

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

July 15, 2024

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-annual update of planned and completed capital improvements to the Abenaki Water Company (“Abenaki”) water systems. This report provides the update as of June 30, 2024.

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Lakeland (Belmont)

The planned capital improvements through 2026 are presented below:

Project Description	Actual Spend to Date Since Acquisition of NESC	2024 Projected Spend	2025 Projected Spend	2026 Projected Spend	Total Spend (Actual + Projected)
Water System Mapping & Improvements	\$ 3,155	\$ 5,750	\$ 600	\$ 600	\$ 10,105
SCADA & Instrumentation Upgrades	\$ 5,413	\$ 17,000	\$ 5,500	\$ 4,800	\$ 32,713
Generator for Plummer Hill Booster Station	\$ 35,132	\$ -	\$ -	\$ -	\$ 35,132
Generator for Wells & Treatment Plant	\$ 85,108	\$ -	\$ -	\$ -	\$ 85,108
Treatment Plant Disinfection System	\$ 2,305	\$ 77,695	\$ -	\$ -	\$ 80,000
Plummer Booster Pump Station Safety Improvements	\$ 1,725	\$ 5,000	\$ -	\$ -	\$ 6,725
Well Production Study	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Meter Replacement	\$ 2,978	\$ 17,900	\$ 804	\$ 603	\$ 22,285
Total	\$ 135,816	\$ 123,345	\$ 6,904	\$ 6,003	\$ 272,068

In Progress or Completed:

- ***Water System Mapping Improvements*** – Revisions and adjustments to the mapping are periodically made when new information becomes available.
- ***SCADA and Instrumentation Upgrades*** – Telemetry and data logging equipment (Telog) was installed at the facility to monitor station operations in 2023. Additional work is on going to improve monitoring capabilities.
- ***Generator for Plummer Hill Booster Station*** – The project is complete and in service.
- ***Generator for Wells and Treatment Plant*** – This project is complete and in service.
- ***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 a company policy for Aquarion, and the same policy will apply to Abenaki. A water quality evaluation and alternatives analysis for chlorine addition is currently underway. The project is scheduled to be completed in 2024.

Planned to begin in 2024:

- ***Plummer Booster Pump Station Safety Improvements*** – Alternatives for improving safety at the station are being evaluated including upgrading the staircase and the possibility of adding a building addition.
- ***Customer Meter Replacement*** – Periodic replacement of customer water meters.
- ***SCADA and Instrumentation Upgrades*** – Direct monitoring of the storage tank level is being added, along with associated programming changes for pump operations. The disinfection project includes additional flow and chemical monitoring equipment, to be followed by more programming changes for chemical feed dosing.

Future Years (2025-2026):

- ***SCADA and Instrumentation Upgrades*** – Equipment updates and repairs will be completed as necessary.
- ***Well Production Study*** – This project includes retaining a consultant to evaluate the production capability of each well to evaluate their long-term viability. The project has been delayed at this time and will be re-evaluated to determine the appropriate time for completion.
- ***Customer Meter Replacement*** – Periodic replacement of customer water meters.

White Rock (Bow)

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 2026 are presented below:

Project Description	Actual Spend to Date Since Acquisition of NESC	2024 Projected Spend	2025 Projected Spend	2026 Projected Spend	Projected / Received Grant	Total Spend (Actual + Projected)
Water System Mapping & Improvements	\$ 295	\$ 5,750	\$ 600	\$ 600	\$ -	\$ 7,245
SCADA & Instrumentation Upgrades	\$ 59,022	\$ 70,000	\$ 5,500	\$ 4,800	\$ -	\$ 139,322
Design & Replacement of Water Mains	\$ -	\$ -	\$ 15,000	\$ 150,000	\$ -	\$ 165,000
Regulator Upgrades & New Isolation Valves	\$ 90,951	\$ 60,000	\$ -	\$ -	\$ (17,243)	\$ 133,708
Water Supply Improvements	\$ 415,737	\$ 86,188	\$ -	\$ -	\$ (229,857)	\$ 272,068
Arsenic Treatment System Upgrade	\$ 190,119	\$ -	\$ -	\$ -	\$ (68,193)	\$ 121,926
Well Production Study	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Meter Replacement	\$ 164	\$ 6,700	\$ 13,869	\$ -	\$ -	\$ 20,733
Total	\$ 756,288	\$ 228,638	\$ 34,969	\$ 155,400	\$ (315,293)	\$ 860,002

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.

The program funding is comprised of a \$350k grant, \$125k loan, and company contributed funds of \$130.5k for a total of \$606,000. The funds are supporting the regulator upgrades, well rehabilitation, and arsenic treatment projects.

In Progress or Completed:

- **Water System Mapping Improvements** – Revisions and adjustments to the mapping will be made as updated information becomes available.
- **SCADA and Instrumentation Upgrades** – Telemetry and data logging equipment (Telog) was installed at the facility to monitor station operations. Additional work is in process to improve monitoring capabilities. Costs have increased since the last report as we have prioritized SCADA upgrades in this system due to water supply issues. This includes to installation of instrumentation to monitor well water levels, tank water level, and individual well flows, along with installing a new programmable logic controller to monitor and control the facility. SCADA and instrumentation work continues at the station with additional improvements planned for 2024.
- **Regulator Upgrades & New Isolation Valves** - The project has been awarded and construction was partially completed in 2023 with final completion scheduled to occur in 2024.
- **Water Supply Improvements** – The tree clearing and access road to the sites has been constructed and drilling of the first exploratory well was drilled. Well casing was set to a depth of approximately 170 feet and drilling continued through bedrock for approximately 650 feet. The total approximate depth of the well was 820 feet with an estimated yield of one gallon per minute. Given the unfavorable results at the first well site, Abenaki and its Consultant are preparing to decommission the new well and remove the gravel access road from the Town’s property. Due to the unfavorable results to-date with new source exploration and in order to improve the quantity of water obtained from existing wells, Well 2 was redeveloped by hydrofracking to increase the well

yield. After hydrofracking showed successful yield increase for Well 2, Aquarion proceeded with hydrofracking Well 3. Hydrofracking of Wells 2 and 3 improved production capacity of both wells.

- ***Arsenic Treatment System Upgrade*** – This project is complete and in service.
- ***Customer Meter Replacements*** – Periodic water meter replacements.
- ***Well Production Study*** – This project was completed within the scope of the Water Supply Improvements project. The process of redeveloping Wells 2 & 3 included pump tests, water quality sampling, monitoring water levels, and inspecting all equipment (still tubes, column piping, pumps, wiring).

Planned to begin in 2024:

- ***Customer Meter Replacements*** – Periodic water meter replacements.

Future Years (2025-2026):

- ***SCADA and Instrumentation Upgrades*** – Equipment updates and repairs will be completed as necessary.
- ***Design & Replacement of Water Mains*** – System areas will be evaluated for replacement. Main break records will be kept for reference in the evaluation.
- ***Customer Meter Replacements*** – Periodic water meter replacements.

Tioga River (Belmont)

The planned capital improvements through 2026 are presented below:

Project Description	Actual Spend to Date Since Acquisition of NESC	2024 Projected Spend	2025 Projected Spend	2026 Projected Spend	DWGTF Grant	Total Spend (Actual + Projected)
Water System Mapping & Improvements	\$ 482	\$ 5,750	\$ 600	\$ 600	\$ -	\$ 7,432
SCADA & Instrumentation Upgrades	\$ 1,236	\$ 7,000	\$ 0	\$ 0	\$ -	\$ 8,236
Design & Replacement of Water Mains	\$ 80,826	\$ -	\$ -	\$ -	\$ (5,000)	\$ 75,826
Generator for Wells & Treatment Station	\$ 26,465	\$ -	\$ -	\$ -	\$ -	\$ 26,465
Well Production Study	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Meter Replacement	\$ 496	\$ -	\$ -	\$ -	\$ -	\$ 496
Total	\$ 109,505	\$ 12,750	\$ 600	\$ 600	\$ (5,000)	\$ 118,455

In Progress or Completed:

- ***Water System Mapping Improvements*** – Revisions and adjustments to the mapping will be made as updated information becomes available.
- ***SCADA and Instrumentation Upgrades*** – Telemetry equipment has been installed. Additional work is needed in order to be fully functional and communicating with the system. Equipment updates and repairs will be completed as necessary. Costs were revised since the last report to shift resources to other projects due to evolving project needs.
- ***Design & Replacement of Water Mains*** – Approximately 300 linear feet of water main on Tioga Drive was replaced in Spring 2023. The New Hampshire Drinking Water and Groundwater Trust Fund (DWGTF) previously awarded a \$5,000 grant towards the project improvements, as shown in the table above.
- ***Generator for Wells and Treatment Station*** – The project is complete and in service.
- ***Customer Meter Replacements*** – Periodic water meter replacements.

Planned for 2024:

- ***Customer Meter Replacements*** – Periodic water meter replacements.
- ***SCADA and Instrumentation Upgrades***. Installation of basic telemetry and monitoring functions will be completed this year.

Future Years (2025-2026):

- ***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.

- ***Well Production Study*** – This project includes retaining a consultant to evaluate the production capability of each well to evaluate their long-term viability. The project has been delayed at this time and will be re-evaluated to determine the appropriate time for completion.
- ***Customer Meter Replacements*** – Periodic water meter replacements.

Gilford Village (Gilford)

The planned capital improvements through 2026 are presented below:

Project Description	Actual Spend to Date Since Acquisition of NESC	2024 Projected Spend	2025 Projected Spend	2026 Projected Spend	Total Spend (Actual + Projected)
Water System Mapping & Improvements	\$ 197	\$ 5,750	\$ 600	\$ 600	\$ 7,147
SCADA & Instrumentation Upgrades	\$ 9,419	\$ 4,000	\$ 5,500	\$ 4,800	\$ 23,719
Design & Replacement of Water Mains	\$ 182,407	\$ -	\$ 10,000	\$ 140,000	\$ 332,407
Generator for Wells & Treatment Station	\$ 92,750	\$ -	\$ -	\$ -	\$ 92,750
Storage Tank Lining	\$ 60,511	\$ -	\$ -	\$ -	\$ 60,511
Well Production Study	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Meter Replacement	\$ 2,117	\$ 1,800	\$ -	\$ -	\$ 3,917
Total	\$ 347,401	\$ 11,550	\$ 16,100	\$ 145,400	\$ 520,451

In Progress or Completed:

- **Water System Mapping Improvements** – Mapping work will continue in 2024 for the location of existing equipment, water main, and associated appurtenances.
- **SCADA and Instrumentation Upgrades** – Installation of new equipment and replacement of obsolete or damaged equipment will continue through 2026.
- **Design and Replacement of Water Mains** – The main serving Bacon Drive was replaced in 2023. Approximately 415 linear feet of 4-inch high density polyethylene (HDPE) pipe, services, valves, services, and curb stops were installed to replace the existing main. This year the meter pit on Bacon Drive was replaced due to the poor condition and accessibility of the prior meter pit.
- **Generator for Wells and Treatment** – This project is complete and in service.
- **Storage Tank Lining**– The system storage tank was inspected in 2022 per NHDES requirements and it was determined that the entire interior coating of the tank had worn away over the approximate 50-years it has been in service. The NHDES required a plan for evaluation and maintenance of the tank, or a plan for replacement, if necessary. At the time of the inspection upgrades to the plumbing were made to allow for the isolation of the tank and the connection of an exterior temporary tank. The tank lining project is complete and in service.

Planned for 2024:

- **Customer Meter Replacements** – Periodic water meter replacements.

Future Years (2025-2026):

- **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.

- ***Well Production Study*** – This project includes retaining a consultant to evaluate the production capability of each well to evaluate their long-term viability. The project has been delayed at this time and will be re-evaluated to determine the appropriate time for completion.
- ***Customer Meter Replacements*** – Periodic water meter replacements.

Rosebrook (Carroll)

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. Abenaki 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. Additionally, Abenaki 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 2026 are presented below:

Project Description	Actual Spend to Date Since Acquisition of NESC	2024 Projected Spend	2025 Projected Spend	2026 Projected Spend	Projected / Received Grant / Contribution	Total Spend (Actual + Projected)
Water System Mapping & Improvements	\$ 1,053	\$ -	\$ 600	\$ 600	\$ -	\$ 2,253
SCADA & Instrumentation Upgrades	\$ 33,092	\$ -	\$ -	\$ 4,800	\$ -	\$ 37,892
Station Pressure Reduction & Treatment (Phase I)	\$ 957,184	\$ 1,330,000	\$ 665,000	\$ -	\$ (280,000)	\$ 2,672,184
System Pressure Reduction (Phase II)	\$ 291,867	\$ 45,000	\$ 773,800	\$ 692,467	\$ (280,000)	\$ 1,523,134
Install 16-inch Isolation Valves	\$ 15,648	\$ -	\$ 60,000	\$ -	\$ -	\$ 75,648
Isolation Valve Replacements	\$ -	\$ -	\$ 75,000	\$ 15,000	\$ -	\$ 90,000
Base Lodge Main Relocation	\$ -	\$ -	\$ -	\$ 40,000	\$ -	\$ 40,000
Well Production Study	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Meter Replacement	\$ 11,549	\$ 500	\$ 1,000	\$ 1,005	\$ -	\$ 14,054
Total	\$ 1,310,393	\$ 1,375,500	\$ 1,575,400	\$ 753,872	\$ (560,000)	\$ 4,455,165

In Progress or Completed:

- **Water System Mapping** – The system mapping will be updated as new information becomes available.
- **SCADA and Instrumentation Upgrades** – Installation of new equipment and replacement of obsolete or damaged equipment will continue through 2024.
- **Station Pressure Reduction & Treatment (Phase I)** – Construction began on the new Rosebrook Water treatment plant in April 2024. Construction is anticipated to be complete in Spring 2025. Information regarding project cost and financing, under Docket 21-061, can be viewed on the NHPUC website at the following link: <https://www.puc.nh.gov/regulatory/Docketbk/2021/21-061.html>
- **System Pressure Reduction (Phase 2 Design)** – Abenaki’s Consultant has begun the design of Phase 2 submitted preliminary design drawings for the location of the proposed pressure reducing valves (PRVs) in January of 2024 per NHDES direction. Easements are being obtained for the

PRVs and the designs are planned to be finalized by December 2024 with construction of the PRVs starting in 2025. Changes in costs since the last report reflect cost estimate updates as design progresses.

- ***Install 16-inch Isolation Valves*** – A consultant is currently working on the design of several 16-inch isolation valves for placement on the system trunk line for improved operational control during maintenance and potential emergency situations.
- ***Customer Meter Replacements*** – Periodic water meter replacements.

Planned to begin in 2024:

- ***Isolation Valve Replacements*** – The replacement of select inoperable and/or damaged valves are planned for 2024-2026. The status of valve operability is evaluated during the annual valve exercising program.
- ***Customer Meter Replacements*** – Periodic water meter replacements.

Future Years (2025-2026):

- ***SCADA and Instrumentation Upgrades*** – Equipment updates and repairs will be completed as necessary.
- ***System Pressure Reduction (Phase 2 Construction)*** – 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 ones to follow in 2026. The solution for Phase 2, selected in consultation with stakeholders, is consistent with the settlement agreement in Docket No. DW 21-090, approved by the NHPUC. Once the solution is submitted and approved by DES, funding will be pursued to seek the lowest-cost option for implementing the project.
- ***Base Lodge Main Relocation*** – 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. The design of the relocation of the water main is planned for 2026.
- ***Well Production Study*** – This project includes retaining a consultant to evaluate the production capability of each well to evaluate their long-term viability. The project has been delayed at this time and will be re-evaluated to determine the appropriate time for completion.
- ***Customer Meter Replacements*** – Periodic water meter replacements.