



City of Mount Dora
510 North Baker Street
Mount Dora, Florida 32757
352-735-7126

Mount Dora City Council
Mount Dora City Hall Board Room
510 North Baker Street, Mount Dora, Florida 32757
March 13, 2023, 5:00 PM

WORK SESSION AGENDA

CALL TO ORDER

ROLL CALL

DISCUSSION ITEMS

1. Options for Waste Water Treatment Plant #1 Rehabilitation
2. Running Utility Lines to Sorrento
3. Update on Waste Water Treatment Plant #2

FUTURE MEETING DATES

- March 21, 2023, 6:00 PM, Regular Session
- April 10, 6:00 PM, 2023, Work Session
- April 18, 2023, 6:00 PM, Regular Session
- May 2, 2023, 6:00 PM, Regular Session

ADJOURNMENT

PURSUANT TO SECTION 286.0105, FLORIDA STATUTES, IF ANY PERSON DECIDES TO APPEAL ANY DECISION MADE AT THIS MEETING WITH RESPECT TO ANY MATTER CONSIDERED AT ANY MEETING OR HEARING, SUCH PERSON MAY NEED A RECORD OF THESE PROCEEDINGS. FOR SUCH PURPOSE, A PERSON MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED. VERBATIM RECORD WILL NOT BE PROVIDED BY THE CITY OF MOUNT DORA.

NOTICE: IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990, PERSONS NEEDING A SPECIAL ACCOMMODATION TO PARTICIPATE IN THIS PROCEEDING SHOULD CONTACT THE CITY CLERK AT LEAST 48 HOURS PRIOR TO THE PROCEEDINGS. TELEPHONE (352) 735-7126 FOR ASSISTANCE. IF HEARING IMPAIRED, TELEPHONE THE FLORIDA RELAY SERVICE NUMBERS, (800) 955-8771 (TDD) OR (800) 955-8770 (VOICE) FOR ASSISTANCE.

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NOTICE: IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (“ADA”) AND FLORIDA STATUTES, SECTION 286.26, PERSONS WITH DISABILITIES NEEDING A REASONABLE ACCOMMODATION TO PARTICIPATE IN A PUBLIC HEARING OR MEETING SHOULD CONTACT THE CITY OF MOUNT DORA’S ADA COORDINATOR AT LEAST 48 HOURS PRIOR TO THE PROCEEDING. THE ADA COORDINATOR MAY BE CONTACTED BY PHONE AT 352-735-7126, EXT. 1111, OR BY EMAIL AT CLERK@CITYOFMOUNTDORA.COM.

IF HEARING IMPAIRED, TELEPHONE THE FLORIDA RELAY SERVICE NUMBERS (800) 955-8771 (TDD) OR (800) 955- 8770 (VOICE) FOR ASSISTANCE.



510 N. Baker St.
Mount Dora, FL 32757
352-735-7126

DATE: March 13, 2023

TO: Honorable Mayor and City Council Members

FROM: Patrick C. Comiskey, City Manager *Patrick C. Comiskey*

SUBJECT: Options for Waste Water Treatment Plant #1 Rehabilitation

Introduction:

This is an opportunity for Council to discuss rehabilitation options for Waste Water Treatment Plant #1.

Discussion:

N/A

Budget Impact:

N/A

Strategic Impact:

N/A

Recommendation:

Council discuss rehabilitation options for Waste Water Treatment Plant #1.

Attachment(s):

1. Attachment #1 Mt Dora City Council Work Session Presentation - 03-13-23_WSI
2. Attachment #2 WWTP 1 Alternative Improvement Plan.v2

Prepared by: Jeanann Hand, City Clerk

Mt. Dora City Council Work Session WWTF #1 Improvements

Monday, March 13th, 2023



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Project History



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- CPH, LLC. Was awarded Design and Permitting services August 20, 2019, with Resolution No. 2019-110.
- Wharton-Smith CMAR Agreement on March 16, 2021.
- Summer/Fall of 2021 during final design estimated cost of project coming in high. CPH and Wharton Smith conducted an evaluation of an alternate design that would meet the same project goals within the City's budget
- Redesign was bid and GMP is at +/- \$24 Million

Project Status Update



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FDEP Permitting:

Project was submitted to FDEP and received approval. WWTF #1 Permit renewal currently being processed.



SRF Funding:

Agreement signed for Project Cost of \$24 Million; Authorized Loan Amount to Date \$12 Million



SJRWMD Funding:

Grant approval for \$3 Million received

Project Goals

Cost effectively rehabilitate existing facility to provide 1.5 MGD and readily upgraded to 1.8 MGD of treatment.

Create Environmental Benefits

- Consistent high quality reclaimed water
- Minimize reject volume
- Improve odor control

Create Economic Benefits

- Install more efficient filters
- Install more energy efficient motors and blowers
- Install SCADA to allow for existing manpower to continue with expanded flows

Benefits of BNR Process



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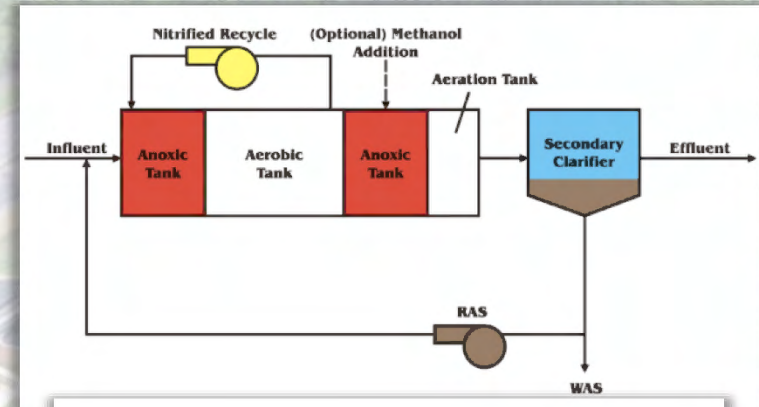
BOD < 5 mg/L

TN < 3 mg/L

TSS < 5 mg/L

TP < 1 mg/L

Improved Effluent
Water Quality!



4-Stage Bardenpho BNR Process

Utilizing Existing Facility Components



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Existing components to remain or be rehabilitated:

- | | | |
|----------------------------|-------------------------|------------------------|
| 1) Sludge Holding Tank | 4) Clarifiers No. 1 & 2 | 7) Operating Building |
| 2) Aerobic Digester | 5) Oxidation Ditch | 8) Reject Storage Pond |
| 3) Chlorine Contact Basins | 6) Lift Station | |

The Must Have's List



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The Team met on-site to carefully review the existing facilities and the proposed project to come up with a "must have's" list

Must Have's

- SCADA Upgrade
- Treatment Redundancy
- Clarifier Capacity
- Filters
- Fixed FDEP Sampling Location

Should Have's

- Generator Upgrade
- Sludge Dewatering

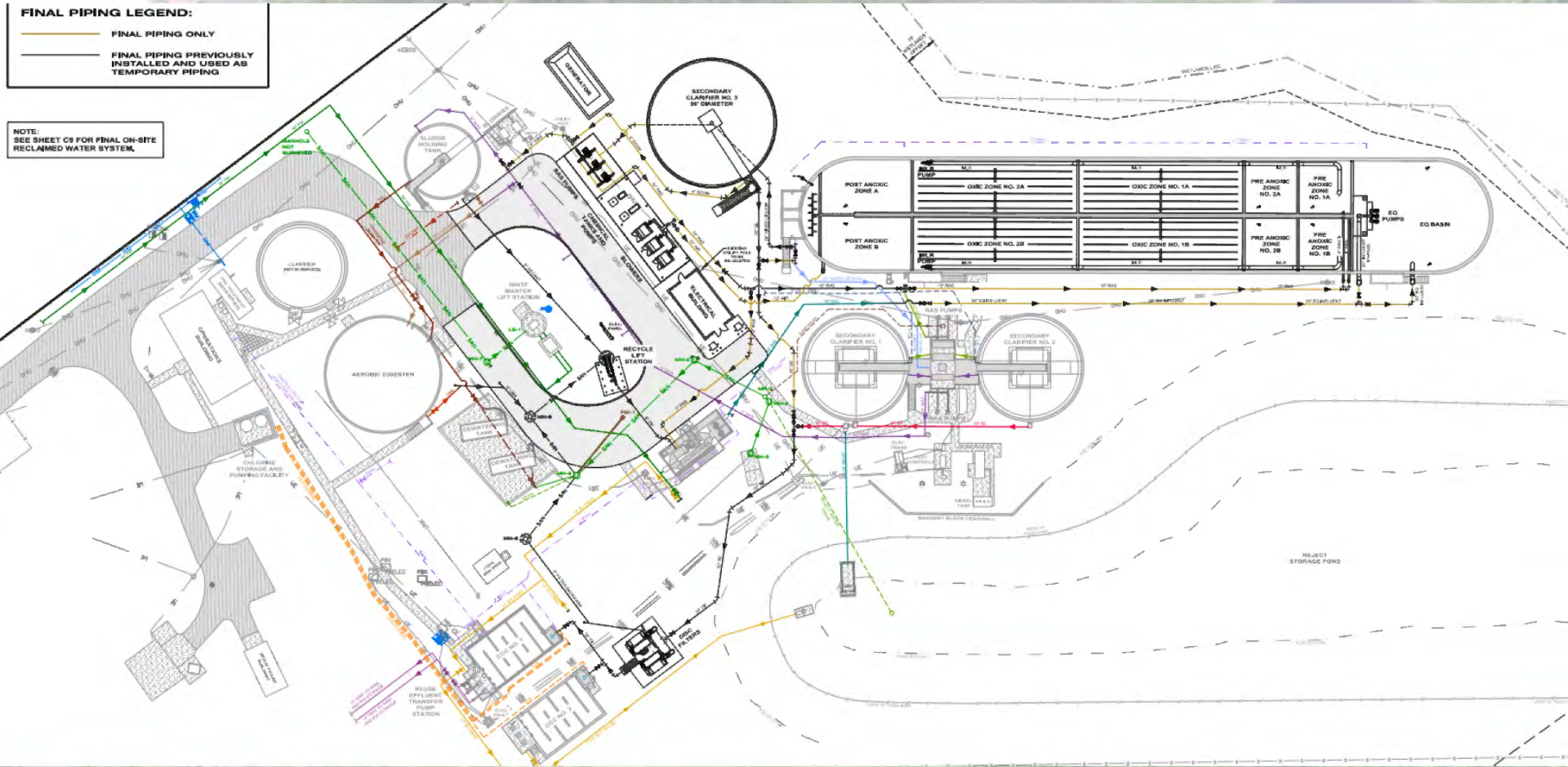
Nice to Have's

- Rehab Existing Clarifiers
- Rehab Pond
- New Influent Screen

Proposed Improvements Site Plan



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Wharton-Smith, Inc.
CONSTRUCTION GROUP



The GMP Process



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A CMAR GMP (Guaranteed Maximum Price) is developed using competitive bidding of trades and equipment

Step 1: Bid Set received from CPH 11/16/2022

Step 2: Develops pre-qualified Bidders List of 52 firms, approved by City

Step 3: Produces 17 Bid Packages, for 30-day bidding period (SRF)

Step 4: Issues IFB 12/15/2022 to Bidders List, and publicly (SRF)

Step 5: Pre-bid Mtg held 1/5/2023, issues 4 Addendum, bids due 1/25/2023

Step 6: Receives 38 bids, reviews for Rec of Award, 2/1/2023

Step 7: Assemble GMP, with \$1.4M of cost reduction items, 2/15/2023

Questions?



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Thank You!



WWTP 1 Alternative Improvement Plan - Option B

March 13, 2023 City Council Work Session

Presented by

George Marek, P.E.
Public Works Director

Josh Kramm
Water Utility Manager

Jimmy Klein
Chief Water Plant Operator

Jamie Hope
Wastewater Training Technician
Florida Rural Water Association

Aneta Barton
Budget Director

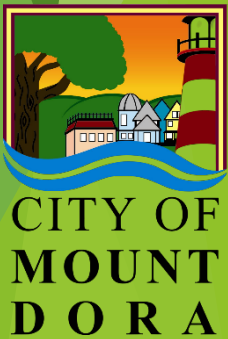
Richard Shepherd
Chief Wastewater Plant Operator



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What is being rehabilitated with this plan?

City staff have developed this alternative plan to improve and rehabilitate the equipment that is already in place.



Option B timeline

FY 2023/24

Filter Bridge Rehab
Valve Replacement
Recycle Lift Station
Scada Upgrade

FY 2024/25

1st Clarifier
Boxes ×2
Reject Pond Liner
Reclaim Water
Storage Basin

FY 2025/26

2nd Clarifier
Headworks and Bar
Screen
Reuse Pump System
Treatment Basin

Year 1 Proposed Improvements

Year 1: FY 2023/24

Filter Bridge Rehab

Valve Replacement

Recycle Lift Station

Scada Upgrade



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Year 1 Proposed Improvements

Filter Bridge Rehab (\$465,000) & Valve Replacement (\$67,031)



Year 1 Proposed Improvements

Recycle lift station (\$375,000)

The new lift station will allow the daily process water to be taken away from the influent composite sampler.



Year 1 Proposed Improvements

SCADA Upgrade (\$250,000)



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Year 2 Proposed Improvements

Year 2: FY 2024/25

1st Clarifier

Sludge Dewatering Boxes ×2

Reject Pond Liner

Reclaim Water Storage Basin



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Year 2 Proposed Improvements

1st Clarifier (\$1,000,000)



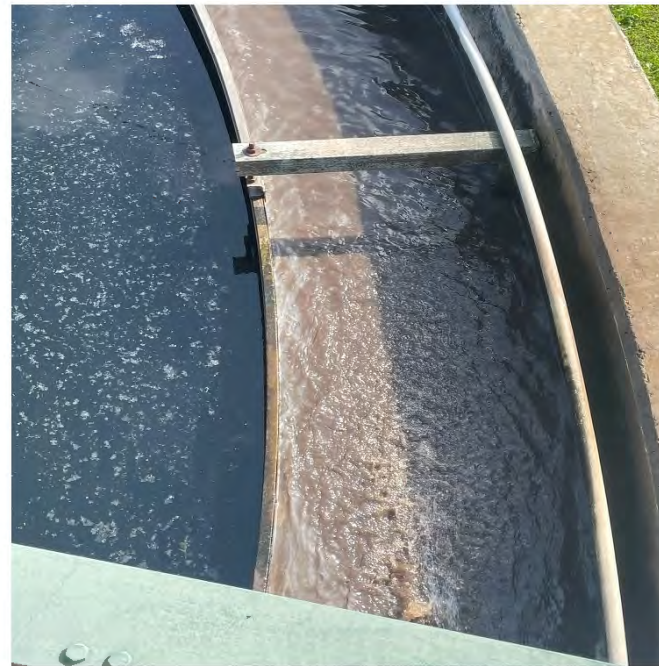
Year 2 Proposed Improvements

These photos show the current configuration of the clarifiers at WWTP 1

Effluent ring is in the center on the current clarifiers



And the influent ring is on the outside



Year 2 Proposed Improvements

This shows that they will be reconfigured to resemble the clarifiers at WWTP 2.

The effluent weir runs around the outside wall and will have more area



The influent will enter in the center



Year 2 Proposed Improvements

Sludge Dewatering Boxes (\$130,000 or \$65,000 each)



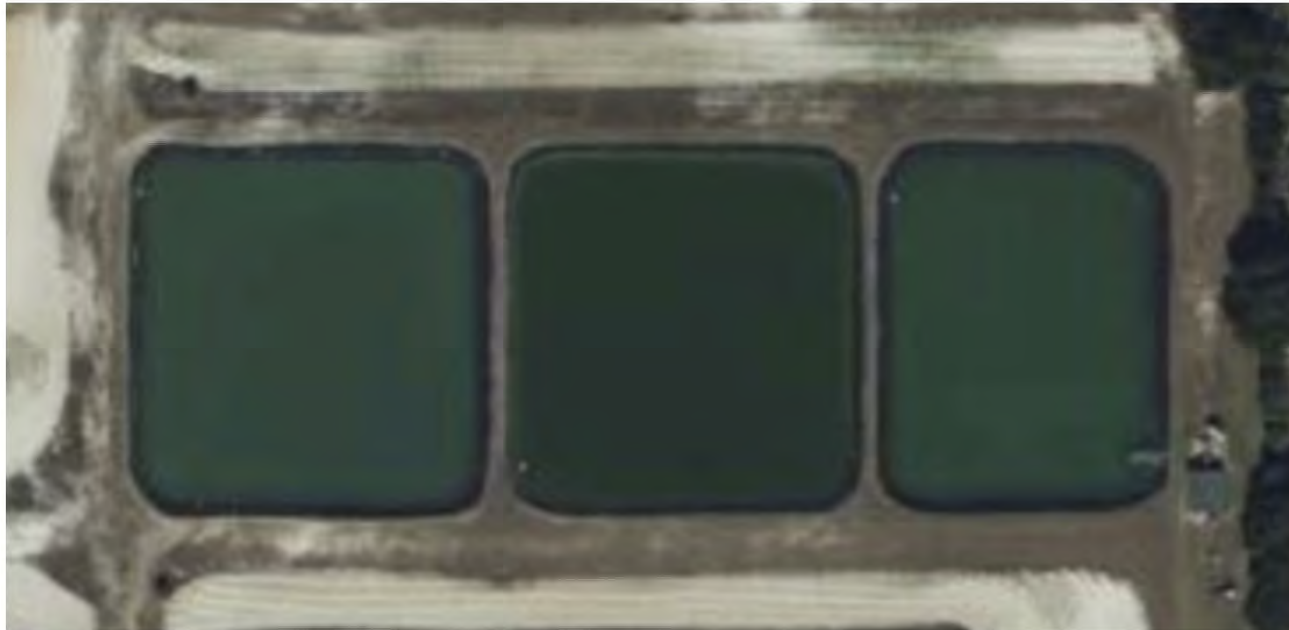
Year 2 Proposed Improvements

Reject Pond Liner (\$550,000)



Year 2 Proposed Improvements

Reclaim Water Storage Basin (\$650,000)



Year 3 Proposed Improvements

Year 3: FY 2024/25

2nd Clarifier

Headworks and Bar Screen

Reuse Pump System

Treatment Basin



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Year 3 Proposed Improvements

2nd Clarifier (\$1,000,000)



Year 3 Proposed Improvements

Headworks & Bar Screen (\$350,000)



Year 3 Proposed Improvements

Reuse Pump System (\$10,000)

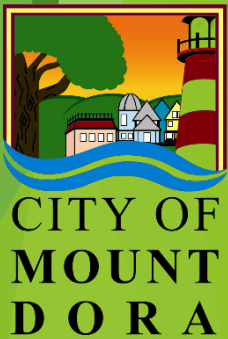


Year 3 Proposed Improvements

Treatment Basin (TBD)



This alternative project plan schedule may be altered to meet the needs of the Wastewater Treatment Plant staff and the budget for each year.



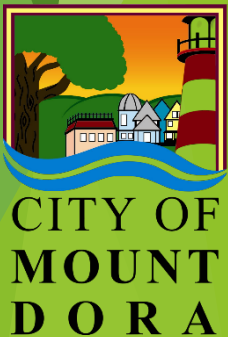
Scope & Summary Comparison

Option A: Partial Upgrade Not Mandated by Regulation

- ◆ Scope:
 - ◆ Increase capacity from 1.5 MGD ADF to 1.8 MGD ADF
 - ◆ Existing Oxidation Ditch converted to parallel 4-stage BNR with influent equalization storage/pumping
 - ◆ New 60-foot diameter secondary clarifier #3 and RAS/WAS pump station
 - ◆ New Recycle and Equalization Pump Stations, Disk Filters, Blowers, Chemical Storage/Metering, Metal Canopy, Electrical Building, Diesel Engine Generator, plus Electrical, I&C, and civil site improvements
- ◆ **Additional costs not included in project for 2 clarifiers, headworks & bar screen, 2 sludge dewatering boxes, 2 reject pond liners & reclaim storage basin totaling \$3,680,000**
- ◆ Option changes the process for handling wastewater

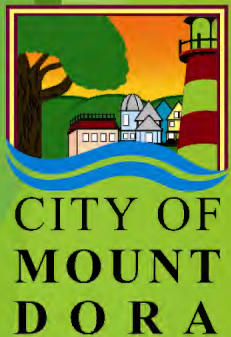
Option B: Scheduled Upgrades

- ◆ Scope:
 - ◆ 2 Clarifiers
 - ◆ Headworks & bar screen
 - ◆ 2 Sludge dewatering boxes
 - ◆ 2 Reject pond liners
 - ◆ Reclaim storage basin
- ◆ Addresses urgent needs of WWTP#1 over 3 year period
- ◆ Utilizes monies already programmed for debt service payment to fund improvements
- ◆ Allows staff to plan for and fund improvements to distribution system
- ◆ Option maintains current process for handling wastewater



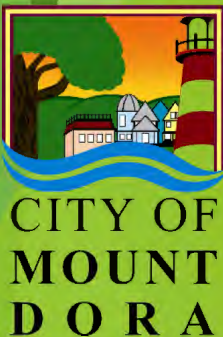
Option A vs Option B financials

			20 year loan				No loan - budget
			Option A: WWTP#1 Partial Upgrades				Option B: Scheduled Upgrades
<u>SRF LOAN</u>							
	Loan		\$ 21,000,000			\$ -	
	Loan fee		\$ 400,000			\$ -	
	Grant		\$ 3,000,000			\$ -	
	Total loan		\$ 24,400,000				
	Annual Payment estimate		\$ 1,528,001				
					Annual Budget	\$ 1,528,001	
<u>PROJECT</u>							
	See GMP Proposal from Wharton-Smith for details						
<u>ADDITIONAL COSTS</u>							
<u>NOT PART OF THE</u>							
<u>PROJECT</u>							
	Clarifiers ×2	\$ 1,000,000	\$ 2,000,000		Filter Bridge Rehab	\$ 465,000.00	\$ 465,000
	Headworks and Bar Screen	\$ 350,000	\$ 350,000		Valve Replacement	\$ 67,031.00	\$ 67,031
	Boxes ×2	\$ 65,000	\$ 130,000		Recycle Lift Station	\$ 375,000.00	\$ 375,000
	Reject Pond Liner	\$ 275,000.00	\$ 275,000		Scada Upgrade	\$ 250,000.00	\$ 250,000
	Reclaim Water Storage Basin	\$ 650,000	\$ 650,000		Clarifiers ×2	\$ 1,000,000	\$ 2,000,000
	Treatment Basin	TBD	TBD		Boxes ×2	\$ 65,000.00	\$ 130,000
			\$ 3,405,000		Reject Pond Liner	\$ 275,000.00	\$ 275,000
					Headworks and Bar Screen	\$ 350,000.00	\$ 350,000
					Reuse Pump System	\$ 10,000.00	\$ 10,000
					Reclaim Water Storage Basin	\$ 650,000.00	\$ 650,000
					Treatment Basin	TBD	TBD
	Total Cost		\$ 27,805,000			\$ 4,572,031	



Option B: Scheduled Upgrades Timeline & Cost Estimates

	FY 2023/24	FY 2024/25	FY 2025/26
Filter Bridge Rehab	\$ 465,000		
Valve Replacement	\$ 67,031		
Recycle Lift Station	\$ 375,000		
Scada Upgrade	\$ 250,000		
Clarifier Boxes ×2		\$ 1,000,000	
Reject Pond Liner		\$ 130,000	
Reclaim Water Storage Basin		\$ 275,000	
		650000	
Clarifier			\$ 1,000,000
Headworks and Bar Screen			\$ 350,000.00
Reuse Pump System			\$ 10,000.00
Treatment Basin			TBD
	\$ 1,157,031	\$ 2,055,000	\$ 1,360,000
		<i>Total Project Estimates</i>	\$ 4,572,031
Annual Payment estimate build into the rates	\$ 1,528,001	\$ 1,528,001	\$ 1,528,001
NET	\$ 370,970	\$ (156,030)	\$ 11,971



QUESTIONS



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