Gardiner WWTF Phase 2 Improvements Update

City of Gardiner, Maine Presentation to City Council



By: Joe Ducharme, Jr., PE

Phase 2 Evolution

Applied for ME DOT Infrastructure Adaptation Grant (for PS generators)

Feb 24 Northern Borders Regional
Commission Grant
Application Submitted
(\$1M grant; 50% match)

Jan Phase 2 Original Scope Defined

Applied for CDS Grant (80% grant; 20% local match)

Apr **20**

PHASE 2 ADDITIONAL NEEDS

SCADA Programming; Full Roof Replacement; PS Generators; Chemical Room Overhaul; Permitting

Nov 24

Additional Needs Identified



- Advanced SCADA programming at WWTF, MAPS, & 7 Remote PS
- Chemical Room Overhaul Tanks, Pumps, HVAC, Partitions, Doors
- Remote Pump Station Upgrade & Emergency Generators (7 total)
- Replace Entire WWTF Roof (except one area)
- Collection System Improvements to Reduce I&I
- Permitting for New Generators

Original Phase 2 Projected Cost (Dec 2023)



Improvement	Cost
Electrical, Instrumentation & Controls (SCADA)	\$0.88M
MAPS Generator & Motor Control Center	\$0.55M
Blower Upgrades / Chemical Feed System Upgrades	\$0.62M
Roof Repairs / New Boilers / CCTV Sewer Maintenance Trailer	\$0.30M
Pump Station One thru Five Electrical/Motors/Controls (SCADA)	\$0.55M
Total	\$2.90M

Updated Phase 2 Projected Cost (Dec 2024)



Improvement	Cost		
WWTF, MAPS, & 7 Remote Pump Station SCADA	\$1.15M		
MAPS Generator & Motor Control Center	\$0.78M		
Blower Upgrades / Chemical Feed Room Overhaul	\$0.84M		
Roof Replacement / Boilers / CCTV Sewer Maint. Trailer / Influent WL Monitoring	\$1.27M		
Remote Pump Station Upgrades, New Generators at 7 Pump Stations	\$0.80M		
Collection System Repairs	\$2.70M		
Total	\$ 7.54 M		

Project Approach



- Advance Design of Original WWTF and MAPS Improvements
- Submit USDA RD Application (~14% grant) for \$7.54M Project
- Submit CDS Grant Application for \$7.54M Project(80% grant; 20% match)
- Reconvene when grant determinations are made
- Advance with affordable project improvements

Project Funding and Debt Service



Grants ¹	Project Option ^{2,3,4}	Total Project Cost	Potential Grant Funding		Gardiner Debt Service (70%) ⁵	
USDA RD Only	Option 1	\$7.54M	\$1.06M	\$6.48M	\$4.54M	31%
	Option 2	\$4.83M	\$676K	\$4.15M	\$2.91M	20%
	Option 3	\$4.49M	\$629K	\$3.86M	\$2.70M	18%
USDA RD + NBRC	Option 1	\$7.54M	\$2.06M	\$5.48M	\$3.84M	26%
	Option 2	\$4.83M	\$1.68M	\$3.15M	\$2.21M	15%
	Option 3	\$4.49M	\$1.63M	\$2.86M	\$2.00M	13.5%
CDS Only	Option 1	\$7.54M	\$6.03M	\$1.51M	\$1.06M	7%
	Option 2	\$4.83M	\$3.86M	\$966K	\$676K	4.5%
	Option 3	\$4.49M	\$3.59M	\$898K	\$629K	4%
USDA RD + NBRC + CDS	Option 1	\$7.54M	\$5.94M	\$1.60M	\$1.12M	7.5%
	Option 2	\$4.83M	\$3.70M	\$1.13M	\$792K	5.5%
	Option 3	\$4.49M	\$3.42M	\$1.07M	\$751K	5%

^{1.} USDA RD is 14% grant, NBRC is \$1M grant with 50% grant match, CDS is 80% grant with 20% overall match.

^{2.} Option 1 is all inclusive Phase II scope + all pump stations + collection system.

^{3.} Option 2 is Phase II scope + all pump stations, no collection system.

^{4.} Option 3 is Phase II scope + two pump stations (D&H and Cobbossee), no other pump stations and no collection system.

^{5.} Assumes Randolph and Farmingdale pay 30% of the total debt service.

^{6.} User rate increase shown is for Gardiner only based on the 70% debt service.

Next Steps





