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

January 23, 2023

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 December 31, 2022.

Lakeland

Project Description	Spend to Date Since Acquisition of NESC	2023 Projected Spend	2024 Projected Spend	2025 Projected Spend	Total Spend (Actual + Projected)
Water System Mapping & Improvements	$ -	$ -	$ 7,000	$ -	$ 7,000
SCADA & Instrumentation Upgrades	$ 4,970	$ 9,000	$ 4,000	$ 2,000	$ 19,970
Generator for Plummer Hill Booster Station	$ 9,140	$ 25,000	$ -	$ -	$ 34,140
Generator for Wells & Treatment Plant	$ 46,930	$ 44,000	$ -	$ -	$ 90,930
Treatment Plant Disinfection System	$ -	$ 15,000	$ 55,000	$ -	$ 70,000
Well Production Study	$ -	$ 10,000	$ -	$ -	$ 10,000
Customer Meter Replacement	$ -	$ -	$ 26,000	$ 26,000	$ 52,000
Total:	$ 61,040	$ 103,000	$ 92,000	$ 28,000	$ 284,040

2023

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. Procurement delays due to supply chain issues has extended the project timeline. The work is expected to be completed in 2023.
- ***Generator for Plummer Hill Booster Station –*** The generator and related equipment has been ordered. It was determined that there was no easement for the existing station, and an easement would be required to cover existing facilities, generator and future improvements and the installation of a security fence. A survey of the station area is currently being finalized for use in establishing an easement with the property owner. The project is planned to be completed in 2023.
- ***Generator for Wells and Treatment Plant –***The generator and related equipment has been ordered and, due to supply chain issues, is expected to arrive in the summer of 2023. The concrete pads for the generator and propane tank have been installed. The remainder of the equipment is planned to be installed in 2023.

Planned:

- ***Treatment Plant Disinfection System –*** The Lakeland System is not currently providing chlorine disinfection of the water supply. Chlorination of water systems is an important safeguard to public health and is an Aquarion policy for the systems it owns. The project is planned for design in 2023.

- ***Well Production Study*** **–**A consultant will evaluate the production capability of each well to determine the long-term viability of each. Wells will also be outfitted with level transducers for long term monitoring.

<u>Future Years</u>

Water System Mapping Improvements (2024) – Revisions and adjustments to the mapping will be made as updated information becomes available.

SCADA and Instrumentation Upgrades **–** Equipment updates and repairs will be completed as necessary.

Treatment Plant Disinfection System (2024) **–** Construction and installation of the disinfection system is planned for 2024.

Customer Meter Replacement (2024-2025) **–** Periodic replacement of customer water meters. It has been determined that the existing meters are approaching their 10-year replacement date. The meter replacements are an addition since the last report.

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	Spend to Date Since Acquisition of NESC	2023 Projected Spend	2024 Projected Spend	2025 Projected Spend	Projected/Received Grant	Total Spend (Actual + Projected)
Water System Mapping & Improvements	$ -	$ 5,500	$ 1,500	$ 600	$ -	$ 7,600
SCADA & Instrumentation Upgrades	$ 3,422	$ 8,000	$ 4,000	$ 2,000	$ -	$ 17,422
Regulator Upgrades & New Isolation Valves	$ 21,696	$ 70,000	$ -	$ -	$ -	$ 91,696
Exploration & Construction of New Source of Supply/Connect to System	$ 30,737	$ 239,000	$ 450,000	$ -	$ (247,100)	$ 472,637
Arsenic Treatment System Upgrade	$ 178,493	$ -	$ -	$ -	$ (68,193)	$ 110,300
Well Production Study	$ -	$ 13,000	$ -	$ -	$ -	$ 13,000
Customer Meter Replacement	$ -	$ 3,000	$ 8,000	$ 8,000	$ -	$ 19,000
Total:	$ 234,348	$ 338,500	$ 463,500	$ 10,600	$ (315,293)	$ 731,655

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

2023

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. Procurement delays, due to supply chain issues, have extended the project timeline. The work is expected to be completed in 2023.
- ***Regulator Upgrades & New Isolation Valves -*** The project involves the replacement of two of the system's pressure regulating valves and the installation of several new isolation valves to improve the operability of the system. The pressure regulating valves have been procured, the two existing vault structures housing the valves have been inspected, and competitive bids for the work have been received. The installations are planned be completed in 2023.
- ***Exploration and Construction of New Source of Supply/Connection to System –*** The project was delayed due to environmental review permitting with the State and permitting efforts with the Town of Bow. Aquarion has obtained the necessary permits to install test wells. The work to remove trees, prepare site access and drill the test wells was competitively bid and qualified contractors were chosen to provide services. The project

is expected to begin as soon as practical, depending on weather and ground conditions. The well drilling and pumping tests are anticipated to be completed in 2023, with survey and design of the connecting pipeline to begin in 2023.

Planned:

- ***Water System Mapping Improvements*** – Revisions and adjustments to the mapping will be made as updated information becomes available.
- ***Well Production Study –***A consultant will evaluate the production capability of each well to determine the long-term viability of each. Wells will also be outfitted with level transducers for long term monitoring.
- ***Customer Meter Replacements –*** Periodic water meter replacements.

Future Years

SCADA and Instrumentation Upgrades – Equipment updates and repairs will be completed as necessary.

Exploration and Construction of New Source of Supply/Connect to System (2024) – The installation of water main to connect the potential well site to the existing treatment plant is planned for 2024.

Customer Meter Replacements (2024-2025) – Periodic water meter replacements.

Tioga River (Belmont)

The planned capital improvements through 2025 are presented below:

Project Description	Spend to Date Since Acquisition of NESC	2023 Projected Spend	2024 Projected Spend	2025 Projected Spend	Total Spend (Actual + Projected)
Water System Mapping & Improvements	$ -	$ 2,500	$ 1,500	$ 600	$ 4,600
Design & Replacement of Water Mains	$ 1,123	$ 115,000	$ -	$ -	$ 116,123
SCADA & Instrumentation Upgrades	$ 1,236	$ 9,000	$ 4,000	$ 2,000	$ 16,236
Generator for Wells & Treatment Station	$ 9,819	$ 25,500	$ -	$ -	$ 35,319
Well Production Study	$ -	$ 10,000	$ -	$ -	$ 10,000
Total:	$ 12,178	$ 162,000	$ 5,500	$ 2,600	$ 182,278

2023

In Progress:

- ***Design & Replacement of Water Mains –*** The project includes the replacement of approximately 300 linear feet of water main and appurtenant equipment on Tioga Drive. The State environmental review for the project has been completed and the project is planned for construction in 2023.
- ***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. Procurement delays due to supply chain issues has extended the project timeline. The work is expected to be completed in 2023.
- ***Generator for Wells and Treatment –*** The project was delayed from 2022 due to environmental permitting that was required by the Town of Belmont for work near the site wetlands. The concrete pads for the generator and propane tank are installed, and the remainder of the project is planned to be completed in 2023.

Planned:

- ***Water System Mapping Improvements*** – Revisions and adjustments to the mapping will be made as updated information becomes available.
- ***Well Production Study –***A consultant will evaluate the production capability of each well to determine the long-term viability of each. Wells will also be outfitted with level transducers for long term monitoring.

Future Years

Water System Mapping Improvements – Revisions and adjustments to the mapping will be made as updated information becomes available.

SCADA and Instrumentation Upgrades – Equipment updates and repairs will be completed as necessary.

Gilford Village

The planned capital improvements through 2025 are presented below:

Project Description	Spend to Date Since Acquisition of NESC	2023 Projected Spend	2024 Projected Spend	2025 Projected Spend	Total Spend (Actual + Projected)
Water System Mapping & Improvements	$ -	$ 2,500	$ 4,000	$ 600	$ 7,100
SCADA & Instrumentation Upgrades	$ 6,130	$ 5,000	$ 4,000	$ 2,000	$ 17,130
Design & Replacement of Water Mains	$ -	$ -	$ 12,000	$ 35,000	$ 47,000
Generator for Wells & Treatment Station	$ 48,245	$ 35,500	$ -	$ -	$ 83,745
Storage Tank Lining	$ -	$ 45,000	$ -	$ -	$ 45,000
Well Production Study	$ -	$ 14,000	$ -	$ -	$ 14,000
Total:	$ 54,375	$ 102,000	$ 20,000	$ 37,600	$ 213,975

2023

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. Procurement delays due to supply chain issues has extended the project timeline. The work is expected to be completed in 2023.
- ***Generator for Wells and Treatment –*** Equipment lead times have delayed the project from the intended 2022 completion date. The generator for the site has been ordered and is expected to arrive in the Summer of 2023. Concrete equipment pads and electrical conduit have been installed at the site. The project is planned for completion in 2023.

Planned:

- ***Water System Mapping Improvements*** – Revisions and adjustments to the mapping will be made as updated information becomes available.
- ***Storage Tank Lining –*** The system storage tank was inspected in 2022 and determined to be a candidate for relining rather than a total replacement. The relining of the tank is planned to be completed in 2023.

- ***Well Production Study –*** A consultant will evaluate the production capability of each well to determine the long-term viability of each. Wells will also be outfitted with level transducers for long term monitoring.

Future Years

Water System Mapping Improvements – Revisions and adjustments to the mapping will be made as updated information becomes available.

SCADA and Instrumentation Upgrades – Equipment updates and repairs will be completed as necessary.

Design & Replacement of Water Mains (2024-2025) – System areas will be evaluated for replacement. Main break records will be kept for reference in the evaluation.

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 2026, as shown in the table below. Aquarion has been working closely with the New Hampshire Department of Environmental Services ("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"). The planned capital improvements through 2025 are presented below:

Project Description	Spend to Date Since Acquisition of NESC	2023 Projected Spend	2024 Projected Spend	2025 Projected Spend	Projected Grant & Credit	Total Spend (Actual + Projected)
SCADA & Instrumentation Upgrades	$ 2,015	$ 9,000.00	$ 4,000.00	$ 2,000.00	$ -	$ 17,015
Water System Mapping & Improvements	$ -	$ 10,000	$ 5,000	$ 600	$ -	$ 15,600
Station Pressure Reduction & Treatment (Phase I)	$ 254,775	$ 1,578,000	$ 1,000,000	$ -	$ (280,000)	$ 2,552,775
System Pressure Reduction (Phase II)[1]	$ 225,010	$ 235,000	$ TBD	$ TBD	$ (280,000)	$ 180,010
Install 16-inch Isolation Valves	$ -	$ 65,000	$ 65,000	$ -	$ -	$ 130,000
Isolation Valve Replacements	$ -	$ -	$ 60,000	$ 15,000	$ -	$ 75,000
Base Lodge Main Relocation	$ -	$ -	$ 25,000	$ 250,000	$ -	$ 275,000
Well Production Study	$ -	$ 13,000	$ -	$ -	$ -	$ 13,000
Total:	$ 481,800	$ 1,910,000	$ 1,159,000	$ 267,600	$ (560,000)	$ 3,258,400

2023

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. Procurement delays due to supply

chain issues has extended the project timeline. The work is expected to be completed in 2023.

- ***Station Pressure Reduction & Treatment (Phase 1)*** **–** Final design for the new pumping and treatment facility is currently under review by NHDES, and approval for financing the project with the loan and grant funds from the NHDWGTF is currently pending with the NHPUC. Upon approval by the NHPUC of the financing and the execution of the grant and loan by the Governor and Executive Council, the project will be put out to competitive bid in Spring of 2023 with the start of construction planned for the Summer of 2023. Construction of the plant is expected to be completed in the Fall of 2024.
- ***System Pressure Reduction (Phase 2 Design)*** **–** The design of the distribution system pressure reduction improvements will begin in 2023 per coordination and direction from the NHDES.

Planned:

- ***Water System Mapping*** **–** The system mapping will be updated as new information becomes available.
- ***Install 16-inch Isolation Valves*** **–** The 16-inch water main that serves as the trunkline of the distribution system is being evaluated to determine if additional valves are needed for emergency events.
- ***Well Production Study*** **–**A consultant will evaluate the production capability of each well to determine the long-term viability of each. Wells will also be outfitted with level transducers for long term monitoring.

Future Years

SCADA and Instrumentation Upgrades **–** Equipment updates and repairs will be completed as necessary.

Water System Mapping Improvements – Revisions and adjustments to the mapping will be made as updated information becomes available.

System Pressure Reduction (Phase 2 Construction; 2025-2026) **–** The construction of three pressure reducing structures is anticipated to be completed over two construction seasons. The larger of the three structures will be constructed in 2025 with the two remaining one to follow in 2026. The solution for Phase 2, selected in consultation with stakeholders consistent with the settlement agreement in Docket No. DW 21-090, approved by the NHPUC, has not yet been submitted to DES for approval. Once the solution is submitted and approved by DES, funding will be pursued to seek the lowest-cost option for implementing this project.

Isolation Valve Replacements (2024-2025) **–** The replacement of select inoperable and/or damaged valves are planned for 2024-2025. The status of valve operability is evaluated during the annual valve exercising program.

Base Lodge Main Relocation (2025) **–** A portion of the 16-inch water main that serves the entire distribution system is located under a portion of the base lodge at the Bretton Woods Ski Area. Relocation of the main is planned for 2025; planning will start in 2023 and will be closely coordinated with Omni.