Aquarion Company Bi-Annual Report on Planned and Completed Capital Improvements to the Abenaki Water Company Systems

July 14, 2022

Aquarion Company ("Aquarion") provides this report pursuant to Order No. 26,549 issued by the New Hampshire Public Utilities Commission (the "Commission") in Docket DW 21-090 on November 12, 2021 (the "Order"), and the Settlement Agreement dated November 9, 2021 as approved in the Order. Specifically, Section 10.1 of the Settlement Agreement requires Aquarion to provide a bi-annal update of planned and completed capital improvements to the Abenaki Water Company ("Abenaki") water systems. This report provides the update as of July 14, 2022.

Lakeland

Project Description	2022 Actual Spend (YTD)	2022 Projected Additional Spend	2023	2024	2025	Projected Overall Cost
Water System Mapping & Improvements	$ -	$ 3,000	$ -	$ -	$ -	$ 3,000
SCADA & Instrumentation Upgrades	$ 2,486	$ 32,514	$ -	$ -	$ -	$ 35,000
Generator Main for Wells & Treatment Building	$ -	$ 40,000	$ 30,000	$ -	$ -	$ 70,000
Generator for Plummer Hill Booster Station	$ -	$ 35,000	$ -	$ -	$ -	$ 35,000
Total:	$ 2,486	$ 110,514	$ 30,000	$ -	$ -	$ 143,000

2022

In Progress:

- ***SCADA and Instrumentation Upgrades –*** Telemetry and data logging equipment (Telog) was installed at the facility to monitor station operations. Additional work is required to improve monitoring capabilities. The work is expected to be completed in 2022.

Planned:

- ***Water System Mapping Improvements*** – Revisions and adjustments to the mapping will be made as updated information becomes available.
- ***Generator for Wells and Treatment Building –*** Aquarion has been obtaining quotes for the installation of a generator to serve the facility. The generator is a special-order item due to the required size, and lead times are extended due to supply issues. A deposit will be paid in 2022, with the balance due when the generator and equipment are installed and operational in 2023. The property is not owned by Aquarion and the Company is evaluating existing easements to determine if an additional one is required for the project.
- ***Generator for Plummer Hill Booster Station –*** Quotes have been obtained for the generator and supporting equipment. The generator is anticipated to be installed in 2022. The property is not owned by Aquarion and the Company is evaluating existing easements to determine if an additional one is required for the project.

Future Years

Generator for Wells and Treatment Building (2023) – The installation of the generator and supporting equipment will be completed.

White Rock

A portion of planned capital work will be funded by the remainder of a $350,000 grant from the New Hampshire Drinking Water and Groundwater Trust Fund ("NHDWGTF"). The planned capital improvements through 2025 are presented below:

Project Description	2022 Actual Spend (YTD)	2022 Projected Additional Spend	2023	2024	2025	Projected/Received Grant	Projected Overall Cost
Design & Replacement of Water Mains	$ -	$ -	$ 15,000	$ 15,000	$ 15,000	$ -	$ 45,000
Water System Mapping & Improvements	$ -	$ 3,000	$ -	$ -	$ -	$ -	$ 3,000
SCADA & Instrumentation Upgrades	$ 2,486	$ 32,514	$ -	$ -	$ -		$ 35,000
Regulator Upgrades & New Distribution Valves	$ -	$ 85,000	$ 35,000	$ 35,000	$ -	$ (49,300)	$ 105,700
Exploration & Construction of New Source of Supply	$ 11,331	$ 143,669	$ 265,000	$ -	$ -	$ (197,800)	$ 222,200
Treatment System & Building Upgrades	$ 115,022	$ 62,678	$ -	$ -	$ -	$ (68,193)	$ 109,507
Periodic Meter Replacements	$ -	$ -	$ -	$ 9,746	$ 1,712		$ 11,458
Total:	$ 128,839	$ 326,861	$ 315,000	$ 59,746	$ 16,712	$ (315,293)	$ 531,865

Note: Grant funds totaling $34,707 have been utilized for the storage tank lining project. Along with the amount shown above, the total grant funding is $350,000.

2022

In Progress:

- ***SCADA and Instrumentation Upgrades –*** Telemetry and data logging equipment (Telog) was installed at the facility to monitor station operations. Additional work is required to improve monitoring capabilities. The work is expected to be completed in 2022.
- ***Exploration and Construction of New Source of Supply –*** The license agreement with the Town of Bow has been executed, allowing for access to the site for the drilling of the test wells. Aquarion is currently revising permitting documents for access to the well sites. Wetlands around the two most favorable locations have be delineated. A site walk with the project consultant (Emery & Garret), well driller, NHDES representative and Aquarion representatives was conducted in June 2022 to evaluate equipment access and observe site conditions of the test well locations. Aquarion has also contacted several contractors for access and site clearing to the test well locations. Once permitting documents are approved, the access and site clearing contract can be awarded and the work will commence. The well and pumping tests are anticipated to be completed in 2022.

- ***Treatment System and Building Upgrades –*** The permanent arsenic treatment system was installed in December of 2021 and the treated water is in compliance with the New Hampshire Department of Environmental Services (NHDES) standards. Project closeout and billing continue into 2022.

Planned:

- ***Water System Mapping Improvements*** – Revisions and adjustments to the mapping will be made as updated information becomes available.
- ***Regulator Upgrades and New Distribution Valves –*** The project will involve the replacement of two of the system's pressure regulating valves and the installation of several new distribution valves. The additional distribution valves will allow for smaller sections of the system to be isolated in the event of a main break, reducing the extent of outage areas in the system. Planning is underway for the installations and replacements, and they are expected to be completed in 2022.

Future Years

Design and Replacement of Water Mains (2023-2025) – System areas will be evaluated for replacement. Main break records will be kept for reference in the evaluation.

Regulator Upgrades and New Distribution Valves (2023-2024) – Regulators not replaced in 2022 will be evaluated for replacement. The regulator valves will be replaced in order of need.

Exploration and Construction of New Source of Supply (2023) – Efforts will continue to finalize the development of the new source and begin planning for connection of the source to the existing distribution system.

Periodic Meter Replacements (2024-2026)– Meter replacements are scheduled to begin in 2024.

Tioga River (Belmont)

The planned capital improvements through 2025 are presented below:

Project Description	2022 Actual Spend (YTD)	2022 Projected Actual Spend	2023	2024	2025	Projected Overall Cost
Water System Mapping & Improvements	$ -	$ 3,000	$ -	$ -	$ -	$ 3,000
Water Distribution Main Replacements	$ -	$ 50,000	$ -	$ -	$ -	$ 50,000
SCADA & Instrumentation Upgrades	$ 180	$ 19,820	$ -	$ -	$ -	$ 20,000
Generator for Wells & Treatment Station	$ -	$ 35,000	$ -	$ -	$ -	$ 35,000
Total:	$ 180	$ 107,820	$ -	$ -	$ -	$ 108,000

2022

In Progress:

- ***SCADA and Instrumentation Upgrades –*** Telemetry and data logging equipment (Telog) was installed at the facility to monitor station operations. Additional work is required to improve monitoring capabilities. The work is expected to be completed in 2022.

Planned:

- ***Water System Mapping Improvements*** – Revisions and adjustments to the mapping will be made as updated information becomes available.
- ***Water Distribution Main Replacements –*** The project includes the replacement of approximately 300 linear feet of water main and appurtenant equipment on Tioga Drive. The project is currently undergoing environmental review and will be constructed in 2022.
- ***Generator for Wells and Treatment –*** Quotes have been obtained for the generator and propane tank equipment. The generator is anticipated to be installed in 2022.

Future Years

As future projects are identified the capital costs will be provided in subsequent reports.

Gilford Village

The planned capital improvements through 2025 are presented below:

Project Description	2022 Actual Spend (YTD)	2022 Projected Spend	2023	2024	2025	Projected Overall Cost
Water System Mapping & Improvements	$ -	$ 3,000	$ -	$ -	$ -	$ 3,000
Replacement of Water Mains	$ -	$ 10,000	$ 130,000	$ -	$ -	$ 140,000
SCADA & Instrumentation Upgrades	$ 180	$ 34,820	$ -	$ -	$ -	$ 35,000
Generator for Wells & Treatment Station	$ -	$ 35,000	$ -	$ -	$ -	$ 35,000
Total:	$ 180	$ 82,820	$ 130,000	$ -	$ -	$ 213,000

2022

In Progress:

- ***SCADA and Instrumentation Upgrades –*** Telemetry and data logging equipment (Telog) was installed at the facility to monitor station operations. Additional work is required to improve monitoring capabilities. The additional work is expected to be completed in 2022.

Planned:

- ***Water System Mapping Improvements*** – Revisions and adjustments to the mapping will be made as updated information becomes available.
- ***Replacement of Water Mains –*** Aquarion is performing leak detection to identify potential locations of leaks. After the leak detection survey Aquarion will inform the NHDES of areas requiring main replacements by, October 31, 2022. If significant leaks are discovered, then the main(s) will be designed for replacement in 2023.
- ***Generator for Wells and Treatment –*** Quotes have been obtained for the generator and propane tank equipment. The generator is anticipated to be installed in 2022.

Future Years

Replacement of Water Mains (2023) – Mains identified for replacement in 2022, and additional mains identified for replacement, during ongoing leak detection surveys, will be designed and constructed in 2023.

Rosebrook

The Rosebrook System is in the Bretton Woods area of the Town of Carroll, New Hampshire. There are high pressures in large areas of the system and mitigating the pressures will be the focus of capital spending through 2025, as shown in the table below. Aquarion has been working closely with the NHDES to coordinate design activities and planned construction to satisfy the Letter of Deficiency (LOD) that was issued for the treatment building deficiencies and high system pressures. The NH Drinking Water & Groundwater Trust Fund previously approved the project for $2,520,000 in loan funds and awarded a $280,000 grant. Aquarion has also applied for additional loans and grants through the Drinking Water State Revolving Fund (SRF), under the 2021 Infrastructure and Investment and Jobs Act, to further offset project costs. Additionally, Aquarion will provide a $280,000 credit towards the pressure reduction project, as agreed to during the acquisition of the New England Service Company (NESC). Several items that were identified in the January 14, 2022 report have been combined with the treatment and pressure reduction projects. The planned capital improvements through 2025 are presented below:

Project Description	2022 Actual Spend (YTD)	2022 Projected Spend	2023	2024	2025	Projected Grant & Credit	Projected Overall Cost
Water Main Replacements	$ -	$ 80,000	$ -	$ -	$ -	$ -	$ 80,000
Water System Mapping & Improvements	$ -	$ 5,000	$ 3,000	$ -	$ -	$ -	$ 8,000
Station Pressure Reduction & Treatment	$ 50,821	$ 195,179	$1,500,000	$ 732,000	$ -	$ (280,000)	$ 2,198,000
System Pressure Reduction	$ 31,168	$ 186,092	$ -	$ 641,700	$ 532,300	$ (280,000)	$ 1,111,260
Total:	$ 81,989	$ 466,271	$1,503,000	$1,373,700	$ 532,300	$ (560,000)	$ 3,397,260

2022

In Progress:

- ***Station Pressure Reduction & Treatment –*** An alternatives analysis has been completed for addressing high chemical injection pressures, chemical storage, and containment. The selected option was the replacement of the existing pumping and treatment building, and it is currently in the design phase. The design and permitting for the new pumping and treatment building will be completed in 2022.
- ***System Pressure Reduction–*** An alternatives analysis has been completed. Aquarion is currently coordinating with stakeholders to determine the best option for addressing the section of the NHDES LOD related to high system pressures. The figures shown in the table above represent the lowest cost option identified in the most recent alternatives analysis.

Planned:

- ***Update Water System Mapping –*** The system mapping will be updated as new information becomes available.
- ***Water Main Replacements –*** A previously identified section of water main in the system will be designed in 2022 for future replacement.

Future Years

- ***Water Main Replacements –*** The main noted for design in 2022 will be replaced at a future date in coordination with the property owner.
- ***Update Water System Mapping (2023) –*** The system mapping will be updated as new information becomes available.
- ***Station Pressure Reduction & Treatment (2023-2024) –*** The new pumping and treatment plant is proposed for construction in 2023 and 2024.
- ***System Pressure Reduction (2024-2025) –*** The design, permitting and construction of the pressure reduction project is planned to take place over the span of several years. A timeline for the construction of the improvements will be determined through coordination with the NHDES and project stakeholders