



# Peek'n Peak Sewer Feasibility Assessment Concept Plans

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# Current Project Status

- Completed Site Visit to Peek N' Peak
- Engineering Report is 90% Completed

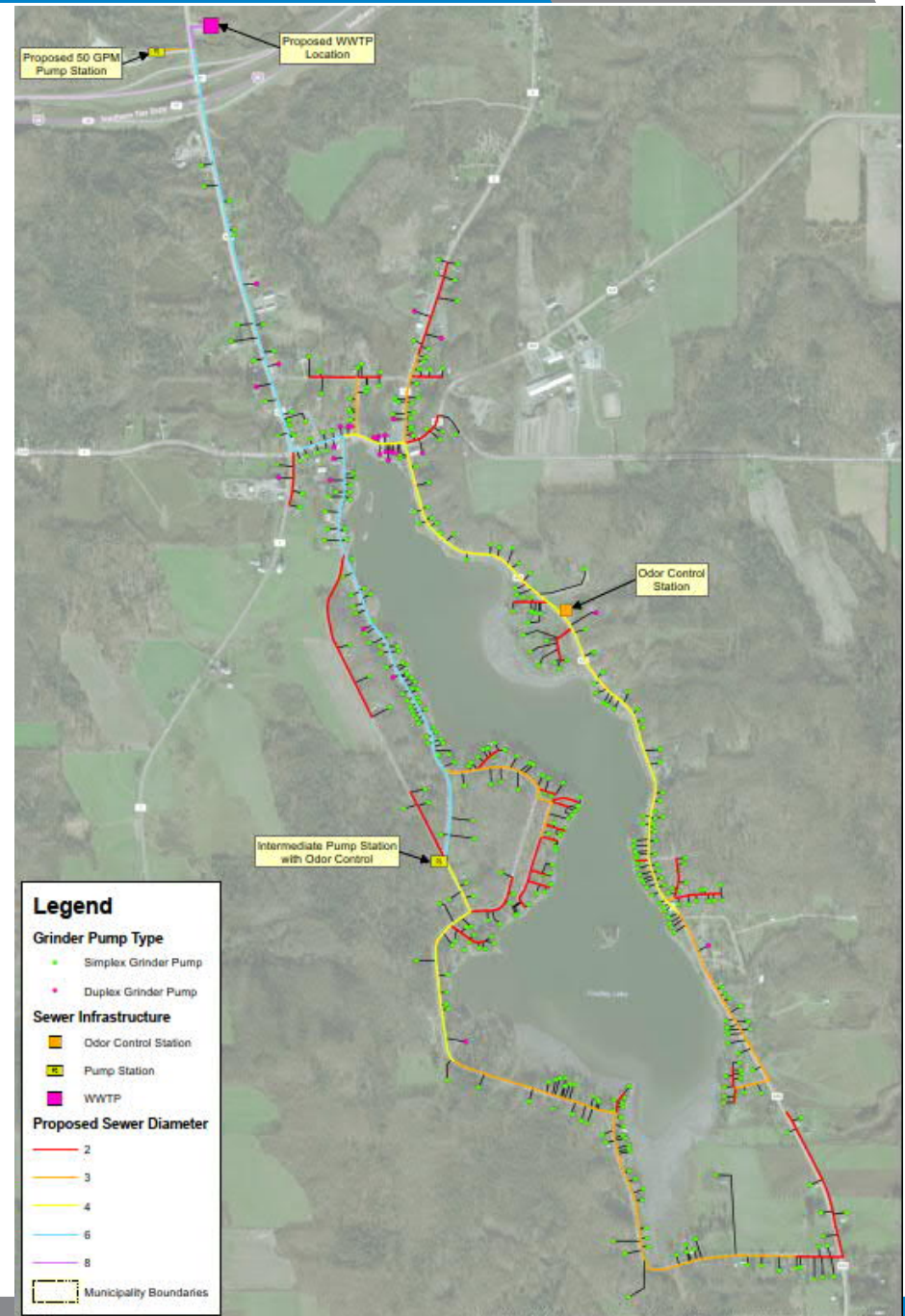
## Alternatives Being Considered:

- Alternative 1: Mina (Findley Lake) Sewer District with a Mina WWTP
- Alternative 2: French Creek (Peek'n Peak) Sewer District (upgrade of existing WWTP)
- Alternative 3A: French Creek and Findley Lake Sewer District with Treatment provided in Mina
- Alternative 3B: French Creek and Findley Lake Sewer District with Treatment provided in French Creek

# Alternatives Considered

- Alternative 1: Mina (Findley Lake) Sewer District with a Mina WWTP

ALTERNATIVE NO. 1 - FINDLEY LAKE SEWER DISTRICT	
COLLECTION SYSTEM CONSTRUCTION COST	\$10,936,000
WWTP CONSTRUCTION COST	\$4,773,000
TOTAL CONSTRUCTION COST	\$15,709,000
TOTAL ENGINEERING / LEGAL / ADMINISTRATIVE COSTS	\$3,143,000
TOTAL CONSTRUCTION CONTINGENCY	\$3,143,000
<b>TOTAL PROJECT COST</b>	<b>\$21,995,000</b>



# Alternatives Considered

- Alternative 2: French Creek (Peek'n Peak) Sewer District (upgrade of existing WWTP)



**Headwork Screening Infrastructure**



**Influent Pump Station**



**Concrete Aeration, Clarifier, and Settling Tankage**

Note: The plant is currently meeting permit



# Alternatives Considered

- Alternative 2: French Creek (Peek'n Peak) Sewer District (upgrade of existing WWTP)



Surface Foam Drains through Pipe to Aeration



Aerobic Digester



Chlorination and Effluent Pump Station Building

Our improvement recommendations are based on a limited site visit. The recommendations should extend the life of the plant for another 25 years. They are not mandated to be completed.



Effluent Pump Station

# Alternatives Considered

- Alternative 2: French Creek (Peek'n Peak) Sewer District (upgrade of existing WWTP)

**Headworks**

- Demolish the existing parshall flume a comminutor infrastructure
- Demolish abandoned electrical panels and existing corroded panels
- Add surface grating to remove safety hazard of cleaning the screens
- Add a grit/gravel trap prior to screen
- Replace existing screens with a finer 1/4" screen
- Power-wash and paint interior surfaces

**WWTP Pump Stations (Influent and Process Return)**

- Replace existing pumps, check valves, and discharge piping
- Replace wet well floats with ultrasonic level sensors
- Drain influent pump station valve vault into wet well. Install a duckbill check valve on drain pipe.

**Influent Flow Meter** - Remove flow meter and piping and reinstall at the properly (not on angle)

**Secondary Treatment - Aeration Tank**

- Repair or replace surface grating to ensure all basin openings are completely covered
- Replace aeration piping and existing coarse bubble diffusers with fine bubble diffusers.
- Add control valves to droplegs of aeration piping.
- Add dissolved oxygen meters to each basin. These meters would be utilized to control blower output.

ALTERNATIVE NO. 2 -FRENCH CREEK UPGRADES	
COLLECTION SYSTEM CONSTRUCTION COST	\$0
WWTP CONSTRUCTION COST	\$1,630,000
TOTAL CONSTRUCTION COST	\$1,630,000
TOTAL ENGINEERING / LEGAL / ADMINISITRATIVE COSTS	\$326,000
TOTAL CONSTRUCTION CONTINGENCY	\$326,000
<b>TOTAL PROJECT COST</b>	<b>\$2,282,000</b>

# Alternatives Considered

- **Alternative 2: French Creek (Peek'n Peak) Sewer District (upgrade of existing WWTP)**

## *Secondary Treatment - Clarifier and Settling Tanks*

- Replace both existing clarifiers with deeper 10 State Standard compliant clarifiers. Install a more effecting skimmer system such as a lever-operated scum pipe on top of new clarifiers.

## *Chlorination Building and Effluent Pump Station*

- Replace existing the older effluent pump in-kind
- Add control for flow-pacing or residual-based dosing of chlorine
- Add a sampling station downstream of chlorine dosing
- Rehabilitate Building

## *Aerobic Digestion*

- Replace/Install a grating or a railing over/around uncovered sections of the digester
- Install a permanent sludge transfer pump and piping to replace drop-in pump unit and fire hose
- Replace blowers and diffusers
- Clean and rehabilitate existing digester tankage as necessary

## *Control and Blower Building*

- Replace existing blowers with new positive displacement blower units and integral VFD's
- Add a master control panel that controls blowers and aeration piping control valves based upon dissolved oxygen levels in the aeration tank

*Equalization Tank* - Clean and rehabilitate existing tankage as necessary and add ultrasonic level sensor for level indication

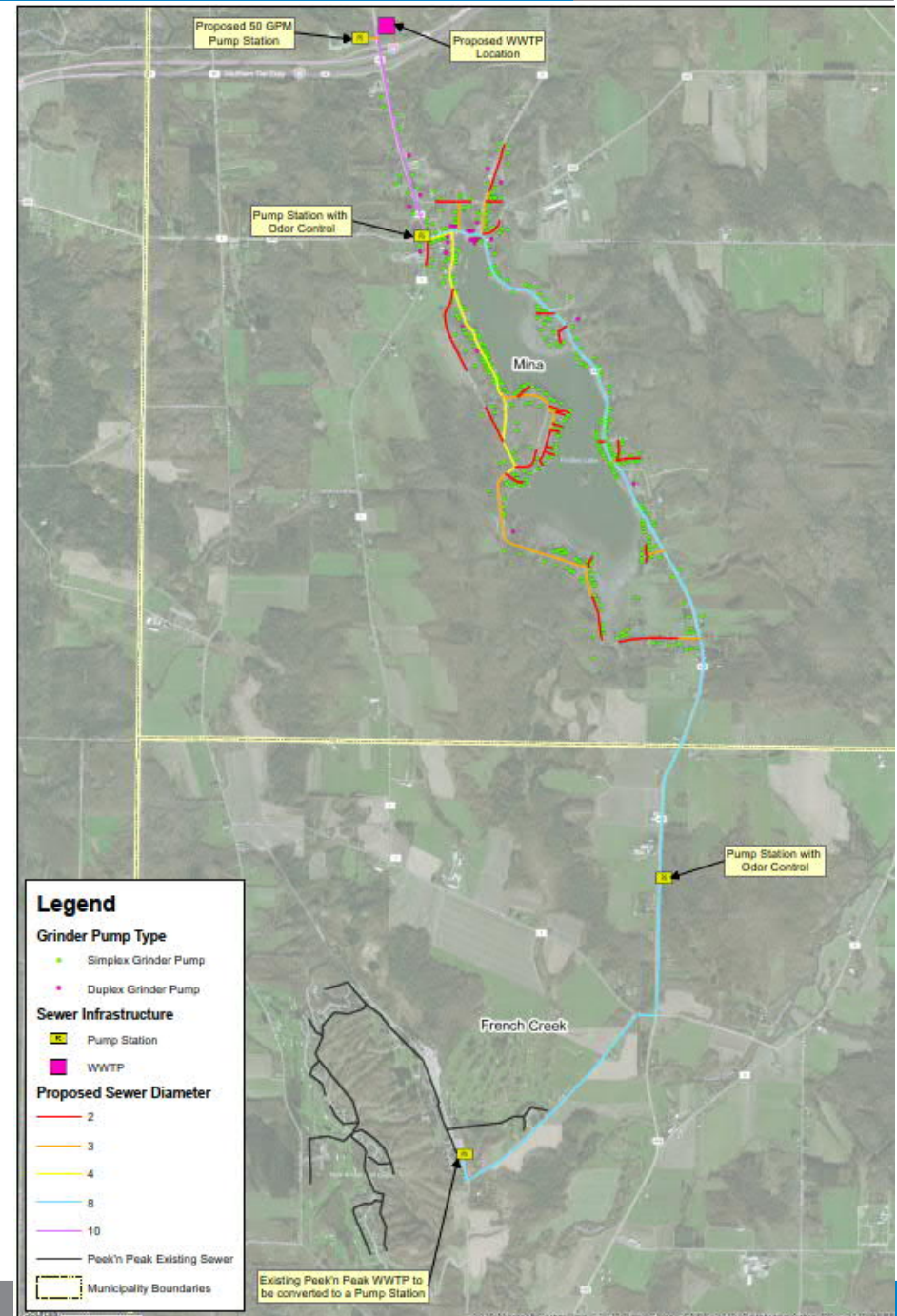
*Greenhouse (Formally Sludge Drying Beds)* - Replace existing corroded electrical panels and emergency power transfer switch



# Alternatives Considered

- Alternative 3A: French Creek and Findley Lake Sewer District with Treatment provided in Mina

ALTERNATIVE NO. 3A -MINA WWTP WITH FRENCH CREEK	
COLLECTION SYSTEM CONSTRUCTION COST	\$16,602,000
WWTP AND MAIN PUMP STATION CONSTRUCTION COST	\$13,422,000
TOTAL CONSTRUCTION COST	\$21,444,000
TOTAL ENGINEERING / LEGAL / ADMINSTRATIVE COSTS	\$4,290,000
TOTAL CONSTRUCTION CONTINGENCY	\$4,290,000
<b>TOTAL PROJECT COST</b>	<b>\$30,024,000</b>

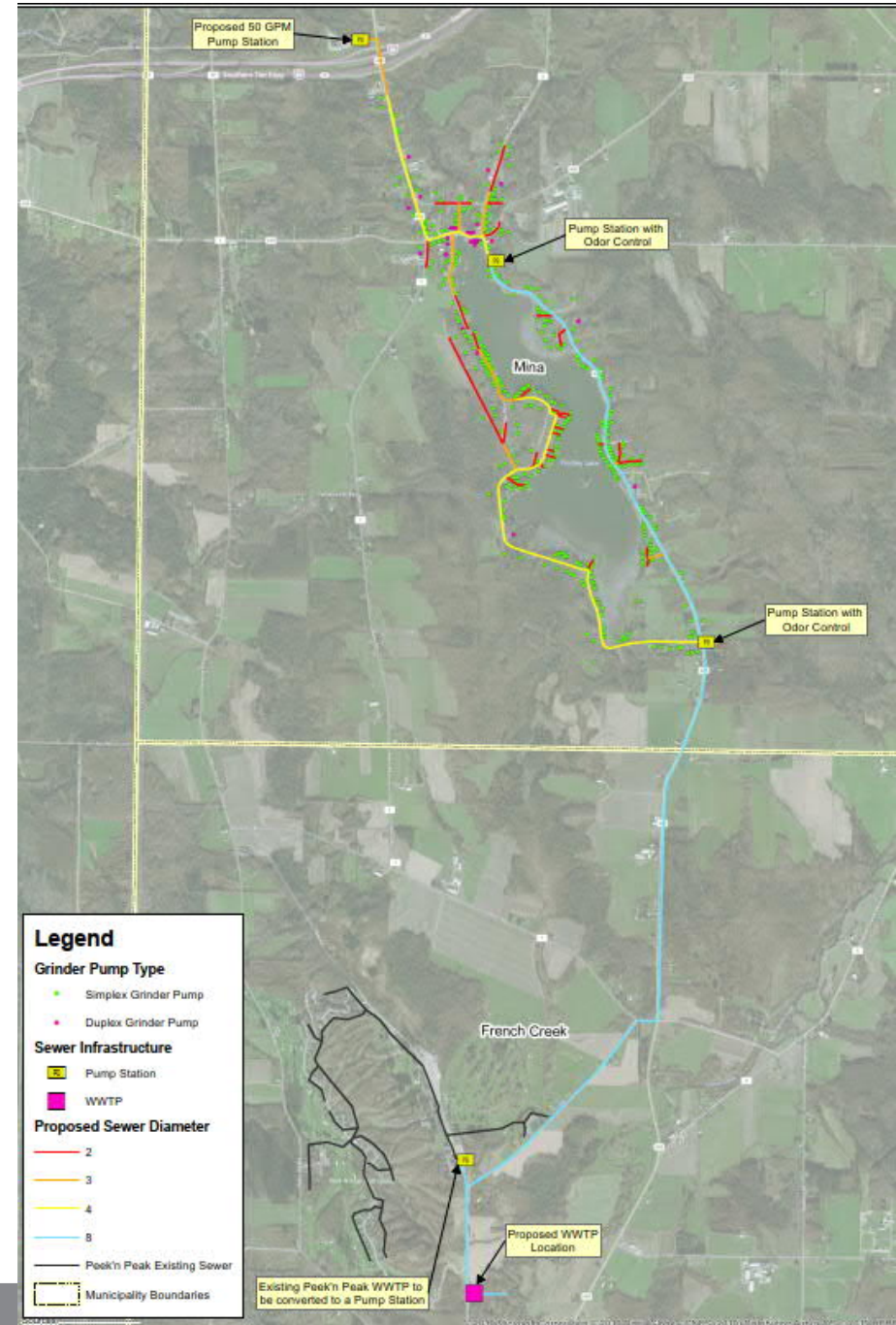




# Alternatives Considered

- Alternative 3B: French Creek and Findley Lake Sewer District with Treatment provided in French Creek

ALTERNATIVE NO. 3B -FRENCH CREEK WWTP WITH MINA	
COLLECTION SYSTEM CONSTRUCTION COST	\$16,435,000
WWTP AND MAIN PUMP STATION CONSTRUCTION COST	\$13,422,000
TOTAL CONSTRUCTION COST	\$29,857,000
TOTAL ENGINEERING / LEGAL / ADMINISITRATIVE COSTS	\$4,266,000
TOTAL CONSTRUCTION CONTINGENCY	\$4,266,000
<b>TOTAL PROJECT COST</b>	<b>\$29,857,000</b>



# Project Costs

ALTERNATIVE NO. 1 - FINDLEY LAKE SEWER DISTRICT	
COLLECTION SYSTEM CONSTRUCTION COST	\$10,936,000
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TOTAL CONSTRUCTION CONTINGENCY	\$3,143,000
<b>TOTAL PROJECT COST</b>	<b>\$21,995,000</b>

ALTERNATIVE NO. 2 - FRENCH CREEK UPGRADES	
COLLECTION SYSTEM CONSTRUCTION COST	\$0
WWTP CONSTRUCTION COST	\$1,630,000
TOTAL CONSTRUCTION COST	\$1,630,000
TOTAL ENGINEERING / LEGAL / ADMINISITRATIVE COSTS	\$326,000
TOTAL CONSTRUCTION CONTINGENCY	\$326,000
<b>TOTAL PROJECT COST</b>	<b>\$2,282,000</b>

ALTERNATIVE NO. 3A - MINA WWTP WITH FRENCH CREEK	
COLLECTION SYSTEM CONSTRUCTION COST	\$16,602,000
WWTP AND MAIN PUMP STATION CONSTRUCTION COST	\$13,422,000
TOTAL CONSTRUCTION COST	\$21,444,000
TOTAL ENGINEERING / LEGAL / ADMINISITRATIVE COSTS	\$4,290,000
TOTAL CONSTRUCTION CONTINGENCY	\$4,290,000
<b>TOTAL PROJECT COST</b>	<b>\$30,024,000</b>

ALTERNATIVE NO. 3B - FRENCH CREEK WWTP WITH MINA	
COLLECTION SYSTEM CONSTRUCTION COST	\$16,435,000
WWTP AND MAIN PUMP STATION CONSTRUCTION COST	\$13,422,000
TOTAL CONSTRUCTION COST	\$29,857,000
TOTAL ENGINEERING / LEGAL / ADMINISITRATIVE COSTS	\$4,266,000
TOTAL CONSTRUCTION CONTINGENCY	\$4,266,000
<b>TOTAL PROJECT COST</b>	<b>\$29,857,000</b>

# Alternative No. 1 User Costs

Alternative 1 : Findley Lake Only Sewer District - Total Cost	\$21,995,000
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		EFC 0% Loan, WIIA Grant, \$5 million WQIP	EFC 0% Loan, WIIA Grant, \$10 million WQIP	EFC 0% Loan, WIIA Grant, \$2.5 million WQIP
Rate		0.0%	0.0%	0.0%
Term Length		30	30	30
WQIP Grant		\$5,000,000	\$10,000,000	\$2,500,000
WIIA		\$4,248,750	\$2,998,750	\$4,873,750
<b>Total Grant</b>		<b>\$9,248,750</b>	<b>\$12,998,750</b>	<b>\$7,373,750</b>
Annualized Capital Debt Cost		\$424,875	\$299,875	\$487,375
Annualized O&M and SLA		\$331,000	\$331,000	\$331,000
Number of Debt EDU's	610			
Number of O&M EDU's	562			
Yearly Debt Cost Per User		\$697	\$492	\$799
Yearly O&M Cost Per User		\$589	\$589	\$589
Est. Total Monthly Cost Per User		\$107	\$90	\$116
Est. Total Quarterly Cost Per User		\$321	\$270	\$347
<b>Est. Total Annual Sewer Use Charge</b>		<b>\$1,285</b>	<b>\$1,081</b>	<b>\$1,388</b>

# Alternative No. 2 User Costs

Alternative 2: Peek N' Peak Plant Improvements - Total Cost		\$2,282,000
		<b>20 Year Bond at 4.5% Interest</b>
	Rate	4.5%
	Term Length	20
	Annualized Capital Debt Cost	\$175,431
	Annualized O&M and SLA	\$200,000
Est. Number of Debt EDU's	262	
Est. Number of O&M EDU's	262	
	Yearly Debt Cost Per User	\$670
	Yearly O&M Cost Per User	\$763
	Est. Total Monthly Cost Per User	\$119
	Est. Total Quarterly Cost Per User	\$358
	<b>Est. Total Annual Sewer Use Charge</b>	<b>\$1,433</b>

We did not coordinate with the Peek on this number. This is based on systems of similar size.



# Alternative No. 3 User Costs

Alternative 3A and 3B will be very similar in costs.

Collection System	\$16,600,000
WWTP and Main Pump Stations	\$13,400,000
Approximate Total for Alternative 3A or Alternative 3B	\$30,000,000

		EFC 0% Loan, WIIA Grant, \$5 million WQIP	EFC 0% Loan, WIIA Grant, \$10 million WQIP	EFC 0% Loan, WIIA Grant, \$2.5 million WQIP
Rate		0.0%	0.0%	0.0%
Term Length		30	30	30
WQIP Grant		\$5,000,000	\$10,000,000	\$2,500,000
WIIA		\$5,000,000	\$5,000,000	\$500,000
<b>Total Grant</b>		<b>\$10,000,000</b>	<b>\$15,000,000</b>	<b>\$3,000,000</b>
WWTP and Main Pump Station Annualized Capital Debt Cost		\$297,778	\$223,333	\$402,000
WWTP and Main Pump Station Annualized O&M and SLA		\$323,000	\$323,000	\$323,000
Collection System Annualized Capital Debt Cost		\$368,889	\$276,667	\$498,000
Collection System Annualized O&M and SLA		\$107,000	\$107,000	\$107,000
WWTP and MPS Number of Debt EDU's	872			
WWTP and MPS Number of O&M EDU's	824			
Collection System Number of Debt EDU's	610			
Collection System Number of O&M EDU's	562			
WWTP and MPS Yearly Debt Cost Per User		\$341	\$256	\$461
WWTP and MPS Yearly O&M Cost Per User		\$392	\$392	\$392
Collection System Yearly Debt Cost Per User		\$605	\$454	\$816
Collection System Yearly O&M Cost Per User		\$190	\$190	\$190
<b>Peak N' Peak Est. Total Annual Sewer Use Charge</b>		<b>\$733</b>	<b>\$648</b>	<b>\$853</b>
<b>Findley Lake Est. Total Annual Sewer Use Charge</b>		<b>\$1,529</b>	<b>\$1,292</b>	<b>\$1,860</b>

These numbers mean very little until cost sharing is decided

# Comparison to Previous MPR

	B&L - Alternative No. 1	GPI MPR	Comment
<b>Project Cost</b>	\$21,995,000	\$15,000,000	Major increase in Construction Costs in recent years. B&L has recommended a few additional items (i.e. Odor Control). GPI WWTP Cost Estimate appears to be very low. GPI O&M Cost Estimate appears to be low.
<b>O&amp;M SLA Cost</b>	\$331,000 / Year	\$270,000 / Year	
<b>Loan Terms</b>	30 Year @ 0%	30 Year @ 0%	No Difference
<b>Grant Terms</b>	\$7.3 - \$13 Million	\$0 - \$4 Million	We believe that \$9 million in grant is very realistic
<b>Contingency</b>	20% (\$3.143 Million)	10% (\$1.072 Million)	Over \$2 million more in contingency
<b>User Cost</b>	\$1,081 - \$1,388	\$1,081 - \$1,316	This includes O&M Cost. B&L's O&M estimate raises user costs by over \$100 per user compared to GPI's.
<b>District Boundary</b>	Same	Same	No Difference
<b>EDU Estimate</b>	Same	Same	No Difference
<b>Report Type</b>	Preliminary Feasibility Study	Map, Plan, and Report	B&L's Report is more detailed as feasibility study.

# Additional Key Considerations

- This is a high level feasibility study
- Our Cost estimate is likely conservative
- A conservative cost estimate is important!
- \$1 million of less loan = \$55 rate decrease
- \$1 million of less project cost may only equal \$750,000 of less loan due to WIIA grant (\$41 rate decrease)
- You can form the district based on a User Cost, obtain the required grant, and then move forward. What cost is affordable?

# Discussion on Next Steps

- Decide if any Alternative is feasible to move forward
- Complete a Map, Plan, and Report
  - This can be funded or reimbursed by NYSEFC EPG Program
- SEQOR
- Public Hearings and Outreach
- District Formation
- Bond Resolution
- Design
- Construction