

TOWN OF LIBERTY  
**SWAN LAKE TREATMENT PLANT UPGRADE**

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PUBLIC MEETING  
Tuesday, May 28, 2024



DELAWARE  
ENGINEERING, D.P.C.

## Why are we here tonight?

### Cost Increases since 2021:

- Since the issuance of the contract and signing of the project financing agreement in 2021 cost of materials and labor necessary to complete the upgrade have exponentially increased

### NYSDEC Permit Review Underway:

- Permit limits are affected by flow into and out of the plant.

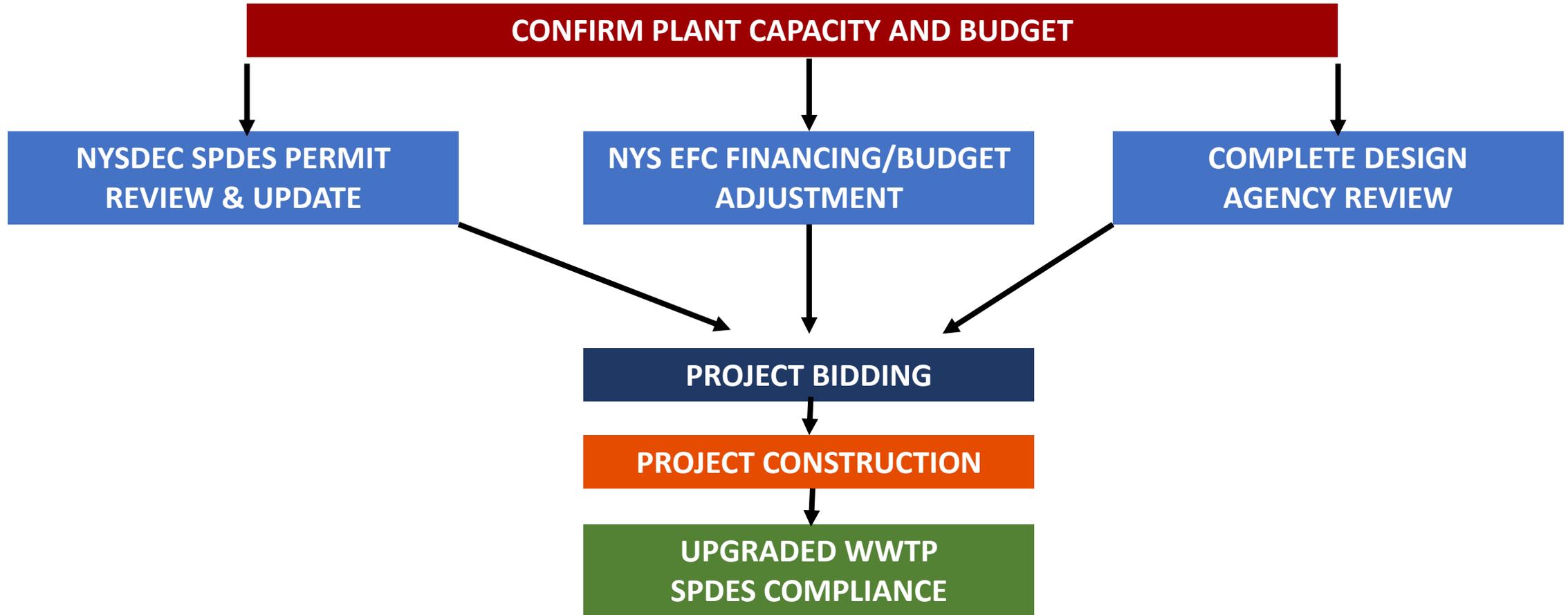
### Budget/Cost + Flow = Impacts to Project Implementation

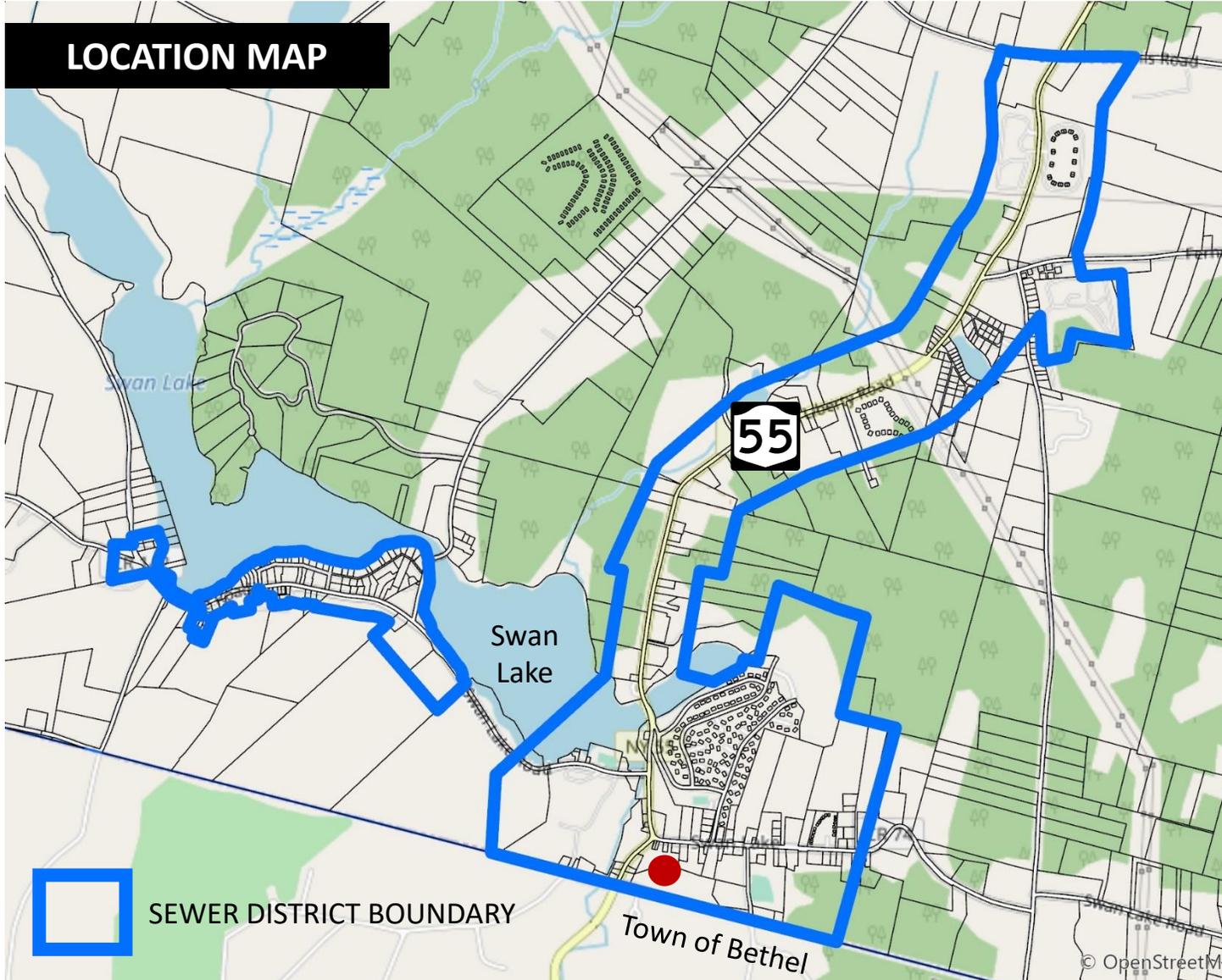
- Review of project history
- District needs
- Project Cost & Funding

### A Plan Forward...



# PLAN FORWARD





### 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



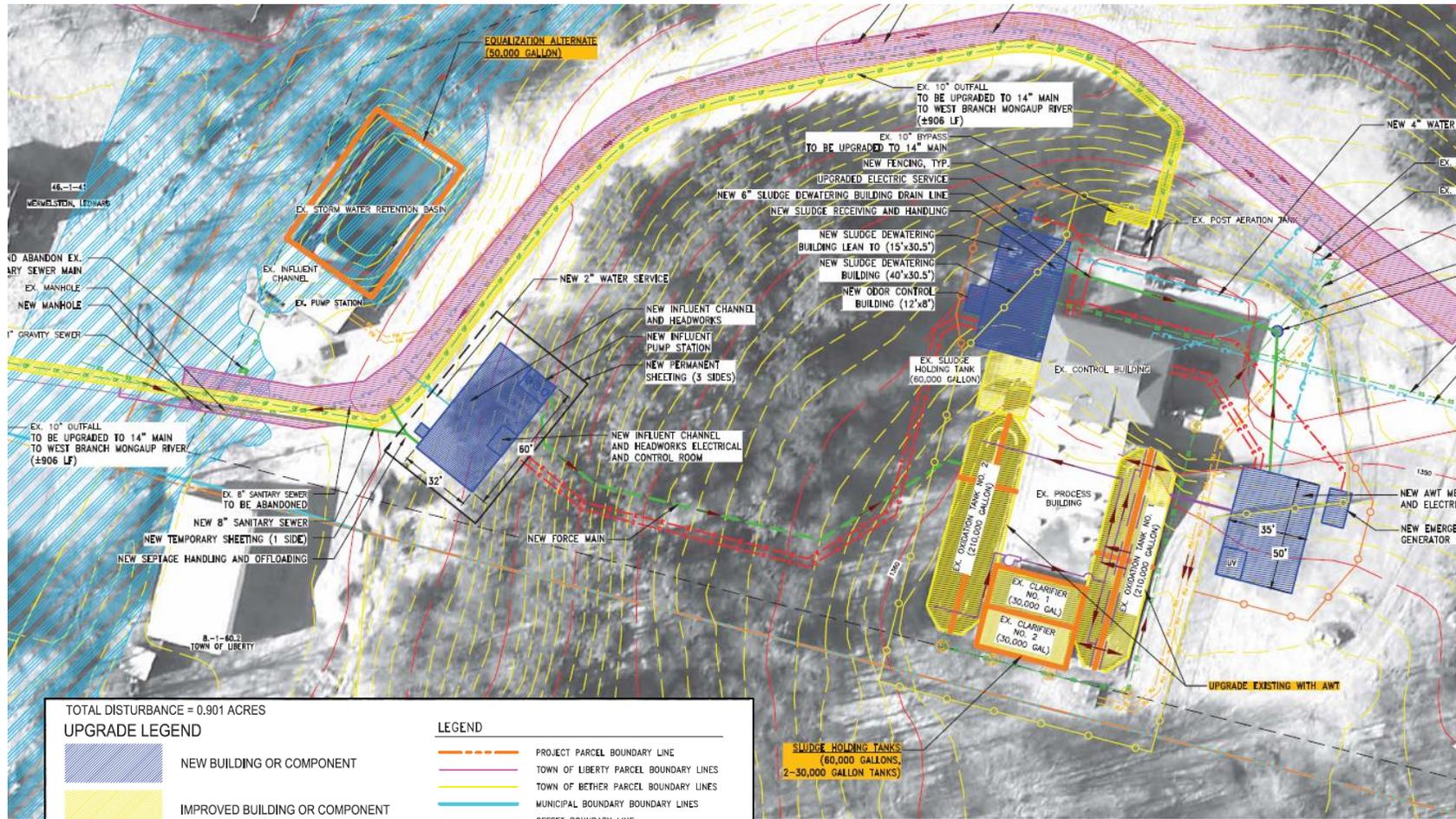
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## WHY UPGRADE NOW?

- 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*
- **Current plant lacks capacity** to satisfy long-term district needs
- **DEC regulatory permit limits** may change in the future as more growth happens in the region and the Town **needs to update the SPDES permit now**
- **Secured \$11.4 Million** in State and Federal Grants





## 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
- Increase capacity up to 960,000 gpd

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.



## **2024 STATUS UPDATE**

### **PROJECT DESIGN**

Engineering design is nearing 50% completion

### **DETERMINING FACTORS**

Understanding that prices have escalated since 2021 it is necessary to confirm plant design, project scope (and cost/budget) for design completion, NYSDEC Permit and NYSEFC Funding

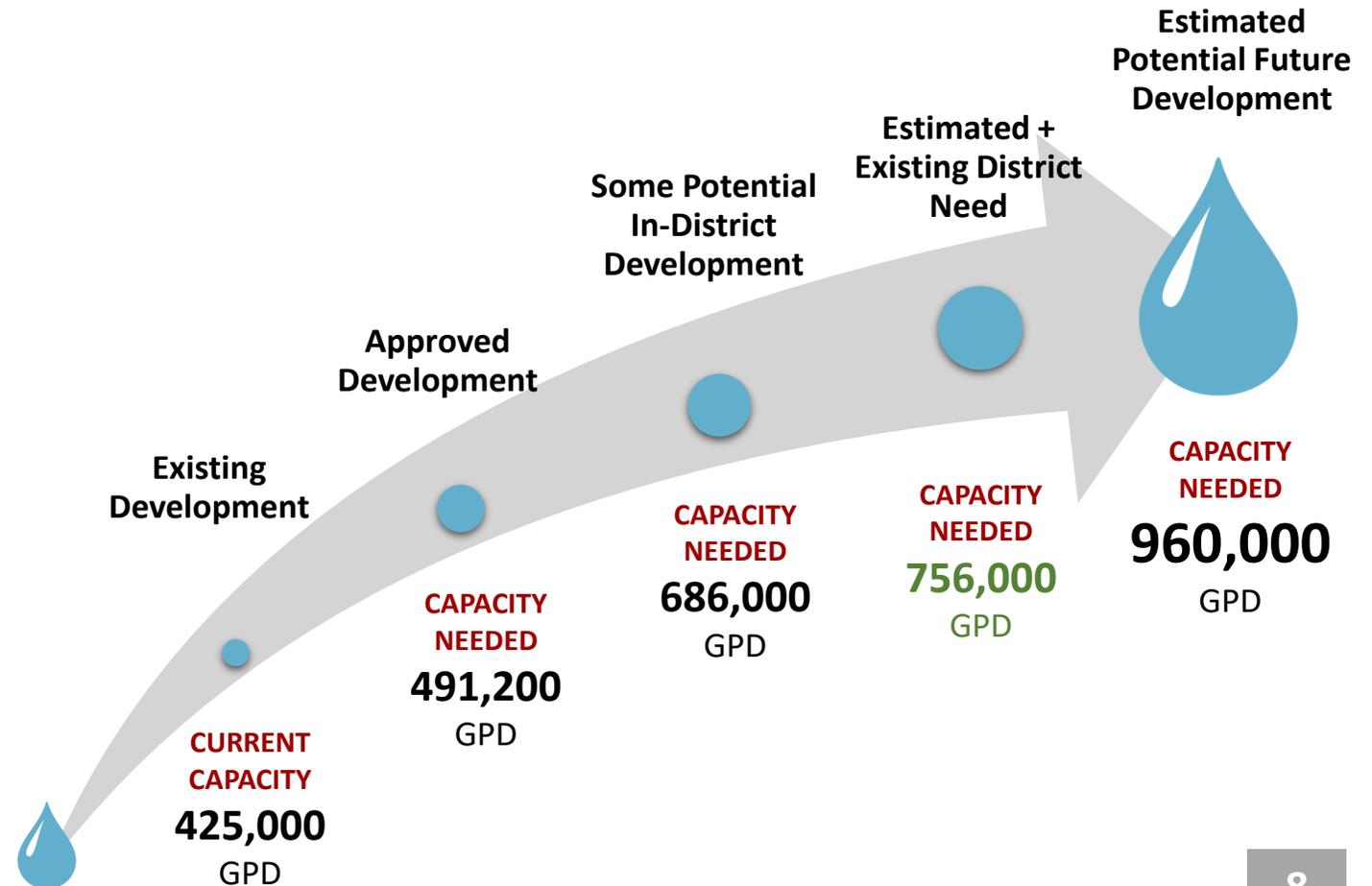
### **PROJECT FINANCE AGREEMENT IN PLACE**

**The Town has executed a Project Finance Agreement (PFA)  
with NYS EFC - includes \$11.4 M in grants**

## 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, can put the plant **at or over its current permitted capacity**.
- **There is no room to accommodate additional growth** and development over the next 20 to 30 years, and future growth helps spread the cost of maintaining and operating the sewer system among more users.
- Potential Current District **Need not met with current 425,000 GPD or 686,000 GPD** (2021 Solution)
- **Town has legal obligation to provide service** to the district (State Requirement)
- **Establish ultimate capacity** now with updated SPDES Permit to secure Town’s waste-load allocation in the receiving water

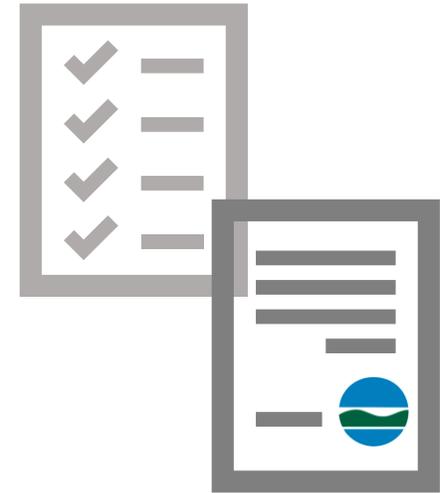
*The design capacity of a sewer plant is based on how much flow is generated from existing development in the district, plus anticipated future development.*



## **NYSDEC PERMIT:**

### **To comply with current draft limits, Advanced waste treatment is necessary**

- NYSDEC is performing a **full technical review of the permit**
- **Limits based on Water Quality standards**, technology ability/performance, etc.
- **Permit and limits are affected by flow**
- **NYSDEC Review takes 3-6 months** after all information is submitted
- **For NYSDEC and NYSEFC to review and approve facility design** (and allow for construction) **an approved NYSDEC Permit is required**



# PROJECT FUNDING AND COST CONSIDERATIONS



## FUNDING

- \$18 M executed PFA
- NYSDEC will consider PFA modification
  - Change Form
  - Amendment of Engineering Report
  - More Grant Funding unlikely

### CURRENT FUNDING

- \$11.4 M WIIA & BIL Grant
- \$6.6 M BIL Loan 0%



## COST

- Costs have increased at unprecedented levels since 2021
- Prime Contactors (general, electrical, HVAC, plumbing) experienced 20-40% cost increase per year (2021-2024)
  - More typical + 3-10% likely going forward
- Availability of products (mixed bag)
- Labor Shortage remains/ busy construction market
- Material costs have not returned to 2020 levels

## 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.*

ESTIMATED TOTAL  
PROJECT COST | BUDGET

**\$40 Million**

INTEREST RATE\*

**0%**

CURRENT GRANT\*

**\$11.4 Million**

O&M	CAPITAL
CURRENT	CURRENT***
<b>\$538,000/yr</b>	<b>\$135,000/yr</b>
PROJECTED	PROJECTED*/**
<b>\$650,000/yr</b>	<b>\$953,333</b>
	<i>\$40 M Project</i> 0% financing with current grants

\* The Town of Liberty is currently eligible for 0% hardship financing and up to \$11.4 M from the NYS Environmental Facilities Corporation (EFC).

\*\*Cost Increase and additional 0% loan pending NYSEFC review

\*\*\* Current capital rates have been essentially the same since 1993

## IMPACTS OF COSTS ON SEWER USER RATES

Current Rate	O&M	Capital	Total
<b>Current</b>	\$829	\$104**	\$933/yr
<b>\$18 M Project</b> With 0% loans only (2021)	\$948	\$587	\$1,535/yr
<b>\$18 M Project*</b> With \$11.4 M secured funding/grants	\$948	\$281	\$1,229/yr
<b>\$40 M Project**</b> With \$11.4 M secured funding/grants	\$881	\$872	\$1,753/yr

\* Cost per Unit for Year One with current number of units (One Sewer User = 1 O&M + 1 Capital Unit)

\*\*Capital Rates have remained essentially unchanged since 1993

## WHAT IS THE TOWN DOING TO MITIGATE COSTS?

### The Town will revisit financing with NYSEFC:

- Current PFA for \$18 M includes WIIA and BIL Grants totaling \$11.4 M in place
- Other Grants?
- Need to submit changes request to NYSEFC to open communications/funding possibilities (Grants?...)

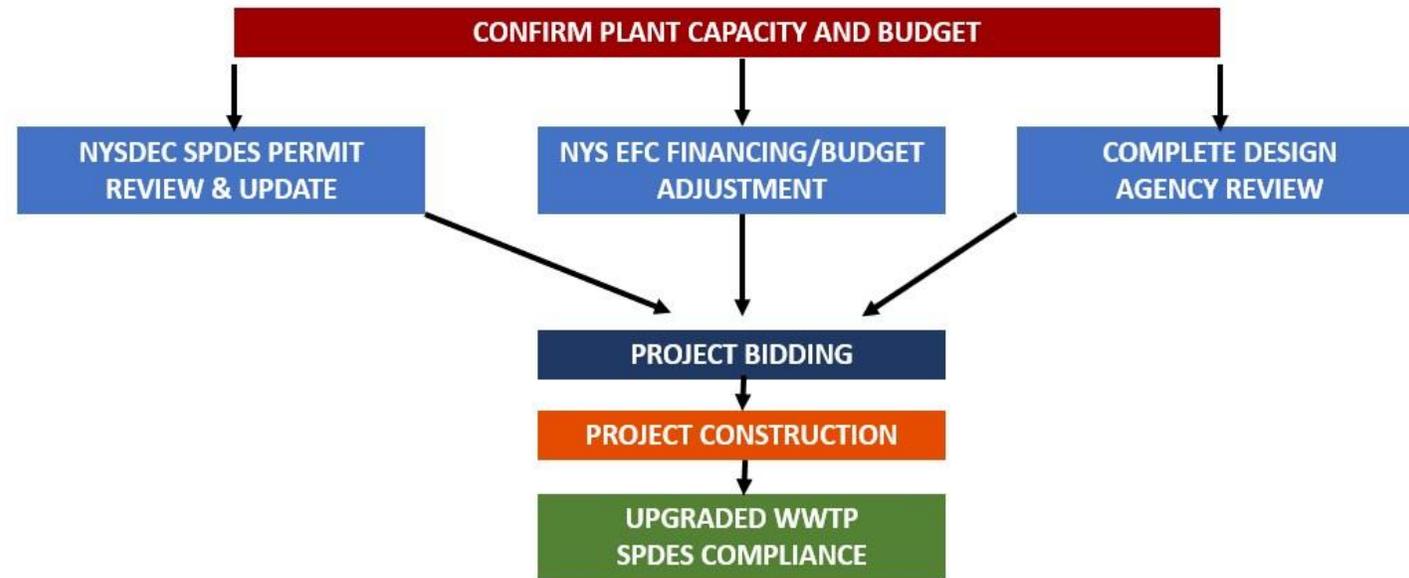
### As the project is designed, engineering will continue to refine cost-saving measures including:

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



## PLAN FORWARD:

- Town agrees to flow capacity and budget
- Town amends project scope and cost/budget
- Review changes with NYSDEC and NYSEFC and agree upon a plan forward to modify the Project Finance Agreement (PFA)
- Complete and Submit NYSDEC SPDES Permit Application
- Town to work through financing issues (e.g. 202B, Board Resolution, etc.)
- Move design forward to completion and submit NYSEFC and NYSDEC for review



## 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.
- Current Flow Capacity at the plant (425,000 GPD) and 686,000 GPD (selected in 2021) **does not meet district needs**
- **Estimated Project Budget increased due to unprecedented economic factors** from \$18 Million to \$40 Million.
- Town has executed a Project Financing Agreement with the EFC based on the \$18 M project which **includes \$11.4 M in grants and a 0% Loan.**
- **Town needs to agree upon flow capacity and budget to move the project forward**
- The Town remains committed to a **transparent process and to do everything possible to reduce the costs of the project**

## ANTICIPATED SCHEDULE

May 28, 2024	Public Meeting
-	Town considers and agrees to Flow Capacity and Budget
-	Review Changes with NYSEFC and NYSDEC to proceed with PFA Modification
-	Complete and Submit SPDES Application (3-6 Months to Approval)
-	Town to move forward with 202B, Bond Resolution, Etc., to address financing issues
-	Move design forward to completion and submit to NYSEFC and NYSDEC for review and approval

## QUESTIONS?