

GFUND - Water Purification District

Anaerobic Digestion of Bio-solids / Regional Biosolids Facility

To design, construct and operate a regional anaerobic digester to energy facility to replace existing ultimate disposal method of sewage sludge at the North plant with related improvements at the South plant. The facility will also be a regional source separated organic (SSO) facility with shared construction, operation and maintenance costs with the Saratoga County Sewer District. This project will replace aging equipment, generate electricity and provide a regional disposal location for SSO's to remove organic waste from landfills. This project would be a major "green" initiative and beneficially use renewable energy resources. This could also be a public / private partnership facility. This project, in 2018, was previously amended to consider consolidation of solids handling operations of both the North, South plants and Saratoga WWTP biosolids and locating it at the North plant providing the greatest economic benefit for the rate payers.

Project is suspended to evaluate other alternatives.

To design, construct and operate a regional anaerobic digester facility at the North Plant with related improvements at the South Plant in order to replace existing sewage sludge incinerators at both North and South plants. The facility will also be a regional facility with shared construction, operation and maintenance costs with the Saratoga County Sewer District. This project was amended in 2020 to include a sludge dryer to mitigate sludge disposal cost escalations due to PFAS concerns and to eliminate onsite electric generation to keep the project cost down.

New Project:	Existing Projects:	Amended Projects:	1
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Project amended for 2020-2024 - updating funding sources and total cost of project.

Project Financing (in millions of dollars)

Year	Pre 2021	2021	2022	2023	2024	2025	2026	Total
County Debt (Bonds & BANS)				18.500	14.900			33.400
Appropriations	0.200	0.400	1.500					2.100
Saratoga County, NY	(0.200)	(0.400)	(1.500)	(18.500)	(12.900)			(33.500)
State Reimbursement								-
Federal Reimbursement								-
Other	0.200	0.400	1.500	18.500	12.900			33.500
Total County Cost	0.200	0.400	1.500	18.500	14.900	-	-	35.500

South Plant Preliminary Treatment Building Rebuild Project

The South plant was constructed in the early 1970's with much of the facility built on pilings. The Preliminary Treatment building, though built on bedrock, has shifted horizontally causing two major cracks in two walls supporting the concrete roof panels each weighing over 2,000 lbs. The District will perform an engineering evaluation to determine what step need to be taken to rebuild the building.

Amended for 2020-2024 - changed funding sources.

New Project:	Existing Projects:	Amended Projects:	1
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Project Financing (in millions of dollars)

Year	Pre 2021	2021	2022	2023	2024	2025	2026	Total
County Debt (Bonds & BANS)				0.600				0.600
Appropriations				0.050				0.050
Private Investment								
NYSERDA/ARRA/GIGP								-
State Reimbursement								-
Federal Reimbursement								-
Other	-	-	-	-	-	-	-	-
Total County Cost	-	-	-	0.650	-	-	-	0.650

Management & Budget Recommendation:

Clarifier Upgrade Project								
Project to include the study, design, and construction of improvements to the existing primary and secondary clarifiers at both the North and South treatment plants. The clarifiers are required for the removal of solids and are a critical process for meeting permit compliance. The majority of the clarifiers mechanical systems are original to both facilities and at the end of their useful life.								
Project Amended for 2021-2025 plan to push out start date.								
New Project:			Existing Projects:		Amended Projects:			
Project Financing (in millions of dollars)								
Year	Pre 2021	2021	2022	2023	2024	2025	2026	Total
County Debt (Bonds & BANS)				0.125	6.000	5.825		11.950
Appropriations			0.050					0.050
Private Investment								-
NYSERDA/ARRA/GIGP								-
State Reimbursement								-
Federal Reimbursement								-
Other	-	-	-	-	-	-	-	-
Total County Cost	-	-	0.050	0.125	6.000	5.825	-	12.000
Management & Budget Recommendation:								

High Voltage Upgrade								
Project to include the study, design, and construction of improvement to the high voltage electrical service equipment at both the North and South treatment plants. Electric service is critical to the operations of both facilities and the high voltage equipment is original to both facilities and at the end of its useful life.								
Project Amended for 2021-2025 plan to push out start date.								
New Project:			Existing Projects:		Amended Projects:			
Project Financing (in millions of dollars)								
Year	Pre 2021	2021	2022	2023	2024	2025	2026	Total
County Debt (Bonds & BANS)				1.300	2.000			3.300
Appropriations			0.050					0.050
Private Investment								
NYSERDA/ARRA/GIGP								-
State Reimbursement								-
Federal Reimbursement								-
Other	-	-	-	-	-	-	-	-
Total County Cost	-	-	0.050	1.300	2.000	-	-	3.350
Management & Budget Recommendation:								

Septage and FOG Receiving Station								
Project to include the study, design and construction of a new septage and Fats, Oils and Grease (FOG) receiving stations. Study will evaluate alternatives for both the septage receiving station and the FOG receiving station. For the FOG system a brown grease separation process that can produce a biodiesel feed stock will be evaluated against directly injected the grease into the sludge incinerators. Engineering services are estimated to be \$500,000 and the construction cost are estimated to be \$3,500,000.								
New Project:			Existing Projects:		Amended Projects:			
Project Financing (in millions of dollars)								
Year	Pre 2021	2021	2022	2023	2024	2025	2026	Total
County Debt (Bonds & BANS)			1.500	2.450				3.950
Appropriations		0.050						0.050
Private Investment								
NYSERDA/ARRA/GIGP								-
State Reimbursement								-
Federal Reimbursement								-
Other								-
Total County Cost	-	0.050	1.500	2.450	-	-	-	4.000
Management & Budget Recommendation:								

North Plant Mechanical Bar Screen Replacement

Project to include the study, design and construction of a new mechanical bar screens at the North Plant. The study will evaluate the use of narrower screen openings to provide more efficient screening removal and provide additional protection to downstream equipment. Screens are anticipated to be similar in design to the screens that are currently being installed at the South Plant. Engineering services are estimated to be \$400,000 and the construction cost are estimated to be \$2,600,000.

New Project:		1	Existing Projects:				Amended Projects:		
Project Financing (in millions of dollars)									
Year	Pre 2021	2021	2022	2023	2024	2025	2026	Total	
County Debt (Bonds & BANS)			0.050	0.950	2.000			3.000	
Appropriations								-	
Private Investment									
NYSERDA/ARRA/GIGP								-	
State Reimbursement								-	
Federal Reimbursement								-	
Other	-							-	
Total County Cost	-	-	0.050	0.950	2.000	-	-	3.000	
Management & Budget Recommendation:									

Sludge Processing Improvements

Project to include the study, design and construction of improvements to the existing sludge processing systems. The study will evaluate the option of consolidating both South Plant and North Plant sludge operations to the North Plant. Cost estimate includes \$1,000,000 for engineering services, \$6,000,000 for a new sludge forcemain and pump system to pump sludge from the South Plant to the North Plant and \$13,00,000 in improvements to the existing North Plant sludge incinerators.

New Project:		1	Existing Projects:				Amended Projects:		
Project Financing (in millions of dollars)									
Year	Pre 2021	2021	2022	2023	2024	2025	2026	Total	
County Debt (Bonds & BANS)			4.900	10.000	5.000			19.900	
Appropriations		0.100						0.100	
Private Investment									
NYSERDA/ARRA/GIGP								-	
State Reimbursement								-	
Federal Reimbursement								-	
Other								-	
Total County Cost	-	0.100	4.900	10.000	5.000	-	-	20.000	
Management & Budget Recommendation:									

Water Purification District Capital Plan Summary: All Projects

New Projects:	3							
Existing Projects:	3							
Amended Projects:	1							
Project Financing (in millions of dollars)								
Year	Pre 2021	2021	2022	2023	2024	2025	2026	Total
County Debt (Bonds & BANS)	-	-	6.450	33.925	29.900	5.825	-	76.100
Appropriations	0.200	0.550	1.600	0.050	-	-	-	2.400
Federal Reimbursement	-	-	-	-	-	-	-	-
Saratoga County, NY	(0.200)	(0.400)	(1.500)	(18.500)	(12.900)	-	-	(33.500)
Other	0.200	0.400	1.500	18.500	12.900	-	-	33.500
Total County Cost	0.200	0.550	8.050	33.975	29.900	5.825	-	78.500