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

**July 19, 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 June 30, 2023.

## Lakeland

The planned capital improvements through 2025 are presented below:

| Project Description | Actual Spend to Date Since Acquisition of NESC | 2023 Projected Additional Spend | 2024 Projected Spend | 2025 Projected Spend | Total Spend (Actual + Projected) |
|---|---|---|---|---|---|
| Water System Mapping & Improvements | $ 3,155 | $ - | $ 7,000 | $ - | $ 10,155 |
| SCADA & Instrumentation Upgrades | $ 4,970 | $ - | $ 4,000 | $ 2,000 | $ 10,970 |
| Generator for Plummer Hill Booster Station | $ 15,659 | $ 18,481 | $ - | $ - | $ 34,140 |
| Generator for Wells & Treatment Plant | $ 49,360 | $ 60,000 | $ - | $ - | $ 109,360 |
| Treatment Plant Disinfection System | $ - | $ 20,000 | $ 80,000 | $ - | $ 100,000 |
| Well Production Study | $ - | $ 2,500 | $ - | $ - | $ 2,500 |
| Customer Meter Replacement | $ - | $ 4,000 | $ - | $ - | $ 4,000 |
| Total: | $ 73,144 | $ 104,981 | $ 91,000 | $ 2,000 | $ 271,125 |

### *2023*

### *In Progress or Completed:*

- ***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. Projected spending for 2023 was removed since the last report due to shifting priorities and needs that are identified as systems operate over time. SCADA and instrumentation are routinely monitored and improvements will continue to be made as necessary for proper system operation.
- ***Generator for Plummer Hill Booster Station –*** The easement required for placement of the generator is being finalized. The necessary tree clearing and installation will continue upon final execution of the easement. The project is planned to be completed in 2023.
- ***Generator for Wells and Treatment Plant –*** Abenaki has been coordinating with the property owner for placement of the generator under the existing easement. The total project cost was revised since the last report from $90,930 to $109,360 due to Town permitting, coordination with property owner, and additional costs for connecting the generator to the facility. Final Delivery of the generator is pending and the project is planned to be completed 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 a company policy for Aquarion, and the same policy will apply to Abenaki. The total project cost was revised since the last report from $70,000 to $100,000 due to increases in materials and construction cost, and the potential for building modifications, subject to confirmation during design. The project is planned for design in 2023 and construction in 2024.
- ***Well Production Study –*** A consultant will evaluate the production capability of each well to evaluate their long-term viability. The total project cost was revised since the last report from $10,000 to $2,500. Resources are being shifted to other priorities based on evolving system needs.
- ***Customer Meter Replacement –*** Periodic replacement of customer water meters.

***Future Years***

***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.

## 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 | Actual Spend to Date Since Acquisition of NESC | 2023 Projected Additional Spend | 2024 Projected Spend | 2025 Projected Spend | Projected/Received Grant | Total Spend (Actual + Projected) |
|---|---|---|---|---|---|---|
| Water System Mapping & Improvements | $ 295 | $ 5,500 | $ 1,500 | $ 600 | $ - | $ 7,895 |
| Design & Replacement of Water Mains | $ - | $ - | $ - | $ - | $ - | $ - |
| SCADA & Instrumentation Upgrades | $ 3,422 | $ 45,000 | $ 4,000 | $ 2,000 | $ - | $ 54,422 |
| Regulator Upgrades & New Isolation Valves | $ 27,892 | $ 77,367 | $ - | $ - | $ - | $ 105,259 |
| Exploration & Construction of New Source of Supply/Connect to System | $ 159,792 | $ 171,338 | $ 450,000 | $ - | $ (247,100) | $ 534,030 |
| Arsenic Treatment System Upgrade[1] | $ 190,119 | $ - | $ - | $ - | $ (68,193) | $ 121,926 |
| Well Production Study | $ - | $ 4,800 | $ - | $ - | $ - | $ 4,800 |
| Customer Meter Replacement | $ - | $ 140 | $ 1,540 | $ 9,940 | $ - | $ 11,620 |
| Total: | $ 381,520 | $ 304,145 | $ 457,040 | $ 12,540 | $ (315,293) | $ 839,952 |

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.

[1]Project retainage paid.

## ***2023***

### *In Progress or Completed:*

- ***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 total project cost was revised since the last report from $8,000 to $45,000. We have prioritized SCADA upgrades due to water supply issues. This includes a plan to install 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 2023.
- ***Regulator Upgrades & New Isolation Valves -*** The project has been awarded and construction is pending. The installations are planned be completed in 2023.
- ***Exploration and Construction of New Source of Supply/Connection to System –*** 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 evaluating options for moving forward with the investigation.

***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 evaluate their long-term viability. The total project cost was revised since the last report from $13,000 to $4,800. Resources are being shifted to work on the SCADA system to optimize well performance.

***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, subject to finding a suitable source.

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

## Tioga River (Belmont)

The planned capital improvements through 2025 are presented below:

| Project Description | Actual Spend to Date Since Acquisition of NESC | 2023 Projected Additional Spend | 2024 Projected Spend | 2025 Projected Spend | DWGTF Grant | Total Spend (Actual + Projected) |
|---|---|---|---|---|---|---|
| Water System Mapping & Improvements | $ 482 | $ 2,500 | $ 1,500 | $ 600 | | $ 5,082 |
| Design & Replacment of Water Mains | $ 76,890 | $ 7,500 | $ - | $ - | $(5,000) | $ 79,390 |
| SCADA & Instrumentation Upgrades | $ 1,236 | $ - | $ 4,000 | $ 2,000 | | $ 7,236 |
| Generator for Wells & Treatment Station | $ 13,137 | $ 10,000 | $ - | $ - | | $ 23,137 |
| Well Production Study | $ - | $ 2,500 | $ - | $ - | | $ 2,500 |
| Customer Meter Replacement | $ - | $ - | $ - | $ - | | $ - |
| Total: | $ 91,745 | $ 22,500 | $ 5,500 | $ 2,600 | | $ 117,345 |

### *2023*

***In Progress or Completed:***

- ***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. The project is being finalized and record drawings are being prepared by Abenaki's consultant. The total cost of the project has been reduced since the last report. Abenaki was able to retain an contractor to construct the improvements at a significant savings over pricing that was previously received.
- ***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, and the site electrical service required relocation. Project cost increased due to the need for design plans and permitting with the Town, and for the relocation of the electrical service. Final startup and commissioning are pending and the project will 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 evaluate their long-term viability. The total project cost was revised

since the last report from $10,000 to $2,500. Resources are being shifted to other priorities based on evolving system needs.

***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. Costs were revised since the last report to shift resources to other projects due to evolving project needs.

## Gilford Village

The planned capital improvements through 2025 are presented below:

| Project Description | Actual Spend to Date Since Acquisition of NESC | 2023 Projected Additional Spend | 2024 Projected Spend | 2025 Projected Spend | Total Spend (Actual + Projected) |
|---|---|---|---|---|---|
| Water System Mapping & Improvements | $ 197 | $ 2,500 | $ 4,000 | $ 600 | $ 7,297 |
| SCADA & Instrumentation Upgrades | $ 6,130 | $ 7,000 | $ 4,000 | $ 2,000 | $ 19,130 |
| Design & Replacement of Water Mains | $ - | $ 200,000 | $ 12,000 | $ 35,000 | $ 247,000 |
| Generator for Wells & Treatment Station | $ 50,975 | $ 60,000 | $ - | $ - | $ 110,975 |
| Storage Tank Lining | $ 29,190 | $ 45,000 | $ - | $ - | $ 74,190 |
| Well Production Study | $ - | $ 3,500 | $ - | $ - | $ 3,500 |
| Total: | $ 86,492 | $ 318,000 | $ 20,000 | $ 37,600 | $ 462,092 |

### *2023*

***In Progress or Completed:***

- ***SCADA and Instrumentation Upgrades –*** Installation of new equipment and replacement of obsolete or damaged equipment will continue through 2023.
- ***Design and Replacement of Water Mains –*** The main serving Bacon Drive is currently under design for replacement. The number of recent and historical main breaks necessitates the replacement. Five repairs on the main, valves and services were made between June 2019 and September 2022. Approximately 475 linear feet of 4-inch high density polyethylene (HDPE) pipe, services, valves, services and curb stops will be installed to replace the existing main. A meter pit will be replaced due to condition and difficulty of access. The project is planned for completion in 2023.

- ***Generator for Wells and Treatment –*** The site has been prepared and Abenaki is awaiting the delivery of the generator. The project is planned for completion in 2023.

***Planned:***

- ***Water System Mapping Improvements*** –Mapping work will continue in 2023 for the location of existing equipment and the main replacement proposed for Bacon Drive.

- ***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. Per a plan filed with the NHDES, the tank is required to be lined by October 2023. The lining project is planned for completion prior to the NHDES required date.
- ***Well Production Study –*** A consultant will evaluate the production capability of each well to evaluate their long-term viability. The total project cost was revised since the last report from $14,000 to $3,500. Resources are being shifted to other priorities based on evolving system needs.

***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. 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 2025 are presented below:

| Project Description | Actual Spend to Date Since Acquisition of NESC | 2023 Projected Additional Spend | 2024 Projected Spend | 2025 Projected Spend | Projected Grant & Credit | Total Spend (Actual + Projected) |
|---|---|---|---|---|---|---|
| SCADA & Instrumentation Upgrades | $ 2,015 | $ 30,811.00 | $ 4,000.00 | $ 2,000.00 | $ - | $ 38,826 |
| Water System Mapping & Improvements | $ 983 | $ 10,000 | $ 5,000 | $ 600 | $ - | $ 16,583 |
| Station Pressure Reduction & Treatment (Phase I) | $ 313,116 | $ 25,000 | $ 1,940,000 | $ 1,033,554 | $ (280,000) | $ 3,031,670 |
| System Pressure Reduction (Phase II) | $ 233,888 | $ 70,000 | $ 156,000 | $ 773,800 | $ (280,000) | $ 953,688 |
| Install 16-inch Isolation Valves | $ - | $ 130,000 | $ - | $ - | $ - | $ 130,000 |
| Isolation Valve Replacements | $ - | $ - | $ 60,000 | $ 15,000 | $ - | $ 75,000 |
| Base Lodge Main Relocation | $ - | $ - | $ 25,000 | $ 250,000 | $ - | $ 275,000 |
| Well Production Study | $ - | $ 2,500 | $ - | $ - | $ - | $ 2,500 |
| Customer Meter Replacement | $ - | $ 4,700 | $ 4,000 | $ 4,000 | $ - | $ 12,700 |
| Total: | $ 550,002 | $ 273,011 | $ 2,194,000 | $ 2,078,954 | $ (560,000) | $ 4,535,967 |

## ***2023***

### *In Progress or Completed:*

- ***SCADA and Instrumentation Upgrades*** **–** Installation of new equipment and replacement of obsolete or damaged equipment will continue through 2023.
- ***Station Pressure Reduction & Treatment (Phase 1)*** **–** The permitting and financing efforts for the treatment plant replacement continue. Studies at the site are being done per NHDES environmental review requirements, and the PUC recently approved Abenaki's petition to finance the project. The final application for financing has been submitted and is awaiting final Governor & Council

approval. The treatment plant construction was planned to start in the Summer of 2023, but due to permitting and financing timelines, along with limited contractor availability, the project is now anticipated to begin in the Spring of 2024, with a 2025 completion date. The total project cost was revised from $2,832,775 in the January 2023 report to $3,311,670 in the current report. 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 and will submit preliminary design drawings in December of 2023 per NHDES direction.

- ***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.

***Planned:***

- ***Water System Mapping*** **–** The system mapping will be updated as new information becomes available.
- ***Well Production Study*** **–** A consultant will evaluate the production capability of each well to evaluate their long-term viability. The total project cost was revised since the last report from $13,000 to $2,500. Resources are being shifted to other priorities based on evolving system needs.

***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 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.

***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.