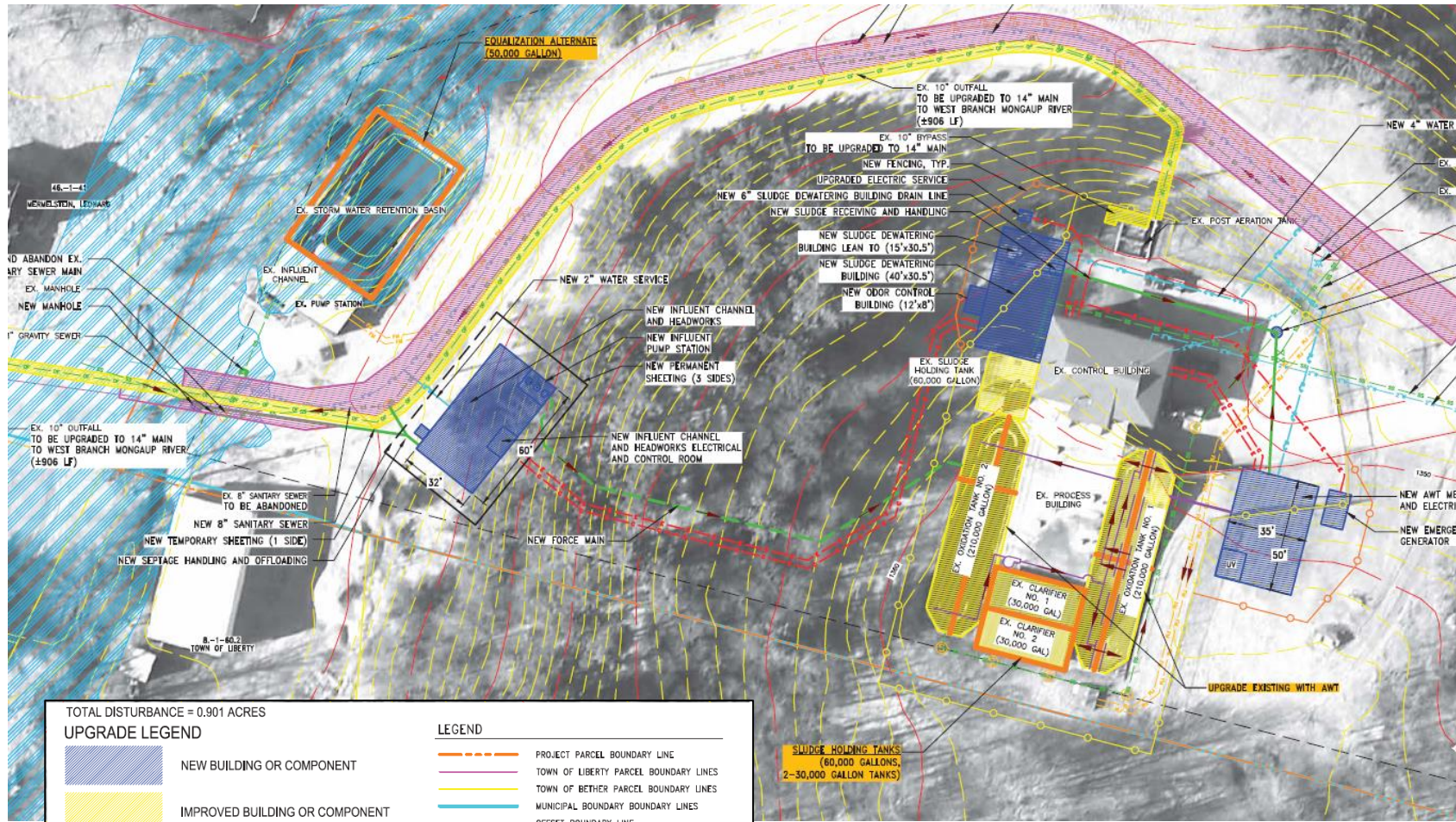
Resolved to proceed with plan for plant upgrade with a capacity of **0.686 MGD** at a maximum cost of **\$18M**

Resolved to proceed with items necessary to complete the 0% hardship application by May 31, 2021

APRIL 5, 2021

Accepted revised Map Plan & Report (MPR) for recommended plan

Approved Order Calling for Public Hearing on April 20, 2021



- RECOMMENDED UPGRADES:**
- New headworks building with septage off-loading
 - New influent pump station
 - New force main to WWTP
 - Upsize existing outfall pipe
 - Convert oxidation ditches to new Advanced Waste Treatment (AWT) building/facility
 - Convert secondary clarifiers to sludge storage
 - New sludge dewatering facilities with liquid sludge off-loading
 - New UV disinfection
 - New generator & data control system
 - New non-potable water system
 - New underground piping, structures, etc.
 - Site work and restoration

TOTAL DISTURBANCE = 0.901 ACRES

UPGRADE LEGEND

	NEW BUILDING OR COMPONENT		PROJECT PARCEL BOUNDARY LINE
	IMPROVED BUILDING OR COMPONENT		TOWN OF LIBERTY PARCEL BOUNDARY LINES
	AREAS TO BE PAVED OR RE-PAVED		TOWN OF BETHER PARCEL BOUNDARY LINES
	ALTERNATE COMPONENTS		MUNICIPAL BOUNDARY BOUNDARY LINES
	NEW ELECTRIC LINES		OFFSET BOUNDARY LINE
	NEW CONTROL LINES		EXISTING GRAVITY SANITARY SEWERS AND MANHOLE
	NEW WATER MAINS		EXISTING SEWER OUTFALL MAIN
	NEW PROCESS PIPING		EXISTING SANITARY SEWER FORCE MAINS
	NEW FORCE MAIN		EXISTING WATER MAINS
	NEW GRAVITY SEWR MAIN AND MANHOLE		EXISTING FENCING
	NEW FENCING		FEMA FLOODWAY
			FEMA 100 YEAR FLOOD ZONE

LEGEND

SLUDGE HOLDING TANKS (60,000 GALLONS, 2-30,000 GALLON TANKS)

WARNING - IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2.

HOW MUCH IS THIS GOING TO COST?

This sewer upgrade is a large capital expense that is planned to be financed over a 30-year period, resulting in a larger annual expense for debt service. With new equipment and a larger plant, it is expected that annual operation & maintenance costs will also go up.

**TOTAL
PROJECT COST**
\$18 Million

INTEREST RATE*
0%

POTENTIAL GRANT*
\$4.5 Million

O&M	CAPITAL
CURRENT \$543,168/yr	CURRENT \$129,064/yr
PROJECTED \$699,400/yr	PROJECTED* \$599,994 0% financing \$449,996 w/\$4.5M grant

** The Town of Liberty is currently eligible for 0% hardship financing and potential 25% matching grant (up to \$4.5M) from the NYS Environmental Facilities Corporation (EFC).*

WHAT DO SEWER USERS CURRENTLY PAY?



A typical user currently pays

\$840

annually for sewer service

**Typical User =
1 O&M unit + 1 Capital unit**

Only properties connected to the sewer system pay for O&M.

*O&M units are based on water use
1 unit = 75,000 gallons*

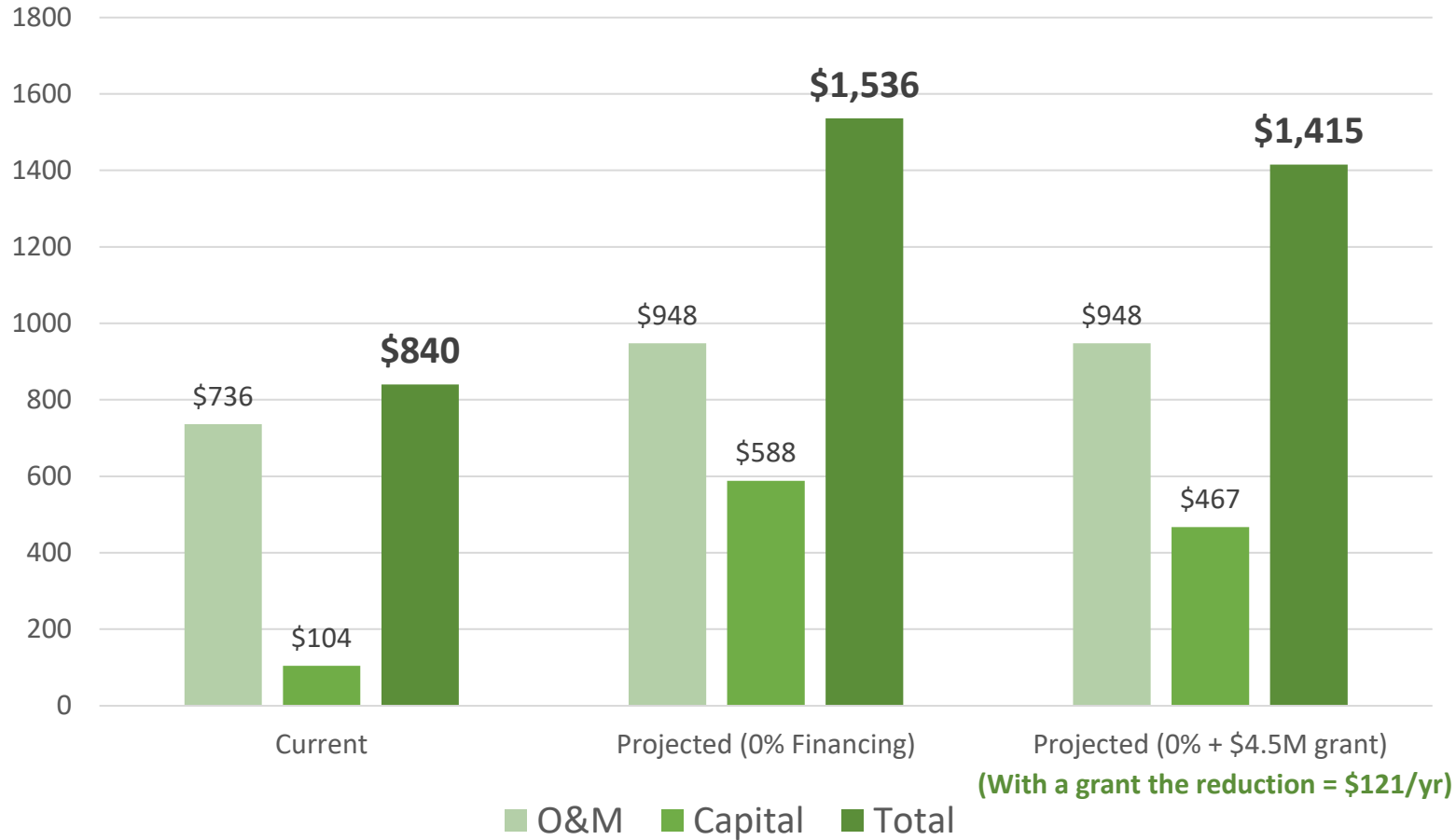
Every property in the district (even vacant land) pays a share of the capital cost.

Capital units are based on property improvements and road frontage

O&M Units and Capital Units are simply measurements used to split the total costs equitably among sewer customers.

Sewer charges are not taxes -- anyone who benefits from being in the sewer district pays them -- even tax-exempt users

HOW WILL SEWER RATES BE IMPACTED?



**Typical User =
1 O&M unit + 1 Capital unit**

Rate impacts are based on current system users and represents the estimated cost/unit for the first year of operation.

WHAT IS THE TOWN DOING TO MITIGATE COSTS?

The Town will pursue grants from the following sources:

- NYSEFC: Water Infrastructure Improvement Act (WIIA)
- Public infrastructure grants through State reps (Gunther & Martucci)
- Federal infrastructure grants through the *American Recovery Plan* currently being debated by Congress

The Town is actively considering the following measures to generate revenue:

- Increasing sewer allocation charges for new hook-ups
- Contributions from developers

As the project is designed, engineering will refine cost-saving measures including:

- Reuse of existing structures
- Extending the useful life of existing equipment & facilities
- Increasing energy efficiency



KEY TAKEAWAYS

- The sewer plant needs to be upgraded for operability and regulatory compliance NOW. It is most economical to proceed now as overall costs increase with time.
- Failure to submit an application for financing on schedule will result in the Town losing the current 0% hardship financing for the upgrades. Hardship eligibility is competitive and varies from year to year.
- The project that is the subject of this hearing is estimated to cost \$18M. The upgrade will address operability & regulatory compliance, and expand the plant to meet current commitments of capacity in the sewer district already made by the Town, with some opportunity for additional development.
- The Town remains committed to a transparent process and to do everything possible to reduce the costs of the project to users including seeking grants and using cost-conscious design.

ANTICIPATED SCHEDULE

April 20, 2021	Public Hearing
April 27, 2021	Deadline for submission of written comments
May 3, 2021	Town Board reviews public comments, reaffirms SEQR negative declaration & adopts bond resolution
May 31, 2021	Deadline for submission of CWSRF finance application and Engineering Report to EFC
June – Dec 2021	Apply for grants, commence engineering design, close on 0% financing
2022-2023	Complete design, undertake permitting, bidding & construction

QUESTIONS?