

January 16, 2024

Sheila O'Malley and John Marini
City of Ansonia
235 Main St.
Ansonia, CT 06401

Dear Ms. O'Malley and Attorney Marini

Aquarion Water Company (Aquarion) is pleased to submit the attached response for the Purchase, Upgrade, Operations and Maintenance of City of Ansonia Wastewater Assets. Aquarion is the largest investor-owned utility (IOU) providing water and wastewater services in the New England region. This includes service to over 218,000 customers in 59 cities and towns in CT.

Enclosed in the response you will find a review of Aquarion's existing operations and our suggested approach to ownership of the Ansonia wastewater system. We believe the response definitively demonstrates that Aquarion is the most qualified firm to purchase and operate the Ansonia system.

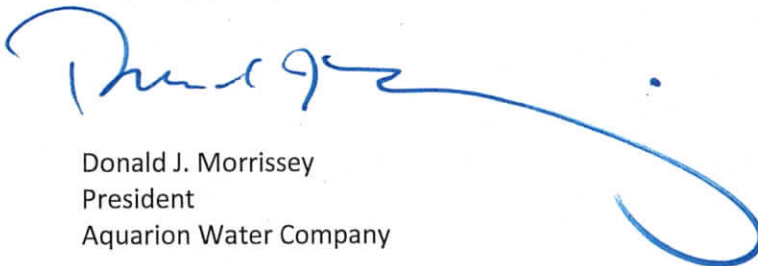
As you review the responses and determine the most appropriate next steps for the City, please feel free to contact either myself or Adam Simonsen. Our contact information is provided below.

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We are excited about the opportunity to partner with the City to solve its wastewater challenges and to serve its residents. We look forward to your next steps and are available to promptly answer any questions or concerns that you may have.

Very truly yours,



Donald J. Morrissey
President
Aquarion Water Company

**QUALIFICATIONS SUBMITTAL
FOR THE
PURCHASE, UPGRADE,
OPERATIONS AND MAINTENANCE OF
CITY OF ANSONIA WASTEWATER ASSETS**



Submitted To:
City of Ansonia
ATTN: Sheila O'Malley and John Marini
235 Main St.
Ansonia, CT 06401

Prepared By:
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1. Executive Summary

Aquarion serves approximately 240,000 customers and 750,000 people in 72 cities and towns across Connecticut, Massachusetts, and New Hampshire and is the largest investor-owned water utility in New England and among the seven largest in the U.S. Aquarion is the only utility in New England to purchase a wastewater system from a municipality and is uniquely qualified to purchase the City of Ansonia wastewater system.

Aquarion is an industry leader and organized to manage every key aspect of a well-run utility including, but not limited to, operations, engineering, finance, accounting, regulatory practices, customer service, and administrative functions, in a manner consistent with accepted industry practices.

Aquarion also has a long history of regulation by the Connecticut Public Utility Regulatory Agency (PURA), including regulatory approval of over 30 separate transactions since 2011. The company finished 2023 with assets of \$2.04 billion, revenues of \$227 million. Aquarion has more financial capabilities to complete a transaction of this size than any other utility in CT.

Aquarion is among the most respected in the industry in providing top customer service to its customers including strong customer service scores, a top JD Power ranking, and the lowest number of complaints to regulators. The customer service for Ansonia will be managed from Aquarion's Bridgeport and Monroe, CT facilities with field operations remaining based in Ansonia. This strong customer service is coupled with a demonstrated history of providing services at affordable rates.

The Ansonia wastewater plant embarked on a major upgrade in 2008, that was completed in 2011. Based on the site visit and a preliminary review of publicly available data the plant appears to be designed appropriately and is treating wastewater consistently within the limits specified in its NPDES permit, with a notable exception. During the site visit it was evident that many maintenance activities have been deferred, there is a significant hydraulic constriction that greatly increases the difficulty of operating the plant during wet weather, and current staffing levels at the plant are inadequate. Each of these factors greatly affect the reliability of the plant operations, timing of future upgrades, and are potential worker safety issues.

To address the identified challenges associated with owning and operating the Ansonia wastewater system Aquarion has identified a six-part plan that includes: staff retention and integration of Aquarion management, a preventative maintenance management plan, establishment of key performance indicators (KPIs), addressing safety concerns, completion of initial capital improvements (ICI), and inflow and infiltration (I/I) removal. In addition to the improvement plan, Aquarion would incorporate the Ansonia wastewater system into all other aspects of its utility operations including capital planning to ensure long-term reliability of wastewater service at affordable rates in Ansonia.

Aquarion Infrastructure Snapshot

- **+303 drinking water wells**
- **10 surface water treatment plants**
- **94 groundwater treatment plants**
- **36 dams**
- **100 pumping stations**
- **3,802 miles of main**
- **120 water storage tanks**
- **3,400 miles of main**

2. Experience

2.1 Company History and Existing Operations

Aquarion serves approximately 240,000 customers and 750,000 people in 72 cities and towns across Connecticut, Massachusetts, and New Hampshire and has been in the water business since 1857. We are the largest investor-owned water utility in New England and among the seven largest in the U.S., providing Connecticut customers with tens of millions of gallons of water every day. Aquarion is the only utility in New England to purchase a wastewater system from a municipality.

Aquarion is organized to manage every key aspect of a well-run water utility including, but not limited to, operations, engineering, finance, accounting, regulatory practices, customer service, administrative functions, and acquisitions in a manner consistent with accepted industry practices.

Aquarion traces its roots to the mid 1800's. Following the Great Fire of 1845 in Bridgeport and subsequent unsuccessful attempts by others to start a water company, the Bridgeport Hydraulic Company (BHC) was formed in 1857. By 1876, BHC had grown its infrastructure by threefold, pacing the growth of Bridgeport. In 1877, following a two-year term as the Mayor of Bridgeport, P.T. Barnum became the second president of BHC. Under Barnum, a number of reservoir and system resiliency projects were completed to meet the water demands of the close to 100,000 people living in Bridgeport at that time. Over the next 100 years, through two world wars and the Great Depression, BHC continued to upgrade its existing infrastructure and consolidate small water systems, providing economies of scale and expanding beyond Bridgeport, into a truly regional utility. In 1991, BHC's parent company changed its name to Aquarion and following its merger with Connecticut-American Water in 2000, renamed its CT operations to Aquarion Water Company of Connecticut. In 2008, Aquarion Water Company of CT merged with United Water Connecticut adding an additional 7,000 customers to the company's base in CT.

Since 2011, Aquarion has completed 30 transactions, acquiring 90 separate water and wastewater systems and over 34,000 customers. This includes the first wastewater privatization in Connecticut (Town of New Hartford) and multiple transactions with other CT municipalities: East Derby Waterworks from the City of Derby in 2014, Town of Marlborough municipal system—2020, Town of New Fairfield municipal system—2020, and Town of Canaan (Falls Village)—2021. With each of these acquisitions, Aquarion has proven repeatedly its capabilities to integrate the operations of separate utilities to the benefit of customers.

New Hartford, like many CT municipalities, owned a wastewater system with significant challenges. Despite years of diligent work by municipal leaders, and a volunteer WPCA board, the Town was faced with a wastewater system that ran an annual deficit and required subsidization from the Town's general fund to meet its debt service. Prior to its acquisition, Aquarion was hired to operate the wastewater system through a contract operations agreement. In the first 16 months of that contract Aquarion was able to lower wastewater operations and maintenance budget items not associated with labor or non-routine services by 17%. Below are a few of the accomplishments:

- **Process Optimization.** Aquarion operators improved the operations of the auger screen, grit chamber, Sequencing Batch Reactor (SBR) biological process control, tertiary filters, equalization tank operation, and the UV disinfection system during the first year of our contract.

- **Sludge Disposal Savings.** Aquarion reduced the number of sludge truck loads sent off-site for disposal from 53 in FY 2016-17 to seven in FY 2019-20 (\$23,000 per year cost savings); we currently have stabilized the number of trucks at 10 to 12 per year.
- **Electrical Cost Savings.** Aquarion optimized the process control operations of the SBR process based on oxygen levels and reduced the annual WPCF electrical costs by 10 percent.
- **UV Disinfection Improvements.** Aquarion conducted an optimization study and implemented changes in flow patterns to the tertiary filters and UV disinfection process that allowed a reduction in the number of UV lamps from 48 to 16.
- **Equalization (EQ) Tank Cleaning.** Aquarion operators were trained in confined space entry and were able to perform EQ tank cleaning (that had not been completed for six years) and save the WPCA about \$6,300 per year in third party contracts.
- **Standby Power Coordination.** When the standby generator failed at the WPCF, Aquarion was able to communicate with the CTDEEP and arrange for the mobilization of an Aquarion generator from another site. The contingency plan coordinated by Aquarion resulted in about a \$15,000 savings to the WPCA.
- **Operator Professional Development.** Aquarion consistently invested in helping its operators achieve additional licensing, with one operator moving from Class II to IV and another moving from Class II to III.

Even after Aquarion was able to significantly lower the operating costs of the plant through careful management, the Town still faced an uncertain future as it looked at long term capital needs and what the required trajectory of its rates would look like. As a result, the Town decided to solicit proposals for the privatization of the wastewater system, to remove the risk of owning its water and wastewater infrastructure. After considering responses from Aquarion, and two other firms – the Town selected Aquarion as the buyer of the system. The selection was further ratified by a town-wide referendum in March 2021. After finalization of the asset purchase agreement and CT PURA's approval of the sale of the water system, Aquarion officially took ownership of the system in October 2023.

As CT's largest provider of drinking water, protection of the environment is a top priority. Aquarion believes in taking a proactive approach toward conserving and enhancing natural resources. We recognize that environmental protection and the efficient use of resources enable us to continue providing valuable services to its customers and communities. Accordingly, Aquarion strives to act as a responsible steward of the environment and maintain its commitment to continuous improvement. We also recognize that environmental protection is the collective responsibility of government, businesses, individuals, and communities. We are committed to implementing efficient and effective practices within our organization and to working in partnership with our stakeholders to meet this responsibility.

To implement this policy, Aquarion commits to:

- Taking responsibility for compliance with applicable environmental regulations and responding to local environmental needs.
- Making environmental protection and improvement an integral part of our planning and decision-making processes.
- Striving to prevent and reduce adverse environmental impacts of our operations, consistent with the need for maintaining the quality of drinking water and wastewater effluents.
- Promoting resource sustainability by seeking ways to reduce our energy and material needs and increasing the reuse and recycling of materials.
- Including environmental criteria in our processes for selecting vendors and purchasing goods and services.
- Communicating and supporting environmental best practices throughout the Company.
- Sustainably managing lands and natural resources to protect and enhance water quality.
- Permitting public access where practical and consistent with water supply and natural resource management goals.
- Developing our employees' awareness of environmental issues and best practices, including their responsibilities under this policy.
- Fostering productive, responsive partnerships with our environmental stakeholders.
- Playing an active role in the environmental community.

Consistent with Aquarion's long-term commitment to the environment and our desire to allow the public to use company land holdings for recreational purposes, we offer opportunities for hiking, fishing, cross-country skiing, snowshoeing, and birding on select Aquarion property.

These opportunities continue and have been expanded with a partnership that began in 2002 among Aquarion, the CTDEEP, and The Nature Conservancy. Together, we agreed to conserve 15,300 acres of forest near Aquarion reservoirs as a way to preserve open space, safeguard ecosystems, protect water supplies, and provide for public use consistent with those goals.

Through its "Be Our Guest" program, Aquarion welcomes the public to the many recreational opportunities it offers. Its trail-use permit allows access to 17 miles of scenic trails, while our fishing permit provides access to fishing at Saugatuck, West Pequonnock, and Far Mill reservoirs.

2.2 CT PURA Regulatory Experience

As a public service company, Aquarion has worked with PURA since its inception to deliver exceptional service at affordable rates. PURA regulates the Aquarion utility business in CT and is the organization tasked with adjudicating rate requests and balancing the needs of the customers with the needs to attract capital investment at a reasonable cost.

Aquarion also provides annual reports and other periodic compliance filings to PURA. These reports include not only audited financials, but a detailed accounting of all assets owned by the utility, capital invested, and customers served. The annual report provides all the information that either regulators or other stakeholders can review specific to the performance of the utility and help assess the prudence of its operations. On the whole, Connecticut regulated utilities undergo far more scrutiny than a municipal utility.

Regulated utilities provide their “product” (i.e. wastewater collection and treatment) at cost. They are also given an opportunity to earn profit based on the amount of prudent infrastructure they construct to deliver safe and reliable service that complies with all environment standards. This arrangement provides an appropriate incentive to make continuous prudent infrastructure investments and as Aquarion’s history has shown, affordable rates.

2.3 Financial Capabilities

Aquarion Water Company of CT finished 2023 with assets of \$1.82 billion, revenues of \$201 million, is rated by Moody’s Investors Service with an A3 rating, and maintains strong financial ratios within the industry norms. Audited 2022 financial statements are included in Attachment A.

Financial Capability for Asset Purchase. Aquarion assumes that one of the objectives in considering an asset sale of the Ansonia Wastewater System is to allow an upfront cash payment that could be used to reduce outstanding debt and provide funding for other capital projects in Ansonia. Aquarion anticipates that if selected to negotiate with the City any cash offer to the City would not be subject to a financing condition.

Financial Ability to Maintain and Expand the System Assets. Aquarion has the financial ability to maintain and upgrade the assets when needed, as demonstrated by the financials disclosures included within Attachment A. In 2023, Aquarion expended more than \$160 million on capital improvements in its service areas.

Additionally, below are four projects that demonstrate examples of large capital projects completed by Aquarion and are representative of the scale of infrastructure projects routinely undertaken:

City of Holyoke WPCF Upgrade and Wet Weather Abatement Project – Aquarion was selected by the City of Holyoke to formulate an upgrade to the WPCF to treat wet weather flows associated with the combined sewers serving the City. Aquarion complete the conceptual plan, and then managed and implemented a design, build, and 20-year operation contract (D/B/O). A key component of this contract was the design and implementation of a series of Initial Capital Improvements (ICIs) to address the need for new grit removal and influent pumping equipment, aeration system improvements, sludge thickening and dewatering improvements, constructing new odor control equipment, and converting the antiquated chlorine gas system to a liquid bleach and dechlorination system. The contract also included a detailed infiltration and inflow (I/I) analysis and the design, construction and operation of the combined sewer abatement facility. The D/B/O project delivery system allowed Aquarion to serve as the program manager for all elements of the D/B/O process and to more efficiently phase the overall project that resulted in stabilized rates for the Holyoke sewer users.

Stamford WTP Upgrade – The Aquarion upgrade of the Stamford water treatment plant increased the storage volume to two 4 MG capacity tanks and simultaneously raised the hydraulic grade line of the system, and replaced the traditional filters with dissolved air flotation over filtration (DAFF). The \$47 million project improved the treatment process and increased the design capacity from 24 to 30 mgd.

Putnam WTP Upgrade – Aquarion initiated a CIP to upgrade the 20 mgd Putnam surface water WTP by implementing over 20 separate ICI projects with a value in excess of \$50 million. ICIs included new chemical storage facilities; upgrades to the mixing, sedimentation and filter operations; installing new chlorine dioxide, sodium hypochlorite, sodium hydroxide, zinc orthophosphate and fluorosilic acid feed systems; new clear wells; and a full upgrade of the mechanical, electrical and instrumentation and controls

throughout the plant. A key factor to the cost effective implementation of this program was the reuse of the original mixing, sedimentation, filters and process control structures.

Southwest Fairfield County Pipeline Plan – This project was initiated following the 2016 drought, when it became clear the Greenwich/Stamford region needed additional water supplies. The implementation plan includes four major ICI phases over a 10-year period with a total capital cost of \$180 million. To date, over \$50 million of improvements have been implemented.

2.4 Capital Program Management

Aquarion has a comprehensive, well-defined program for identifying, prioritizing, budgeting and implementing capital expenditures based upon condition assessments, facility plans, master plans and studies. Aquarion maintains and updates 5-year CIPs that are reviewed and presented for business planning purposes on an annual basis. Aquarion also proactively developed a 20-year Infrastructure Replacement (IFR) plan for the period 2024 through 2044. The IFR plan will serve as a road map in moving forward and updating the Aquarion CIP on an annual basis. Major treatment plant and distribution/collection system projects are identified in planning studies, and budgets and engineering justifications are prepared for each identified project, with a proposed short term, intermediate term, or long-term implementation schedule.

Aquarion has invested in technology to facilitate the CIP process including development and maintenance of a robust asset management database (SAP); water main and sewer break/failure prediction modelling to assist in identifying and prioritizing recommended main and sewer replacements; and undertaking routine facility inspections by independent consultants to identify needed improvements that can be proactively programmed into the CIP. The CIP for wastewater system is generally broken down into primary areas that include: treatment, pumping, collection system (gravity, siphons, and force mains), information technology/SCADA and general plant.

Aquarion's approach to CIP management differs markedly from the typical municipal capital planning and construction process. The typical municipal wastewater capital planning process is accomplished by tackling large infrastructure projects and sequenced with a study, design, bond, bid, and construct process. While that process is efficient to comply with local, state, and federal government procurement laws, it often leads to change orders and cost overruns.

Aquarion is more flexible in meeting its capital program needs employing various alternative delivery methods design to match the process to the project. This has included conventional design, bid and construction projects, but more often a design/build process that heavily incorporates the feedback from operations staff. Sections 3.1 and 3.2 provide additional detail on capital improvements approach for the Ansonia wastewater system.

2.5 Ratemaking

Aquarion prides itself on being able to deliver high quality service at affordable rates. Every financial decision made by the company requires a review of how this will affect rates over both the short and long term. This means that while customers are subject to periodic rate increases, those increases are carefully planned and typically track at rates close to inflation. As an example, most Ansonia residents today are served by the South Central CT Regional Water Authority (SCCRWA); Aquarion water customers in neighboring towns pay approximately 10% less for the consumption of the same amount of drinking water than a customer served by

SCCRWA. And while SCCRWA is a well-run utility, and has valid reasons for charging higher rates, it does demonstrate Aquarion’s continued commitment to its mission of affordability.

During the last 15 years, the operational and regulatory demands on running a water utility have increased dramatically, but during this time Aquarion has been able to hold its rates close to inflation while continuing to invest in its infrastructure to provide high quality service.

2.6 Customer Support Services

Aquarion is among the most respected in the industry in providing top customer service and enjoys strong rankings in all widely recognized customer service metrics. Aquarion regularly participates in customer satisfaction surveys and is reviewed and ranked every year by JD Power, a global marketing research firm that analyzes feedback from customers regarding the products and services they receive. In 2023, Aquarion continues to be a top ranked with mid-size water utilities in the northeast, consistently ranking higher than other water utilities. Aquarion also maintains the best customer service record measured by the fewest customer complaints recorded by the Connecticut PURA across all utilities for the past 13 years running.

Aquarion maintains a dedicated customer service department that includes call center, billing, and collections functions. A brief description is presented below.

The Customer Service (CS) department handles all customer inquiries including customer phone calls and e-mails. This team is responsible for scheduling appointments for field work, resolving bill disputes, and explaining programs or services. Representatives coordinate payment arrangements, handle customer maintenance and prepare quotes for home sales and final bills. CS is in direct contact with our customers and coordinates with the Field Service department to schedule appointments for field visits. Any disputes and inquires relating to a state regulator may be forwarded for special handling to the Customer Advocate or a Supervisor. All CS back-office functions related to billing is handled by the CT Operations staff.

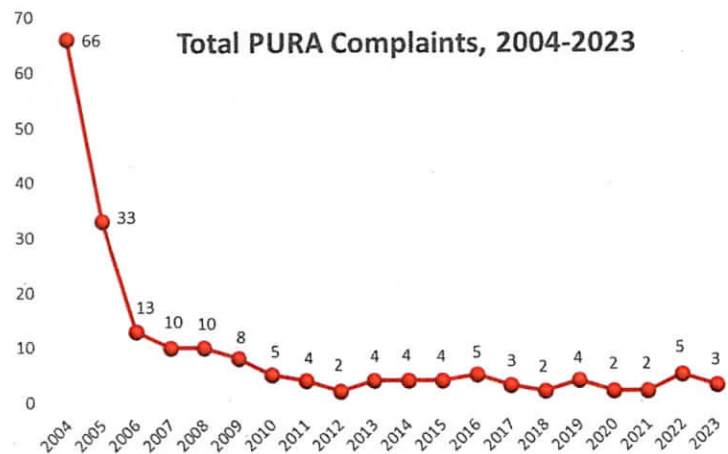


Figure 1 - PURA Complaint History

CS is also responsible to ensure that all customers are billed timely and accurately. The Supervisor of Billing ensures adherence to company policies (ex: back-billing and billing estimates) and state regulations. Most Aquarion customers are billed monthly and over 50% participate in e-billing.

Aquarion monitors and records all customer requests and complaints within its integrated customer relationship management (CRM) system. Aquarion uses an SAP technology platform that integrates cross-functional business processes to allow for a streamlined customer interaction. These cross-functional business processes include not only customer service, but billing, inventory management, preventative and reactive maintenance work orders, and incident tracking. This gives customer service staff a 360-degree view of a customer request and lead to more thorough resolution of problems. To further this goal Key Performance Indicator metrics (KPIs) have been established for all functional areas including Service Quality, Customer Satisfaction, Appointments Missed, Call

Answering Speed, Abandonment Rate, and First Call Resolution. These KPIs are continuously tracked and reviewed, at a minimum, monthly by the entire management team.

Finally, as part of its continued commitment to affordability Aquarion has multiple programs for customers facing a hardship and needs assistance paying their bill. These include our Low Income Rate Assistance Program (LIRAP), offering a 15% bill discount for qualifying customers; Flexible Payment Plans, which offer a no-fee and no-interest 24 month payment plan on any past due balances; and a Voucher Program, which offers one-time bill credits for customer facing an unusual hardship. Aquarion partners with Operation Fuel and other community action agencies to help make sure that these programs are administered efficiently and fairly, ensuring those that need the help most, receive it. The breadth and flexibility of these programs offer a significant benefit to Ansonia, as most municipal ordinances make it difficult to provide flexible arrangements for those customers facing hardships.

3. Ownership and Operations Approach

3.1 Existing Operations

The Ansonia wastewater plant embarked on a major upgrade in 2008, that was completed in 2011. Based on the site visit and a preliminary review of publicly available data the plant appears to be designed appropriately and is largely treating wastewater consistently within the limits specified in its NPDES permit. But, during the site visit it was evident that many maintenance activities have been deferred, there is a significant hydraulic constriction between the ultraviolet (UV) light disinfection process and the outfall to the Naugatuck River that greatly increases the difficulty of operation of the plant during wet weather, one of two secondary clarifiers is off-line and needs to be repaired, and current staffing levels at the plant are inadequate. Each of these factors greatly affect the reliability of the plant operations, timing of future upgrades, and are potential worker safety issues. To address these issues Aquarion would propose the following focused tasks under its potential ownership:

- 1) Staffing and integration of Aquarion management
- 2) Preventative maintenance management plan
- 3) Establishment of key performance indicators (KPIs)
- 4) Address safety concerns
- 5) Initial Capital Improvements (ICI)
- 6) Inflow and Infiltration Removal

Staff Retention and Integration of Aquarion Management

The plant is currently understaffed, and the lead operator of the plant does not have the appropriate level of licensing required. The wastewater system currently only has three dedicated operations employees, one administrator, and is supplemented with two Department of Public Works employees to react to collection system events. The system should be staffed with a minimum of six or seven full time employees:

- 1 Chief Operator/Superintendent (Class IV wastewater license)
- 1 Shift Leader/Senior Operator (Class III or higher wastewater license)
- 1 Senior Mechanic
- 1 Lab Supervisor
- 1 additional utility worker (ideally in training to receive their wastewater certification)
- 2 additional utility workers to handle collection system (including 14 pump stations) maintenance

The backbone of any strong operation is a well-qualified and motivated staff. Aquarion would retain all staff currently employed by the Ansonia WPCA, subject to Aquarion's standard pre-employment screening standards (physical, drug testing, etc.). Before any transition, Aquarion's management and human resources team would look to meet with each employee to understand their skill sets, current responsibilities, and career goals. From these series of meetings, operational responsibilities for the operation of the system may be adjusted. Section 3.4 provides additional information regarding Aquarion's overall approach to staffing and company human resources policies.

In addition to specific operational staffing, Aquarion management would become oriented with the facilities and the staff. The staff of the Ansonia facilities would be integrated into the operational team and overseen by the same management team that is responsible for Aquarion's other systems. Specific functions not related to plant

and collection system operations would be handled by the existing Aquarion management team (this includes: customer service, billing, collections, accounting, information technology, and human resources). Each of these supervisors will work with the Ansonia operational team to ensure a continuity of operations as the system transfers from Ansonia to Aquarion ownership.

The replacement of the City of Ansonia management with an Aquarion management team will provide both the Ansonia operations staff and the customers with an important benefit. City of Ansonia management is responsible for and provides oversight of a large range of city services, including fire, police, parks and recreation, sanitation/recycling, building inspections, senior services, etc, and the wastewater system is overseen by a dedicated volunteer board. The Aquarion management team has collectively hundreds of years of experience and is 100% focused on running the best utility possible. The Ansonia operations will benefit from a 24/7/365 utility management focus and Aquarion's extensive knowledge base.

Preventative Maintenance Management Plan

Ansonia has no formal or documented preventative maintenance plan. With many components of the plant over 15 years old, the lack of maintenance is leading to equipment failures. During the site visit we noted:

- Mechanical screens have received little to no maintenance during their 15-year life with cobwebs and debris visible on the exterior and interior of the rack.
- One of two grit pumps is not operational.
- Local control panels at the primary clarifiers are not functional and can only be operated from the control room. In addition, only two of four primary clarifiers are currently on-line and should be further evaluated for long-term operation.
- Soda ash silo and feed system has not functioned properly in years and the soda ash has crystalized in the silo.
- Multiple mixers in the pre- and post-anoxic zones do not function.
- Variable frequency drives (VFDs) in one train of the oxidation ditch do not operate to capacity resulting in suboptimal aeration.
- No floor drains were installed in the oxidation ditches, anoxic tanks and secondary clarifiers thus requiring that the tanks be pumped for cleaning; this has not happened since the upgrade.
- The alum dosing system manifold and pumping systems do not function, and an intended temporary dosing system has become the permanent solution, requiring alum dosing to be controlled manually.
- Multiple return activated sludge and waste activated sludge pumps are not functional and need to be replaced.
- Only one secondary clarifier is in operation providing no process redundancy for this critical unit process. The second clarifier has been offline for many months after a failure of its spur gear. It will require a large crane to remove the center well structure, the gear assembly will need to be sent off-site for repair and then re-installed.



Figure 2 - Anoxic Zones

- When the levels of the Naugatuck River rise, effluent must be pumped to discharge. The automated control of the flow valves has failed, and they must be manually operated by climbing a 15-foot ladder above the floor elevation. It is also suspected that the pipeline from the gravity discharge line to the effluent pumps may not have sufficient hydraulic carrying capacity. Additionally, only one of the two effluent pumps is operational, providing no redundancy.
- The biofilter odor control system at the plant does not function properly and the media has been removed.
- There is no proactive lining or repair program for the over 60 miles of collection system piping.
- The 14 pump stations have not been integrated to the supervisory control and data acquisition (SCADA) that was recently installed at the WWTP.

While breakdowns in unit processes throughout a wastewater plant is common, they appear to be happening at the Ansonia wastewater plant before the end of the intended useful life of these assets. Of equal concern, based on a review of recent minutes of the meeting of the WPCA and during conversations with plant operations staff during the site visit, there is not a plan in place to make the needed repairs.

Under a potential Aquarion ownership there will be two critical tasks to address these problems. First, Aquarion will complete a set of Initial Capital Upgrades (ICIs) to repair assets. (The City should implement repairs immediately as there is significant risk of an environmental violations and/or flooding events at the plant.) Potential ICI's are discussed in the following sections.

Secondly, Aquarion would implement its preventative maintenance program for the Ansonia wastewater system. At the plant, each piece of equipment will be entered into the SAP Computerized Maintenance Management System. Attached to each equipment record is a preventative maintenance schedule that prompts the operations staff to complete regularly tasks to optimize the life and efficiency of the equipment. Each of these tasks is documented and tracked as a KPI. The proactive maintenance plan also allows both operations and management better clarity into the operation of the plant and to plan for future equipment replacement.

Establishment of KPIs

A key tool for managing Aquarion's utility business is the use of KPIs to track important metrics and to drive positive outcomes. A series of KPIs will be developed specific to the Derby wastewater system. These KPIs will mirror the regulatory requirements set by CTDEEP and the US EPA but also introduce Aquarion standards. Examples may include:

- Average daily, monthly average, peak daily and peak hourly flows, with a focus on assessing the frequency and ratio of peak flows to average flows as an indicator of I/I removal.
- Dewatered sludge quantity (dry and wet tonnage) per million gallons (MG) of wastewater treated.
- Estimated quantities of grit and screenings per MG of wastewater treated.
- Chemical usage per MG of wastewater treated.
- Monthly analysis of the pump stations, total WPCF, and major unit operations electrical usage and the associated electrical cost per MG of wastewater treated.
- Process optimization analysis for the biological process including the following:
 - Adjusting dissolved oxygen concentration set points by treatment zone to improve biological nutrient removal performance while reducing electrical usage
 - Fine tuning the internal mixed liquor recycling (IMLR) flow rate to maximize denitrification

- Establishing standard operational procedures to improve performance and reliability by standardizing plant operations around solids retention time (SRT) through management of the solids wasting rate, alkalinity levels and, the food to micro-organism ratio (F/M).
- Developing a high flow management plant to minimize peak wet weather flow impact to the biological process by improving step-feed mechanism, sludge volume index (SVI) and mix liquor suspended solids (MLSS) content.
- Influent and effluent wastewater quality trends (including biochemical oxygen demand, total suspended solids, the nitrogen species including ammonia, nitrite, nitrate and organic nitrogen, alkalinity, pH, etc., metals and daily microbiological examinations).
- Hours of operations and preventative/corrective maintenance records for all pumps and unit processes with a focus on equipment rotation.
- Solids inventory balance throughout the plant (primary sludge, waste activated sludge, thickened waste activated sludge, combined sludge feed to the dewatering operation and dewatered sludge content) to identify areas for improving dewaterability and decrease sludge disposal costs.
- Record the number of non-routine labor hours and the reason for emergency responses.
- Collection system metrics including miles of sewer cleaned, televised and repaired; number of sewer failures and repairs; number of dry or wet weather overflows; and identification of any hydraulic limitations within the collection system.

Aquarion will use these metrics to look for opportunities for continuous improvement and to maintain efficient operations.

Address Safety Concerns

While we have no knowledge of recordable accidents at the plant, during the site visit Aquarion noted conditions that do not comply with Aquarion standards. These include unsafe use of a ladder, improper rigging, slip/trip hazards, poor housekeeping, inadequate lighting, and a confined space that could require access during emergency conditions. The health and safety of employees is a priority, and these items would be addressed immediately. Also, the plant mechanical shop has been converted to storage following a recent OSHA inspection. The shop does not have a hood or proper ventilation to allow welding and only has a single egress to the building. The lack of a mechanical shop likely contributes to solving preventive maintenance issues. Additionally, as part of the transition, Aquarion's manager of safety programs would do a thorough review of the plant, pump stations, and collection system operations and work with the operations team to prepare job safety plans for both routine and non-routine tasks.

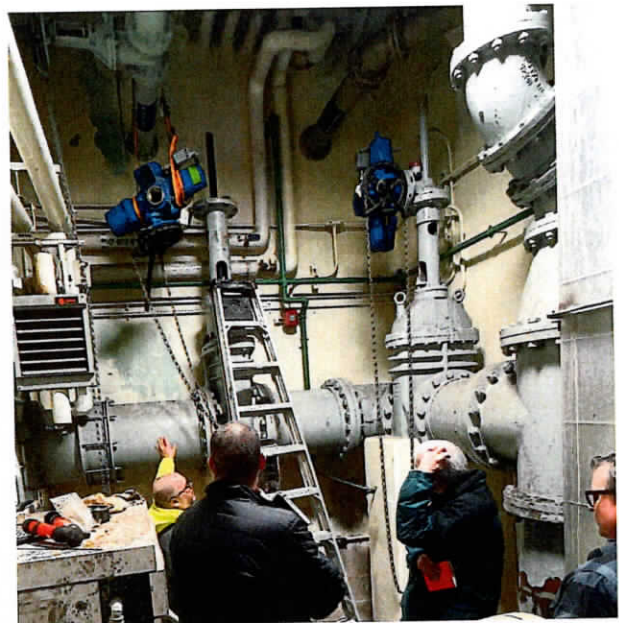


Figure 3 Effluent Control Valves

Initial Capital Improvements

The Ansonia wastewater plant was most recently upgraded between 2008 and 2011 and generally functions within its approved NDPES permit. The City does not prepare formal capital plans and as noted above routine maintenance is deficient. Aquarion was able to inspect the facilities during the site visit and to also review the

2018 engineering report commissioned by the Naugatuck Valley Council of Governments, that included a condition assessment of the system. More analysis and due diligence are needed by Aquarion to develop a complete capital plan, but it does provide a reasonable expectation of ICI's that should be completed. In addition, the repairs noted in the Preventative Maintenance Plan section should be completed immediately.

Additional projects that should be evaluated are as follows:

Secondary Clarifier Repair: The inoperable secondary clarifier should be repaired immediately. With only one clarifier functional, a critical part of the wastewater process does not have redundancy. The lead operator reports that the spur gear in the clarifier has failed. The gearing needs to be removed with a crane, sent out or repair, and then reinstalled with a crane.

UV Disinfection and Effluent Channel: In both the 2018 engineering report and during the site visit, it was noted that a significant hydraulic constriction exists at the UV disinfection and effluent channel process. While the location allows for the



Figure 4 Inoperable Secondary Clarifier

construction of multiple channels, during the upgrade of the plant, only a single channel was created. This condition exists during both a gravity discharge and is exacerbated during pumped discharged conditions. This constriction limits the effluent discharge volume and on occasion surcharges the UV process that could result in permit violations and/or damage to the UV equipment. Essentially this hydraulic constriction provides almost no margin of error for operating the plant during wet weather conditions.

Effluent Pump Replacement and Hydraulic Restriction: When the discharge river levels are high, effluent pumping is required. Plant staff reports that there is a hydraulic constriction from the effluent channel to the suction side of the effluent pumps, that will only allow a single pump to run. Adding to this, is that only one pump is operational, which could result in excessive run times, and limit the useful life of the pump. The effluent pumping needs to be redesigned, and the second effluent pump repaired.

Aeration Basin Process Improvements: currently both trains of the oxidation basin remain in service at all times. While the excess tankage does provide some level of operational flexibility it is likely inefficient for average daily flows and does not allow for one train to be taken offline for preventative maintenance. A hydraulic limitation has not previously allowed the operators to use just one train. This may require upgrades to the exit piping and valves from the basins, a reconfiguration of the weir that separates the basins, or a combination there of. The basins also uses older surface mechanical aerators that should be replaced with more energy efficient aeration system.



Figure 5 - Aeration Basin

Sludge handling upgrades: Two former anaerobic digesters were converted to sludge holding tanks during the plant upgrade. Primary and WAS are blended, dosed with polymer and thickened using a rotary drum thickener (RDT). Recent data shows a thickened sludge has a solids content of about 3.5 to 5 percent. There are no provisions to allow the sludge in the storage tanks to be decanted and the hauler contract allows for a thickened sludge with a solids content at 6%. The process should be evaluated to determine if the savings from a higher solids content would justify an investment to improve the process.

Inflow and Infiltration (I/I) Removal

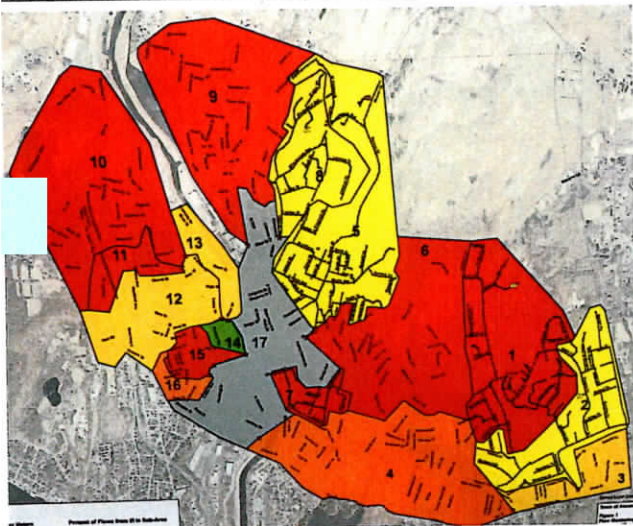


Figure 6 – Inflow & Infiltration Mapping

the collection system. Prioritization of repairs would be conducted using a risk analysis that takes into account both the condition of the pipe and the consequence of its failure. Using this approach, Aquarion would budget and proactively complete repairs annually on the collection network.

The collection network is comprised of over 60 miles of gravity sewers including three interceptors that transport the wastewater to the WWTP about 20 to 25-feet below grade. The collection system has high infiltration and inflow (I/I) and the majority of the sewers (about 80%) are vitrified clay pipe (VCP) or segmented concrete (10 to 20%). The head operator estimates that about 60,000 LF of the collection system (about 20 %) has undergone a CCTV inspection consistent with Capacity, Management, Operations and Maintenance (CMOM) program for the collection network.

Despite both high I/I and data from the CCTV inspections, there is not a proactive program in place to repair defects in the collection system. Aquarion would use the data collected through the CCTV program to target repairs to

3.2 Capital Investment

Because the Ansonia wastewater plant was last upgraded in 2011, it is likely 10 to 15 years away from a major upgrade, assuming that a proper preventive maintenance program is put into place. Aquarion’s approach to larger

treatment plant upgrades differ from the conventional study, design, bid, construct, finance and operate model followed by most municipal wastewater systems. In this process each unit process of the plant is typically upgraded in one large project. While this approach typically is easier for a municipality to finance, it creates tremendous operational challenges to establish temporary treatment during construction, and creates a facility where many unit processes are simultaneously replaced when not all unit operations have reached the end of the useful lives and are essentially prematurely replaced.

Aquarion's plant upgrade approach evaluates each unit process and identifies the optimal priority to stagger upgrade work limiting the need to significantly disrupt operations. The ICI section above gives examples of unit process that could be upgraded in the near term to provide immediate operational efficiencies and also extend their useful life. Aquarion creates detailed 5-year capital improvement plans and 20 year capital improvement forecasts. The Ansonia wastewater plant would be incorporated into that process.

Second, Aquarion plans to formulate a systematic master plan for the removal of I/I that currently results in excessive peak influent flows at the plant during wet weather periods. The objective is to remove excessive I/I in order that the unit operations throughout the liquid treatment train do not have to be designed to handle the current peak flows. It should be recognized that certain pipe replacement and/or relining programs are not efficient means of removing infiltration as it will still find the path of least resistance to enter a sewer system (i.e., infiltration may not enter the sewer system where a pipe has been relined, but the infiltration will find a mechanism to enter the sewer via laterals and other unlined sewers). We believe the initial focus should be on reducing inflow via removal of catch basins and roof leaders that are connected to the sanitary sewers that will result in, lower peak flows, smaller unit operations and longer term stability in capital design requirements.

3.3 Treatment of Rates

To correct both the inadequate staffing, address deferred maintenance, and keep pace with inflation, rates will need to increase over the long term, whether the system remains municipally owned or potentially purchased by Aquarion. Aquarion believes, though, that its approach to operating, maintaining, and upgrading the system and creating a more efficient operation will result in the best long rate trajectory for the Ansonia ratepayers.

If Aquarion is the eventual buyer of the system, the initial setting of wastewater rates will happen through agreement with the City of Ansonia and be part of the terms and conditions in an eventual asset purchase agreement. For future rate cases, Aquarion would need to file a rate request with the Connecticut PURA. This request would assess the overall cost of providing wastewater services to Ansonia, including a prudence review of all operations and capital investment. During this transparent process, all relevant stakeholders, including the Office of Consumer Counsel (OCC), local politicians, environmental regulators, and the general public will be given the opportunity to both review the application and provide input for the record.

If selected to move forward in the sale process, any offer from Aquarion would include guidance on expected future rate increases.

3.4 Staffing

Hiring, retaining, growing, and motivating qualified staff is a core function for Aquarion. Aquarion has been named one of the best places to work in Connecticut by Hearst Media six times in the last decade. Aquarion also

has an active operator-in-training program, that has resulted in 15 operators being hired as interns and being promoted into the permanent positions and receiving training that has allowed them to earn licensing.

As explained in Section 3.1 retaining the staff of the Ansonia wastewater system would be a top priority. We anticipate that all current Ansonia wastewater staff willing to interview and successfully pass standard background checks will be offered employment with Aquarion with comparable or better pay and benefits.

As employees of Aquarion some of the benefits that the Ansonia staff would enjoy are:

- Industry competitive pay
- Competitive medical, dental, vision, and life insurance plans
- 401k savings plan with up to 100% match on the first 6% of employee contributions
- Paid time off (vacation and sick time)
- Paid family leave
- Tuition reimbursement up to a maximum annual amount of \$5,400

Additionally, Aquarion would actively support the staff at the wastewater plant in obtaining additional wastewater licensing and other continuing education opportunities to support future promotional opportunities. At any time during a sale process and at the request of the City, Aquarion can meet with staff to discuss individual employment goals and circumstances.

3.5 Customer Service and Billing

Customer service and billing activities will be managed from Aquarion’s Bridgeport and Monroe facilities. Any customer request that requires assistance from field personnel would be immediately routed to the appropriate supervisor through Aquarion’s enterprise resource management systems and that staff member dispatched from either the Ansonia facility or Bridgeport.

Customers will also have options to connect with customer service through Aquarion’s website, online chat, or supported social media channels. Additionally over 50% of Aquarion’s customers are currently enrolled in e-billing and the same service would be extended to Aquarion wastewater customers.

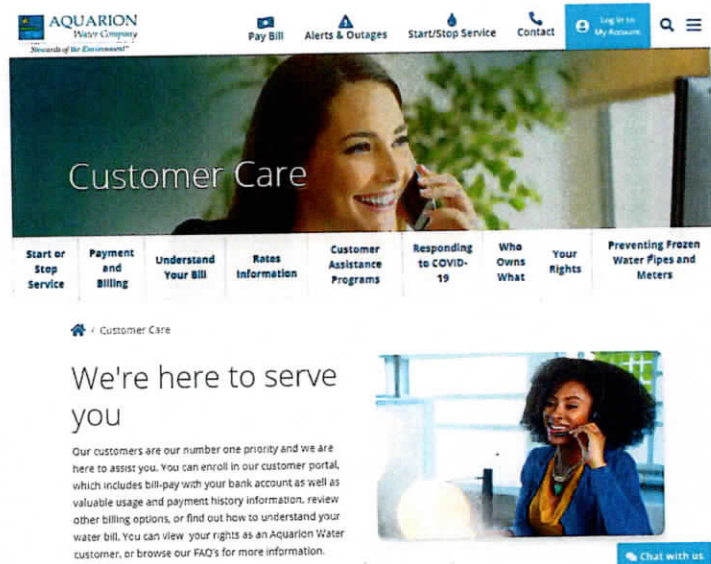


Figure 7 Aquarion Customer Service Website

Most Aquarion customers are billed monthly for their usage. This is considered an industry best practice as it gives customers the opportunity to more quickly respond to leaks or other consumption that could affect their bill and also promotes conservation. Aquarion would look for opportunities to move to a monthly billing plan to allow for smaller incremental payments by customers and help promote overall conservation goals.

See Section 2.6 for more information about Aquarion’s overall customer service process and organization.

ATTACHMENT A: FINANCIAL STATEMENTS

AUDITED FINANCIAL STATEMENTS

Aquarion Water Company of Connecticut

As of and for the years ended December 31, 2022 and 2021

Together with the Independent Auditor's Report



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INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of Aquarion Water Company of Connecticut

Opinion

We have audited the financial statements of Aquarion Water Company of Connecticut (the "Company"), which comprise the balance sheets as of December 31, 2022 and 2021, and the related statements of operations, comprehensive income, stockholder's equity, and cash flows for the years then ended, and the related notes to the financial statements (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Deloitte & Touche LLP

March 30, 2023

**Aquarion Water Company of Connecticut
Balance Sheets**

As of December 31, 2022 and 2021

(Dollars in thousands, except per share amounts)

<u>Assets and Other Debits</u>	2022	2021	<u>Liabilities and Stockholder's Equity</u>	2022	2021
<u>Property, Plant and Equipment</u>			<u>Stockholder's Equity</u>		
Utility Plant	\$ 1,976,973	\$ 1,833,606	Common stock - \$10 par value, 1,009,385 shares outstanding, 2,000,000 authorized	\$ 10,094	\$ 10,094
Less: Accumulated depreciation	(543,760)	(514,218)	Paid in capital	1,236	1,236
Net utility plant	1,433,213	1,319,388	Contributed capital	285,560	250,560
Non-utility property and equipment	2,748	2,591	Retained earnings	320,713	302,808
Less: Accumulated depreciation	(1,596)	(1,510)	Total	617,603	564,698
Net non-utility property and equipment	1,152	1,081			
<u>Current Assets</u>			<u>Long-Term Debt</u>		
Cash and cash equivalents	85	828	Other long-term debt	481,354	411,258
Restricted cash	15	15	Total Long-Term Debt	481,354	411,258
Accounts receivables, net of reserves of \$2,714 and \$2,809 as of December 31, 2022 and 2021, respectively	14,577	14,343			
Other receivables	1,058	312	<u>Current and Accrued Liabilities</u>		
Accrued revenues	8,473	8,154	Accounts payable and accrued liabilities	36,722	36,866
Materials and supplies, at cost	3,826	1,878	Amounts due to associated companies	12,428	24,785
Prepayments	3,439	3,039	Accrued interest	5,155	4,062
Regulatory assets - current	2,664	1,376	Regulatory liabilities - current	3,012	983
Other current assets	2,981	3,720	Short term lease obligations	126	118
Total	37,118	33,665	Total	57,443	66,814
<u>Other Assets</u>			<u>Commitments and Contingencies</u>		
Goodwill	44,189	44,189	<u>Other Liabilities and Deferred Credits</u>		
Unfunded deferred taxes	129,755	114,571	Deferred taxes and investment tax credits	169,194	151,004
Deferred pension and OPEB regulatory asset	17,644	36,947	Contributions in aid of and customers' advances for construction	183,027	180,835
Right of use assets	328	447	Deferred pension and OPEB	20,562	48,216
Regulatory assets - long term	31,383	29,822	Regulatory liabilities - long term	158,304	148,774
Total	223,299	225,976	Other long-term liabilities	7,093	8,183
			Long term lease obligations	202	328
			Total	538,382	537,340
Total Assets and Other Debits	\$ 1,694,782	\$ 1,580,110	Total Liabilities and Stockholder's Equity	\$ 1,694,782	\$ 1,580,110

See accompanying notes.

Aquarion Water Company of Connecticut
Statements of Operations
For the Years Ended December 31, 2022 and 2021
(Dollars in thousands)

	For the Year Ended December 31,	
	2022	2021
Revenues	\$ 198,735	\$ 193,248
Costs and expenses:		
Operating, maintenance and general expenses	76,279	73,564
Depreciation	45,735	42,189
Taxes other than income	18,828	18,003
Total costs and expenses	140,842	133,756
Operating income	57,893	59,492
Other (income)/expense, net	(3,335)	(2,677)
Interest expense	17,703	16,098
Allowance for funds used during construction	(2,875)	(2,212)
Income before income taxes	46,400	48,283
Income tax expense	1,152	3,164
Net income	\$ 45,248	\$ 45,119

See accompanying notes.

Aquarion Water Company of Connecticut
Statements of Stockholder's Equity
As of December 31, 2022 and 2021

(Dollars in thousands, except per share amounts)

	<u>Common Stock</u>	<u>Paid In</u>	<u>Contributed</u>	<u>Retained</u>	<u>Stockholder's</u>
	<u>Shares</u>	<u>Par Value</u>	<u>Capital</u>	<u>Earnings</u>	<u>Equity</u>
Balance at December 31, 2020	1,009,385	\$ 10,094	\$ 1,236	\$ 285,189	\$ 507,918
Net income	-	-	-	45,119	45,119
Common stock dividends	-	-	-	(27,500)	(27,500)
Contribution from parent	-	-	39,161	-	39,161
Balance at December 31, 2021	1,009,385	\$ 10,094	\$ 1,236	\$ 302,808	\$ 564,698
Net income	-	-	-	45,248	45,248
Common stock dividends	-	-	-	(27,343)	(27,343)
Contribution from parent	-	-	35,000	-	35,000
Balance at December 31, 2022	1,009,385	\$ 10,094	\$ 1,236	\$ 320,713	\$ 617,603

See accompanying notes.

Aquarion Water Company of Connecticut
Statements of Cash Flows
For the Years Ended December 31, 2022 and 2021
(Dollars in thousands)

	For the Year Ended December 31,	
	2022	2021
Cash flows from operating activities:		
Net income	\$ 45,248	\$ 45,119
Adjustments reconciling net income to net cash provided by operating activities:		
Depreciation and amortization	47,822	44,306
Equity portion of AFUDC	(2,875)	(2,211)
Provision for losses on accounts receivable	400	600
Deferred income taxes	1,662	2,571
Gain on sale of property	(2)	(2,096)
Other	12	60
Changes in assets and liabilities (Note 9)	(12,114)	(2,728)
Net cash provided by operating activities	80,153	85,621
Cash flows from investing activities:		
Capital additions, excluding AFUDC	(145,404)	(127,687)
Proceeds from sale of land	23	2,571
Debt portion of AFUDC	(2,454)	(2,070)
Other	727	(767)
Net cash used in investing activities	(147,108)	(127,953)
Cash flows from financing activities:		
Proceeds from issuance of long-term debt	70,000	100,000
Advances and contributions in aid of construction	1,039	480
Refunds on advances for construction	(127)	(85)
Capital contribution	35,000	29,000
Intercompany notes payments, net	(12,357)	(13,555)
Principal payments on long-term debt	-	(45,282)
Common dividends paid	(27,343)	(27,500)
Net cash provided by financing activities	66,212	43,058
Net increase (decrease) in cash, cash equivalents and restricted cash	(743)	726
Cash, cash equivalents and restricted cash at beginning of year	843	117
Cash, cash equivalents and restricted cash at end of year	\$ 100	\$ 843

See accompanying notes.

Aquarion Water Company of Connecticut
Notes to Audited Financial Statements
(Dollars in thousands)

1. Organization and Operation

Aquarion Water Company of Connecticut (“AWC of CT” or the “Company”) is a wholly-owned subsidiary of Aquarion Water Company, which is a wholly-owned subsidiary of Aquarion Company (“Aquarion”). Prior to March 4, 2021, Aquarion was a wholly-owned subsidiary of Eversource Aquarion Holdings, Inc. (“EAH”), which in turn was a wholly-owned subsidiary of Eversource Water Ventures (“EWV”), a subsidiary of Eversource Energy (“Eversource”). On March 4, 2021, EWV was merged into EAH and EAH was then merged into Aquarion.

Utilities

The Company collects, treats and distributes water to residential, commercial and industrial customers, to other utilities for resale, and for private and municipal fire protection. It is regulated by several Connecticut agencies, including the Public Utilities Regulatory Authority (“PURA”). AWC of CT provides water to approximately 208,000 customers in 59 cities and towns in Connecticut, including communities served by other utilities to which water is available on a wholesale basis for back-up supply and peak demand purposes through AWC of CT’s Southwest Regional Pipeline.

COVID-19

The global pandemic of the 2019 novel coronavirus (“COVID-19”) resulted in widespread disruption to the financial markets and overall economy. The Company continues to respond to COVID-19 by taking steps to mitigate the potential risks to employees and customers. The Company anticipates incurring incremental costs associated with bad debt expense and working capital costs related to PURA’s shut off moratorium and the suspension of security deposits and late payment fees, as well as COVID-19 payment programs for customers. As of December 31, 2022 and 2021 the Company has not deferred any incremental costs. As of December 31, 2022, the Company has been filing monthly compliance filings with PURA. The extent of the impact to the Company in the future will mostly be related to the uncollectible account receivable related to the shut off moratorium, which has resulted in higher-than-normal aged receivables over 90 days. The Company was approved the new Flexible Payment program in response to the COVID pandemic that went into effect on December 1, 2022. As a result, management is currently unable to estimate the potential impact of COVID-19 to the Company’s financial position.

2. Summary of Significant Accounting Policies

Basis of Presentation

The Company’s accounting policies conform to accounting principles generally accepted in the United States (“GAAP”) and, as applied in the case of rate-regulated public utilities, include those policies contained in the Financial Accounting Standards Board (“FASB”) Accounting Standard Codification (“ASC”) Section 980, *Regulated Operations* (“ASC 980”)

Aquarion Water Company of Connecticut
Notes to Audited Financial Statements
(Dollars in thousands)

and comply with the Uniform System of Accounts and ratemaking practices prescribed by the Regulatory Authorities. A description of the Company's principal accounting policies follows.

Regulation

The Company has incurred various costs and recorded certain credits, which have been reflected as regulatory assets and liabilities on the Company's Balance Sheet. Accounting for such costs and credits as regulatory assets and liabilities is in accordance with ASC 980, which sets forth the application of GAAP for those companies whose rates are established by or are subject to approval by an independent third-party regulator. Under ASC 980, regulated companies defer costs and credits on the balance sheet as regulatory assets and liabilities when it is probable that those costs and credits will be recognized in the rate setting process in a period different from the period in which they would have been reflected in income by an unregulated company. These deferred regulatory assets and liabilities are then reflected in the statement of operations in the period in which the same amounts are reflected in rates charged for service.

Regulatory assets consist of the following at December 31:

	<u>2022</u>	<u>2021</u>
Pension and OPEB costs	\$ 17,644	\$ 36,947
Unfunded deferred taxes	131,099	114,571
Deferred tank painting costs	11,097	10,798
Deferred drought costs	7,053	7,053
Deferred sales taxes	8,476	8,004
Unamortized debt issuance costs	705	756
Other regulatory assets	<u>5,372</u>	<u>4,587</u>
Total regulatory assets	181,446	182,716
Less: current portion	<u>2,664</u>	<u>1,376</u>
Total Long-Term Regulatory Assets	<u>\$ 178,782</u>	<u>\$ 181,340</u>

The Company believes, based on current regulatory circumstances, that the regulatory assets recorded are probable of recovery and that its use of regulatory accounting is appropriate. Material regulatory assets are earning a return.

Regulatory liabilities consist of the following at December 31:

Aquarion Water Company of Connecticut
Notes to Audited Financial Statements
(Dollars in thousands)

	<u>2022</u>	<u>2021</u>
Return to ratepayers - Excess Deferred Income Taxes	\$ 51,641	\$ 51,641
Unfunded deferred taxes	-	890
Cost of removal	82,436	74,795
Return to ratepayers - Revenue Adjustment Mechanism	3,012	64
Return to ratepayers - Tangible Property Regulation	8,005	8,005
Return to ratepayers - Earning Sharing Mechanism	(34)	(34)
Return to ratepayers - Federal Tax Revenue Adjustment	16,256	14,367
Return to ratepayers - Excess WICA	-	29
Total regulatory liabilities	<u>161,316</u>	<u>149,757</u>
Less: current portion	<u>3,012</u>	<u>983</u>
Total Long-Term Regulatory Liabilities	<u>\$ 158,304</u>	<u>\$ 148,774</u>

Property, Plant and Equipment

Property, plant and equipment is stated at cost. The costs of additions to and replacements of retired units of utility plant are capitalized. Costs include charges for direct material, labor and services, and indirect charges related to construction, such as engineering, supervision, payroll taxes and employee benefits. The Company also capitalizes an allowance for funds used during construction ("AFUDC") equivalent to the cost of funds devoted to plant under construction. Property modifications and improvements are capitalized. Expenditures for repairs and maintenance are charged to expense as incurred.

At the time depreciable utility property is retired or disposed of, the carrying amount, less salvage, is charged to accumulated depreciation in accordance with the Uniform System of Accounts prescribed by the PURA. Upon disposal or retirement of depreciable non-utility property, the appropriate plant and equipment and accumulated depreciation are reduced, with any resulting gain or loss recognized in the statements of operations.

For financial reporting purposes, depreciation is provided for using the straight-line method over the estimated service lives of the respective assets and includes amounts relating to cost of removal. The composite depreciation rate was 2.69% and 2.68% at December 31, 2022 and 2021, respectively. Service lives for utility plant are determined by independent engineers and subject to review and approval by PURA.

The Company had no material asset retirement obligations at December 31, 2022 or 2021.

Cash, Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments that have a maturity of three months or less when purchased to be cash equivalents.

Aquarion Water Company of Connecticut
Notes to Audited Financial Statements
(Dollars in thousands)

Restricted cash balances as of December 31, 2022 and 2021 relate to cash on hand to cover medical claims.

Concentration of credit risk

The Company maintains an estimated allowance for uncollectible trade receivables based on a percentage factor applied to each aging category of such receivables. The Company monitors the aging of receivables and for delinquent accounts billed on a quarterly basis a 30-day reminder notice followed by a 60-day shut-off notice will be sent. Delinquent accounts billed on a monthly basis will receive a shut-off notice at 36 days. The Company is allowed to terminate water service to non-paying single-family, commercial and industrial quarterly and monthly customers per regulation and commences shut-off at 75 days and 51 days past due, respectively. Due to the COVID-19 pandemic, the Regulatory Authorities required the Company to suspend shut-offs through the end of 2020. No interest or late fees were assessed, and no security deposits were required during the year. The states lifted the moratorium in 2021. COVID-19 payment programs were communicated to customers in various channels and extended into 2022. On October 11, 2022, PURA approved a Flexible Payment Plan to replace the COVID-19 payment plan effective December 1, 2022. The Payment Plan requires a minimum down payment in order for water service to be turned back on.

The Company is allowed to pursue receivership action in the courts for multi-family accounts. The Company does require deposits from tenants, but these deposits are returned to the customer (with interest) after one year if they demonstrate that they are good payers. Final billed and non-water accounts that cannot be collected after notice are placed with a collection agency. If the agency is unsuccessful, the account is written off against the reserve.

The Company limits its risk exposure for cash equivalents by investing in investment grade debt instruments and using multiple, highly rated financial institutions as trustees.

Allowance for Funds Used During Construction

AFUDC, as defined in the Uniform System of Accounts and permitted by the Regulatory Authorities, represents the net cost of borrowed funds used for construction during the construction period and a reasonable rate of return on other funds when used. AFUDC represents a noncash addition to income and utility plant. AFUDC is recognized by applying the last approved rate of return on rate base to construction projects exceeding \$10 and requiring more than one month to complete.

Utility plant under construction is not recognized as part of the Company's rate base for ratemaking purposes until such facilities are placed in service. Accordingly, the utilities capitalize AFUDC as a portion of the construction cost of utility plant until it is completed. Capitalized AFUDC is recovered through water service rates over the service lives of the facilities.

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Revenue Recognition

The Company recognizes revenue, based on PURA approved rates, for water consumed and billed, and for the estimated amount of water consumed but not billed at the end of each period. Unbilled revenue is reflected as accrued utility revenue in the accompanying balance sheets.

In connection with the Company's 2013 Rate Case, a Revenue Adjustment Mechanism ("RAM") was established that allows the Company to recognize revenue in an amount as defined by PURA. If the Company earns less than the allowed amount in a given year, the Company will record additional revenues (recorded as a regulatory asset) to be collected from customers over a twelve month period the following year in the form of a Water Revenue Adjustment ("WRA") surcharge. If the Company earns more than the allowed amount in a given year, the Company must reduce revenues (recorded as a regulatory liability) and return the difference to its customers over a twelve month period the following year in the form of a WRA surcredit. The estimated 2022 RAM for the year ended December 31, 2022 is a surcredit of \$3,053, all of which remains outstanding at December 31, 2022. The 2021 authorized RAM resulted in a surcharge of \$1,409, of which \$41 is outstanding at December 31, 2022. The resulting estimated cumulative surcredit of \$3,012 will be returned to customers over twelve months commencing with the 2022 RAM effective date.

An Earning Sharing Mechanism ("ESM") was also implemented in connection with the Company's 2013 Rate Case. The ESM provides for any earnings in excess of the allowed return on equity to be shared equally between ratepayers and shareholders in the form of an ESM surcredit. The Company recorded an ESM surcredit related to earnings in excess of the allowed return for the year ending December 31, 2014 ("2014 ESM") of \$806 and \$971 in the year ended December 31, 2015 and 2014, respectively. During 2016 an overpayment of \$34 for the 2014 ESM was made to the ratepayers. The overpayment will be included in the earlier of either the next ESM filing or rate case. Earnings for the year ended December 31, 2022 and 2021 did not exceed the allowed return on equity.

Materials and supplies

Utility materials and supplies inventories are valued at average cost. Due to supply chain issues and the impacts of the COVID-19 pandemic, the Company purchased pipe inventory that is valued at cost.

Fair value of financial instruments

Under the Disclosures topic of ASC 715, *Compensation - Retirement Benefits* ("ASC 715"), the Company is required to apply the fair value disclosures in accordance with ASC 820, *Fair Value Measurement* to disclose: (i) how fair value is determined for certain assets, and (ii) a hierarchy (for which these assets must be grouped), based on significant levels of inputs, as follows:

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- Level 1** quoted prices in active markets for identical assets or liabilities;
- Level 2** quoted prices in active markets for similar assets and liabilities and inputs that are observable for the asset or liabilities; or
- Level 3** unobservable inputs for which little or no market data exists, therefore requiring a company to develop its own assumptions, such as discounted cash flow models or valuations.

The determination of where assets and liabilities fall within this hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

Long-Lived Assets

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. If such an evaluation is required, the estimated future undiscounted cash flows associated with the asset would be compared to the asset's carrying amount. If the sum of expected cash flows is less than the carrying amount, an impairment charge is recorded for the amount by which the carrying amount exceeds the fair value. The Company did not record any such impairment charge in 2022 and 2021.

Goodwill

Pursuant to the provisions of ASC 350, *Intangibles – Goodwill and Other* (“ASC 350”), as amended by Accounting Standards Update (“ASU”) No. 2017-04, *Simplifying the Test for Goodwill for Impairment* (“ASU 2017-04”), goodwill is not amortized and is subject to an annual impairment test. A goodwill impairment is the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The Company elected to perform a qualitative assessment as of October 3, 2022 and determined a quantitative impairment test was not necessary. There was no impairment of goodwill recorded in 2022 or 2021. None of the Company's goodwill is deductible for tax purposes.

Customer Advances for Construction/Contributions in Aid of Construction

The Company receives cash advances from developers and customers to finance construction of new water main extensions. These advances are partially refunded over a ten-year period as water revenues are earned from those new customers. Any remaining non-refunded balances are reclassified to contributions in aid of construction and are no longer refundable.

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Transactions with Affiliated Companies

For the years ended December 31, 2022 and 2021, the Company reported \$3,135 (representing charges for electric and gas usage) and \$4,381 (representing charges for electric and gas usage), respectively, of expense for the value of services provided by Eversource and \$16 and \$16, respectively, of revenue for the value of services provided to Eversource. The Company borrows and lends short-term funds from/to Aquarion at negotiated rates, which are reflected as notes payable and notes receivable to/from Aquarion in the accompanying balance sheets. From these transactions there was approximately \$489 and \$30 for the year ended December 31, 2022 and 2021, respectively.

Included in operating expenses is an allocation of corporate charges of \$689 and \$1,056 from Aquarion in 2022 and 2021, respectively.

The Company provides certain management services (administration, accounting, data processing, engineering, etc.) to other Aquarion water companies, at cost, in accordance with a management and service agreement. Reimbursements for these expenses amounted to \$759 and \$656 for such services during 2022 and 2021, respectively, and are included in the statements of operations as reductions to operating expenses.

Income taxes

The Company, its parent and affiliates (“Consolidated Group”) are included in Eversource’s consolidated Federal income tax return. Federal income tax expense for financial reporting purposes is provided on a separate return basis, except that the Federal income tax rate applicable to the Consolidated Group is applied to separate company taxable income and is recognized currently. The Company provides deferred taxes for all temporary book-tax differences using the liability method as modified by ASC 980. The liability method requires that deferred tax balances be adjusted to reflect enacted future tax rates that are anticipated to be in effect when the temporary differences reverse. In accordance with GAAP for regulated industries, the Company reflects as income tax expense the amount of tax currently payable, except for accelerated depreciation since 1981 and the tax effect of post-1986 contributions in aid of construction, for which deferred income taxes have been provided on an annual basis. This method, known as the flow-through method of accounting, is consistent with ratemaking policies of PURA. The Company has established assets and liabilities that reflect anticipated future ratemaking effects of deferred tax provisions arising from the implementation of the liability method, which are reflected as unfunded deferred taxes in the accompanying balance sheets. Deferred investment tax credits are amortized ratably over the book life of property. The annual amortization of the investment tax credit is \$152. It is available through 2024.

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Estimates

The accompanying financial statements reflect judgments and estimates made in preparation of these statements and in the application of its accounting policies. Actual results may differ from these estimates.

Employee benefits

The Company participates in Aquarion's consolidated noncontributory defined benefit pension plans and other post-employment medical plans. These plans are accounted for in accordance with ASC 715.

3. Regulatory Matters

As necessary, the Company applies to PURA for changes in the rates charged for water service. Such rate requests are based on an historic test year, selected by the Company as the base period, adjusted for known changes, such as changes in customer base and/or consumption patterns; planned changes in operating and maintenance expenses; and planned changes in tax rates.

The following table provides rate authorizations with effective dates after January 1, 2021:

Entity	Filing Type	Approved	Effective	Authorized:	
				Annual Revenue Impact	Rate Impact
AWC CT	RAM Surcredit	March 2021	April 2021	(4,481)	-2.49%
	WICA Surcharge	March 2021	April 2021	244	0.14%
	Rate Increase (Valley)	October 2021	January 2022	737	21.40%
	RAM Surcharge	March 2022	April 2022	848	0.48%
	RAM Surcharge (Valley)	March 2022	April 2022	198	4.73%
	WICA Surcharge	March 2022	April 2022	438	0.25%

The Connecticut Water Infrastructure and Conservation Adjustment ("CT WICA") program allows for the implementation of a rate adjustment between rate cases, not to exceed 5% annually or 10% in total, to recover eligible costs associated with the replacement and/or rehabilitation of existing water infrastructure. The cumulative WICA surcharge at December 31, 2022 and 2021 is 10.00%. The WICA program also provides for an annual reconciliation to determine whether the Company has overcollected or undercollected the allowed WICA revenues which are then recovered or refunded, as appropriate, as a reconciliation adjustment over a one year period commencing on April 1st. The reconciliation adjustment was a surcharge of 0.03% at December 31, 2022 and a refund of 0.22% at December 31, 2021.

In November 2021 the Company filed a motion requesting a reopener to the Company's 2013 rate case proceeding for the limited purpose of approving a settlement

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agreement, entered into by and between the Company and the Office of Consumer Counsel, to reset the Company's WICA program which had reached the statutory limit of 10% between rate cases. PURA issued its final decision on March 16, 2022 and declined to approve the Settlement Agreement.

In August 2022, the Company filed a rate application with PURA to request a \$27,497, or 13.9%, increase in annual water service revenues. On March 15, 2023, PURA approved a final decision that rejected the Company's request. Under this decision, the annual revenue requirement represents a decrease of \$2,000 and approximately \$2,500 of disallowed expenses. On March 30, 2023, the Company filed an appeal on the decision and a request for stay of enforcement of agency decision with the State of Connecticut Superior Court.

4. Income Taxes

Income tax expense for the years ended December 31 consists of the following:

	2022	2021
Current		
Federal	\$ (165)	\$ 1,000
State	545	49
Total current	380	1,049
Deferred		
Federal	215	427
State	557	1,688
Total deferred	772	2,115
Total income tax expense	\$ 1,152	\$ 3,164

A reconciliation of the statutory federal income tax rate to the effective income tax rate for the years ended December 31, is as follows:

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	<u>2022</u>	<u>2021</u>
Tax at statutory rate	21.00 %	21.00 %
Increase (reductions) in taxes resulting from:		
State taxes, net of federal income taxes	1.90	0.50
Tax credits	0.10	2.40
Land sale gains	-	(0.30)
Repairs and maintenance	(18.40)	(14.60)
Excess depreciation and cost of removal	2.10	2.60
Deferred tank painting and drought costs	0.10	(0.40)
Capitalized interest	(1.60)	(1.30)
RAM and ESM	1.30	(1.50)
Pension and retiree medical	(4.40)	(1.70)
Other items, net	0.50	-
Effective tax rate	<u>2.60 %</u>	<u>6.70 %</u>

The state tax credit line item is presented net of a valuation allowance of 6.70% and 8.70%, for the years 2022 and 2021, respectively.

Deferred tax liabilities (assets) at December 31, were comprised of the following:

	<u>2022</u>	<u>2021</u>
Utility temporary difference	\$ 45,865	\$ 42,152
Depreciation	149,852	138,829
Regulatory asset - post retiree benefits	5,880	11,084
Total deferred tax liabilities	<u>201,597</u>	<u>192,065</u>
State Open Space credit	29,820	29,820
State Fixed Capital credit	14,387	12,628
Utility temporary difference	744	1,707
Pension and post retiree medical	7,902	15,723
Excess deferred income taxes	13,904	13,904
Other	7,473	6,999
Total deferred tax assets	<u>74,230</u>	<u>80,781</u>
Valuation allowance for deferred tax assets	(41,553)	(39,294)
Net deferred tax assets	<u>32,677</u>	<u>41,487</u>
Investment tax credits	274	426
Net deferred tax liabilities	<u>\$ 169,194</u>	<u>\$ 151,004</u>

Investment tax credits represent a deferred credit and the Company has classified them within the "Deferred investment tax credits" line on its balance sheet.

The Company has \$37,747 (\$29,820 net of federal taxes) of state open space tax credits available which are expected to expire unused by the end of tax year 2026. A valuation allowance totaling \$29,820 has been recorded for the state open space credits of

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\$29,820 based on the Company's estimates regarding future utilization of these carry forwards. These estimates consider, among other factors, projected state taxable income, tangible property regulation deductions and utilization of Connecticut Fixed Capital Investment Credits. The Company continues to evaluate these factors and whether their trends constitute sufficient positive evidence to support the reversal of the valuation allowance (in full or in part). The Company has \$18,212 and \$15,985 of Connecticut Fixed Capital Investment Credits (\$14,387 and \$12,628, net of federal taxes) as of December 31, 2022 and 2021, respectively, which will expire between 2023 and 2027. Valuation allowances have been established totaling \$14,852 and \$11,993 (\$11,733 and \$9,474, net of federal taxes) as of December 31, 2022 and 2021, respectively. Management believes the remaining tax benefit arising from these credits will be realized in the carry forward periods against future taxes.

The Company does not have any uncertain tax positions as of December 31, 2022 and 2021.

The Company has fully funded its parent for its separate return tax liability, which is in accordance with the tax sharing agreement among the members of the Consolidated Group. The adoption of the tangible property regulations in 2013 resulted in a net federal taxable loss. On separate return basis, the Company elected to carry back the 2013 federal taxable loss to offset taxable income in the previous two years. As a result, the Company recorded a receivable for the carry back claim within the "Amounts due to associated companies" line on its balance sheet.

A portion of the receivable has been recovered as the benefit of the tangible property regulations deduction was returned to the ratepayers starting in 2015. As such, the Company has established a regulatory liability in the "Other Liabilities and Deferred Credits" section of its balance sheet. The Company has reduced the regulatory liability account by collecting less cash from its customers in 2015 and 2016. The Company's parent correspondingly funded the surcredits through reducing the Company's receivable from associates. The recovery of the receivable from the parent is in accordance with the tax sharing agreement among the members of the consolidated group. In 2016, the Company recorded a \$7,050 regulatory asset for drought costs that are expected to be recovered from the ratepayers as a surcharge. As such, the Company suspended the surcredits in 2017 and netted the remaining surcredits with the deferred drought costs as part of its pending 2022 rate case.

As a result of Eversource's purchase of the Company's parent in 2017, the Company's parent filed its final federal and state tax returns in 2018. As such, no separate company tax years remain subject to examination for Federal and Connecticut for the consolidated Aquarion group prior to Eversource's ownership. Due to its inclusion in the Eversource consolidated group, Aquarion is subject to the same open tax years as Eversource. Tax year 2022 remains open for Federal, along with 2019-2022 for Connecticut.

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On December 22, 2017, the Tax Cuts and Jobs Act (“TCJA”) was signed into law. At the date of enactment, the Company’s deferred taxes were re-measured based upon the new tax rate. As a regulated utility, the Company’s change in deferred taxes is recorded as either an offset to a regulatory asset or liability and may be subject to refund to customers.

Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates to 21% under the provisions of the TCJA will result in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes are to be passed back to customers for certain accelerated tax depreciation benefits. The balance sheets at December 31, 2022 and 2021 reflect the impact of the TCJA on the Company’s regulatory assets and liabilities which increased its regulatory liability by \$50,771. The acquisition of Valley Water Systems increased this amount to \$51,641. Of this amount, \$50,621 consists of excess deferred taxes for certain accelerated tax depreciation benefits, which the Company intends to provide to utility customers through reductions in future rates over the remaining book lives of its assets. These adjustments had no impact on the Company’s 2022 and 2021 cash flows.

5. Long-Term Debt

Long-term debt at December 31 consisted of the following:

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	2022	2021
<u>Notes payable – unsecured</u>		
3.31% senior notes due April 1, 2051 (a)	\$ 100,000	\$ 100,000
4.69% senior notes due September 1, 2052 (a)	70,000	-
4.29% senior notes due August 15, 2032 (a)	60,000	60,000
3.75% senior notes due May 04, 2035 (a)	46,000	46,000
3.54% senior notes due December 15, 2049 (a)	45,000	45,000
4.00% senior notes due April 30, 2033 (a)	35,000	35,000
4.40% senior notes due February 21, 2032(a)	30,000	30,000
3.57% senior notes due September 1, 2037 (a)	30,000	30,000
3.67% senior notes due July 1, 2036 (a)	25,000	25,000
4.07% senior notes due April 30, 2033 (a)	15,000	15,000
6.43% senior notes due June 29, 2034 (a)	8,500	8,500
<u>Notes payable – secured</u>		
7.33% series due December 1, 2027 (a)	14,000	14,000
9.29% series due April 1, 2031 (a)	4,500	4,500
8.04% series due February 1, 2030 (b)	3,500	3,500
Series R, 6.875%, due November 1, 2028	5	5
Long-term debt	486,505	416,505
Less: unamortized debt issuance costs	5,151	5,247
Total Long-Term Debt	\$ 481,354	\$ 411,258

(a) Callable subject to make-whole premium.

(b) Callable at 100%, if through condemnation or purchase of Company assets by a municipal or other governmental entity.

All or substantially all of the fixed assets of the Company are pledged as security for the secured notes.

Aggregate maturities on long-term debt for each of the five years succeeding December 31, 2022 are as follows:

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<u>The year ended December 31</u>	
2023	\$ -
2024	-
2025	-
2026	-
2027	-
Thereafter	486,505
Total	<u>\$ 486,505</u>

On August 31, 2022, the Company issued \$70,000 aggregate principal amount of 4.69% Senior Notes, due September 1, 2052. The Company used the proceeds from this issuance to pay off short-term debt, which was primarily used to finance capital expenditures.

The Company's unsecured debt agreements contain certain covenants typical of such agreements, the most restrictive of which requires the maintenance of total funded debt to total capital, as defined, of no more than 66.67%. The Company was in compliance with these covenants at December 31, 2022 and 2021.

6. Short-Term Borrowings

On August 20, 2019, the Company was added to Eversource's credit facility with a borrower sublimit of \$100,000. This facility will mature on October 15, 2027. There was nothing drawn under this facility as of December 31, 2022 and 2021.

7. Employee Benefit Plans

Since several subsidiaries of Aquarion participate in Aquarion's employee benefit plans, it is impractical to segregate the assets of the individual plans. Therefore, the following information presents the reconciliation of the Aquarion benefit plans as of December 31, 2022 and 2021. Certain disclosures of amounts which relate specifically to the Company are shown in the section entitled Segregated Disclosures.

Retirement Plans. Aquarion and certain of its subsidiaries have a noncontributory defined retirement pension plan ("Pension Plan") covering qualified employees. The Pension Plan was closed for new participants since October 1, 2009 for non-union employees and January 1, 2011 for union employees. In general, Aquarion's policy is to fund accrued pension costs. The Pension Plan's assets are primarily invested in U.S. and foreign equities and debt securities issued by the U.S. government and corporations.

Postretirement Health Care Benefits. Aquarion and certain of its subsidiaries provide health benefits for substantially all retired employees ("Postretirement Plans") and life insurance for a small group of retired individuals. Postretirement health benefits are not provided to employees hired after July 1, 1996. Aquarion amended the Postretirement Plan

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eligibility effective January 1, 2017 to include certain employees with at least twenty years of service. Both active and retired employees contribute a portion of the cost of medical benefits. Aquarion is funding its postretirement health care benefits through contributions to a Voluntary Employee Beneficiary Association Trust (“VEBA”). Aquarion’s tax-deductible contribution to the VEBA for calendar years ended December 31, 2022 and 2021 was \$3,148 and \$2,344, respectively. The Postretirement Plans assets are primarily invested in short-term investments.

Aquarion follows the provisions of ASC 715, which requires Aquarion to recognize in its Consolidated Balance Sheet the funded status of a benefit plan. For the Pension Plan, this is measured as the difference between plan assets at fair value and the projected benefit obligation. For the Postretirement Plans, this is measured as the difference between the plan assets at fair value and the accumulated benefit obligation. In addition, ASC 715 requires Aquarion to recognize the gains or losses and prior service costs or credits that arise during the period but are not recognized as components of net periodic benefit cost. Under ASC 980, the net periodic benefit costs associated with the Company are recorded as a regulatory asset of \$17,644 and \$36,947 at December 31, 2022 and 2021, respectively, as the Regulatory Authorities have provided for full recovery of these costs in rates.

Pension and Postretirement Benefits

Based on an actuarial valuation as of December 31, the following table sets forth the funded status of Aquarion’s qualified Pension Plan and Postretirement Plans as of December 31:

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	<u>Pension Plan</u>		<u>Postretirement Plans</u>	
	<u>2022</u>	<u>2021</u>	<u>2022</u>	<u>2021</u>
<u>Change In Benefit Obligation</u>				
Benefit Obligation at Beginning of Year	\$ 184,265	\$ 189,279	\$ 49,177	\$ 52,231
Service Cost	2,569	2,917	37	40
Interest Cost	4,409	3,796	1,116	954
Plan Amendments	-	-	570	-
Actuarial (Gain)/Loss	(44,064)	(4,875)	(11,937)	(2,046)
Torrington acquisition	-	-	2,743	-
Key Employee Benefits	-	-	(35)	-
Benefits Paid	(7,029)	(6,852)	(1,864)	(2,002)
Benefit Obligation at End of Year	\$ 140,150	\$ 184,265	\$ 39,807	\$ 49,177
<u>Change In Plan Assets</u>				
Fair Value Of Plan Assets At Beginning Of Year	\$ 160,217	\$ 144,778	\$ 31,137	\$ 27,746
Actual return on assets	(21,772)	17,291	(4,900)	3,049
Employer Contributions	5,000	5,000	3,148	2,344
Employer contributions for Key Employee benefits	-	-	35	-
Key Employee benefits paid	-	-	(35)	-
Tax Reimbursement	-	-	(139)	-
Benefits Paid	(7,029)	(6,852)	(1,864)	(2,002)
Fair Value of Plan Assets at End of Year	\$ 136,416	\$ 160,217	\$ 27,382	\$ 31,137
<u>Net Amount Recognized</u>				
Funded Status	\$ (3,734)	\$ (24,048)	\$ (12,425)	\$ (18,040)
<u>Amounts recognized in Balance Sheet consist of:</u>				
Noncurrent Liabilities	\$ 3,734	\$ 24,048	\$ 12,425	\$ 18,040

The Pension Plan actuarial gain of \$44,064 and \$4,875 reported in 2022 and 2021, respectively, was due primarily to a change in the discount rate.

The Postretirement Plans actuarial gain of \$11,937 and \$2,046 reported in 2022 and 2021, respectively, was due primarily to a change in the discount rate.

The accumulated benefit obligation for the Pension Plan was \$128,397 and \$165,573 at December 31, 2022 and 2021, respectively.

The following table sets forth the components of amounts recognized in Regulatory Assets and Other Comprehensive Income at December 31 and changes recognized in Regulatory Assets and Other Comprehensive Income for the years ended December 31:

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	Pension Plan		Postretirement Plans	
	2022	2021	2022	2021
<u>Amounts recognized in Regulatory Assets consist of:</u>				
Net (Gain)/Loss	\$ 17,422	\$ 31,661	\$ (3,074)	\$ 1,783
Prior Service Cost (Credit)	234	356	564	-
<u>Amounts recognized in Accumulated Other Comprehensive Income consist of:</u>				
Net Loss	\$ 1,421	\$ 88	\$ (153)	\$ (51)
Prior Service Cost (Credit)	-	4	7	-
<u>Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income:</u>				
Net (Gain)/Loss	\$ 1,333	\$ (590)	\$ (102)	\$ (85)
Amortization of Prior Service Cost	(4)	(4)	7	-
Total recognized in other comprehensive income	\$ 1,329	\$ (594)	\$ (95)	\$ (85)
<u>Other Changes in Plan Assets and Benefit Obligations Recognized in Regulatory Assets:</u>				
Net (Gain)/Loss	\$ (14,239)	\$ (16,704)	\$ (4,857)	\$ (3,274)
Amortization of Prior Service Cost	(122)	(135)	564	(539)
Total recognized in regulatory asset	\$ (14,361)	\$ (16,839)	\$ (4,293)	\$ (3,813)

The components of the net periodic benefit cost and the weighted average assumptions for the Pension Plan for the years ended December 31 were as follows:

	Pension Plan		Postretirement Plans	
	2022	2021	2022	2021
<u>Components Of Net Periodic Benefit Cost</u>				
Service Cost	\$ 2,569	\$ 2,917	\$ 37	\$ 40
Interest Cost	4,409	3,796	1,116	954
Expected Return on Plan Assets	(11,152)	(10,067)	(1,940)	(1,732)
Amortizations:				
Prior Service Cost (Credit)	126	139	-	539
Net Loss	1,764	4,187	-	-
Net Periodic Benefit Cost	\$ (2,284)	\$ 972	\$ (786)	\$ (199)

The weighted-average assumptions used in the actuarial calculations for the Pension Plan and Postretirement Plans were as follows:

	Pension Plan		Postretirement Plans	
	2022	2021	2022	2021
Weighted Average Assumptions:				
Discount Rate for projected benefit obligation	5.22%	3.00%	5.19% 0	2.91%
Discount Rate for net periodic benefit cost	5.31%/5.10%	3.22%/2.47%	2.90%* #	2.59%
Expected Return on Plan Assets	7.00%	7.00%	7.00%/5.40% #	7.00%/5.40%
Rate of Compensation Increase	4.00%	4.00%	N/A #	N/A

The fair values of Pension Plan assets at December 31 by asset category are as follows:

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Asset Category	As of December 31, 2022			As of December 31, 2021		
	Level I	Uncategorized	Total	Level I	Uncategorized	Total
U.S. Equity Funds	\$ 40,530	\$ -	\$ 40,530	\$ 51,978	\$ -	\$ 51,978
Fixed Income Mutual Funds	47,351	-	47,351	55,622	-	55,622
International Equity Funds	31,416	-	31,416	35,717	-	35,717
Other	6,495	10,624	17,119	8,479	8,421	16,900
Total	\$ 125,792	\$ 10,624	\$ 136,416	\$ 151,796	\$ 8,421	\$ 160,217

The fair values of Postretirement Plan assets, all of which are Level I investments, at December 31 by asset category are as follows:

Asset Category	2022	2021
Money Market Funds	\$ 3,147	\$ 2,344
U.S. Equity Funds	7,524	8,967
Fixed Income Mutual Funds	9,909	11,817
International Equity Funds	5,575	6,560
Other	1,227	1,449
Total	\$ 27,382	\$ 31,137

The equity funds include investments in large-cap, mid-cap, and small-cap companies, both domestic and international. The components of fixed income mutual funds consist of long-term fixed income investments in high yield instruments.

The Pension other investments consist entirely of investments in a trust which invests substantially all of its assets in real estate inside the United States through private investment funds. This investment is valued using the Net Asset Value ("NAV") as a practical expedient and is structured as an investment company offering shares or units to multiple investors for the purpose of providing a return. This investment is valued at NAV provided by the partnership, which is based on discounted cash flows of the underlying investments, real estate appraisals or public market comparables of the underlying investments.

The long-term objectives of the plans are to invest in vehicles that provide a return that both limits the risk of plan assets failing to meet associated liabilities and minimizes long-term expense.

The expected long-term rate of return is based on target allocations of investments. The long-term rate of return is developed based on a capital markets model that was developed by investment consultants. This model considers expectations of future returns for investments and historical returns on comparable equity, debt and other investments. The target and actual allocations were as follows:

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Asset category:	Pension Plan				Postretirement Plans			
	Target		Actual		Target		Actual	
	2022	2021	2022	2021	2022	2021	2022	2021
Equity securities	59.0 %	54.0 %	52.8 %	54.7 %	59.0 %	54.0 %	59.3 %	54.0 %
Debt securities	36.0	36.0	34.8	34.8	36.0	41.0	36.2	40.8
Other	5.0	10.0	12.4	10.5	5.0	5.0	4.5	5.2
Total	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

Aquarion expects to contribute \$5,000 and \$2,895 to the Pension Plan (excluding nonqualified pension plans) and the Postretirement Plans, respectively, for 2023.

Future benefit payments and subsidy receipts are expected to be (including the nonqualified plans):

	Pension Plans	Postretirement Plans
2023	\$ 8,754	\$ 2,895
2024	\$ 9,134	\$ 2,964
2025	\$ 9,374	\$ 3,083
2026	\$ 9,698	\$ 3,051
2027	\$ 9,881	\$ 2,990
2028-2032	\$ 52,010	\$ 14,366

For measurement purposes, the weighted average annual assumed rate of increase in the per capita cost of covered benefits (health care trend rate) related to the Postretirement Plans for December 31 is as follows:

	2022	2021
Health care cost trend rate assumed next year	6.50/3.50%	6.25%/3.50%
Rate at which the trend rate is assumed to decline (the ultimate rate)	5.0%/3.50%	5.0%/3.50%
Year at which the trend rate reaches the ultimate rate	2028/2019	2023/2019

In addition to the above qualified Pension Plan, Aquarion has nonqualified plans for certain executives and former members of the Board of Directors. Total expense under these plans was approximately \$617 and \$509 in 2022 and 2021, respectively. The plans were unfunded with \$5,868 and \$7,479 reflected in long term liabilities as of December 31, 2022 and 2021, respectively.

Savings Plan for Employees

Aquarion sponsors a 401(k) Savings Plan for employees of the Company (the "Savings Plan"). All employees can make contributions that are invested at their direction in one or more funds. For non-union employees hired prior to October 1, 2009 and union

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employees hired prior to January 1, 2011, the Company matches 75% of the first 6% of each employee's eligible wages contributed to the Savings Plan for both union and non-union employees. For non-union employees hired on or after October 1, 2009 and union employees hired on or after January 1, 2011, the Company matches 100% of the first 6% of each employee's eligible wages contributed to the Savings Plan. The Company expensed matching contributions to the Savings Plan totaling \$1,596 and \$1,425 for 2022 and 2021, respectively. These amounts were recognized in the Statements of Operations as operating, maintenance and general expenses.

Segregated Disclosures

The Company's portion of the net pension benefit was \$1,138 and cost was \$2,765 in 2022 and 2021, respectively. The Company's portion of net postretirement benefit was \$420 and cost was \$19 in 2022 and 2021, respectively.

8. Property, Plant and Equipment

Net property, plant and equipment at December 31 consisted of the following components:

	<u>2022</u>	<u>2021</u>
Transmission and distribution	\$ 1,141,146	\$ 1,070,381
Water treatment	334,355	307,943
Source of supply	145,426	137,880
General structures and improvements	152,779	138,246
Pumping	124,159	119,463
Construction work in progress	78,534	58,704
Non-utility plant	2,748	2,591
Other	574	989
	<u>1,979,721</u>	<u>1,836,197</u>
Less: accumulated depreciation	<u>545,356</u>	<u>515,728</u>
Property, plant and equipment, net	<u>\$ 1,434,365</u>	<u>\$ 1,320,469</u>

9. Statements of Cash Flows

Changes in assets and liabilities and supplemental cash flow information for the years ended December 31 are set forth below:

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	<u>2022</u>	<u>2021</u>
Decrease/(Increase) in accounts receivable and accrued revenues	\$ (1,700)	\$ 496
Decrease/(Increase) in materials and supplies	(1,949)	(185)
Increase in prepayments and other current assets	(400)	(240)
(Decrease)/Increase in AP and accrued liabilities	1,297	4,065
Increase in accrued interest	1,093	279
Change in other current accounts	(247)	1,171
Net changes in other noncurrent balance sheet items	(10,208)	(8,314)
Changes in assets and liabilities	<u>\$ (12,114)</u>	<u>\$ (2,728)</u>
Cash paid during the year for:		
Interest	<u>\$ 16,795</u>	<u>\$ 16,237</u>
Income taxes	<u>\$ 380</u>	<u>\$ 1,049</u>
Supplemental non-cash contributed property	<u>\$ 1,261</u>	<u>\$ 1,577</u>
Change in accounts payable for purchase of fixed assets	<u>\$ (1,187)</u>	<u>\$ 6,780</u>

10. Operating Leases

The Company has entered into lease agreements as a lessee for the use of land, facilities and equipment. These lease agreements are classified as operating leases and the liability and right-of-use asset are recognized on the balance sheet at lease commencement. Leases with an initial term of 12 months or less are not recorded on the balance sheet and are recognized as lease expense on a straight-line basis.

The Company determines whether or not a contract contains a lease based on whether or not it provides the Company with the use of a specifically identified asset for a period of time, as well as both the right to direct the use of the asset and receive the significant economic benefits of the asset. The Company has elected the practical expedient to not separate non-lease components from lease components and instead to account for both as a single lease component.

Operating lease cost was approximately \$350 and \$244 for each of the years ended December 31, 2022 and 2021, respectively. Operating lease cost is included in operating, maintenance and general expenses on the statement of income.

Supplemental balance sheet information related to leases is as follows:

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	<u>2022</u>	<u>2021</u>
Operating Leases:		
Operating Lease Right-of-use-Assets	<u>\$ 328</u>	<u>\$ 447</u>
Operating Lease Liabilities		
Operating Lease Liabilities - Current Portion	\$ 126	\$ 119
Operating Lease Liabilities - Long Term	202	328
Total Operating Lease Liabilities	<u>\$ 328</u>	<u>\$ 447</u>

Other information related to leases is as follows:

	<u>2022</u>	<u>2021</u>
Weighted-Average Remaining Lease Term (Years)	2.9	3.8
Weighted-Average Discount Rate (Percentage)	0.8%	1.0%

Future minimum lease payments under operating leases that have initial or remaining non-cancelable lease terms in excess of one year are as follows:

<u>The year ended December 31,</u>	
2023	137
2024	93
2025	95
2026	24
Total	<u>349</u>
Less amount representing interest	21
Present value of future minimum lease payments	<u>\$ 328</u>

11. Contingencies

The Company is subject to various litigation in the normal course of business, none of which, in management's opinion, would be material to the Company's operations or financial position.

Since approximately 1950, in accordance with past-accepted practices, the Company's Southern Division (formerly known as Connecticut American Water Company ("CAWC")) discharged sedimentation basin residuals and spent filter backwash water from the Putnam Treatment Plant to the Putnam Reservoir. Prior to its acquisition by the Company, CAWC entered into a Consent Order with the Connecticut Department of Energy and Environmental Protection ("DEEP") (formerly known as Department of Environmental Protection) that required that these discharges cease and that CAWC investigate the fate of the residuals that have accumulated in Putnam Reservoir and evaluate the need, if any, for remediation or removal of the residuals. CAWC stopped discharging sedimentation basin residuals in 1993 and untreated backwash water in December 1999. Extensive work has also been done to investigate the impact of the residuals deposit in the reservoir and possible remediation

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alternatives. The Company currently disagrees with the DEEP regarding the most appropriate remediation alternative for the reservoir and is awaiting a final decision from DEEP.

The balance related to the Putnam reservoir environmental liability was \$121 at December 31, 2022 and 2021.

12. Subsequent Events

Management has evaluated subsequent events through March 30, 2023, the date which the financial statements were available for issue.

ATTACHMENT B: SELECT PROJECT DESCRIPTIONS

Table B-1. Easton Water Treatment Plant

Name of Water Supply System	Greater Bridgeport
Year commissioned	1993
Design Capacity	20 MGD
Plant Type	Conventional dual media filtration with lamella plate settlers, treating high quality water from the Easton Reservoir
General Plant Condition	Excellent
General Operations	Remotely monitored, one shift operator controlled on regular work days. Plant consistently produces high-quality treated water

The Easton Water Treatment Plant (WTP) is a 20 MGD conventional surface water treatment plant commissioned in 1993. A raw water pump station, located along the main access road to the WTP, delivers water to the first of two mixing chambers operating in series where sodium hydroxide, alum and polymer are added. The chemically treated and mixed raw water passes through three parallel flocculation basins and then to three plate settler basins. Sodium hypochlorite and polymer are added to the clarified water before entering eight dual media filters (DMF) in the filter building. Each DMF has approximately 400 sq.ft. of surface area with a 24-inch depth of anthracite and a 12-inch layer of sand filter media. The filters are operated as declining rate filters. The main treatment building also houses chemical feed and storage systems, electrical and process control equipment, laboratory, control room and offices. Filtered water flows to two 3 million gallon (MG) welded steel clearwells with concentric baffle curtains. Filtered water is treated with sodium hydroxide (pH adjustment), sodium hypochlorite (disinfection), zinc orthophosphate (corrosion inhibitor), and fluorosilicic acid (fluoride addition) before entering the clearwells. Finished water from the clearwells flows by gravity to the distribution system.

The instrumentation and control system in the plant is based on General Electric, GE-Fanuc programmable logic controllers with two workstations running Wonderware HMI software. The PLC-SCADA system is distributed with multiple I/O cabinets having serial communication via proprietary GE, Genius communication protocol. The WTP has capabilities for communication to remote locations via telephone or radio communication links. Hach in-line analyzers are provided for monitoring vital water quality parameters (turbidity, pH, chlorine residual) in the plant.

Implementation of a sophisticated PLC-SCADA has significantly automated the Easton operation. The WTP is operated by two operators and one maintenance technician 8 hours/day, 5 days a week. Other times, the plant runs unattended with remote monitoring from Aquarion's central control facility at Stamford. The power demand in the plant is tightly controlled and most of the energy intensive activities are done outside the peak power demand period in the main power supply grid.

The Easton WTP has been in the Partnership for Safe Water (PSW) program for over 15 years and it received the PSW Director's award for outstanding performance in 2015.

Table B-2. Hemlocks Water Treatment Plant

Name of Water Supply System	Greater Bridgeport System
Year commissioned	1997
Design Capacity	50 MGD
Plant Type	Stacked DAF/Dual Media Filter system treating high quality water from the Hemlocks Reservoir
General Plant Condition	Very Good
General Operations	Remotely monitored, one shift operator controlled on regular work days. Plant consistently produces high-quality treated water

The Hemlocks WTP is a 50 MGD, stacked Dissolved Air Flotation (DAF) and Dual Media Filter (DMF) surface water treatment plant commissioned in 1997. The plant is housed in a five-story structure. The plant control room, DAF basins, chemical storage and feed systems, standby generator and boiler are located on the first floor of the plant building. The basement of the building houses most of the process pumps and monitoring equipment and the mezzanine houses the air scour system, piping and large valves with actuators. The second floor houses the dewatered sludge conveyor and the top most floor houses centrifuges.

A raw water pump station, situated adjacent to the Hemlocks Reservoir, delivers raw water to a contact tank, and then to two mixing basins operated in series (where sodium aluminate and a cationic polymer are added). Water then flows through nine parallel flocculation basins and feeds nine DAF/DMF tanks that have 24-inch thick layer of anthracite and 12-inch layer of sand. Sodium hypochlorite is added to the DAF/DMF tanks for pre-disinfection and oxide coating of the filter media. Floated solids from the DAF units flow into a residual storage tank and settled solids are pumped up to two centrifuges located on the third floor. Dewatered solids discharges onto a screw conveyor on the second floor, which transfers the solids to a roll-off container storage on the floor below for off-site disposal. Filter backwash waste is pumped into the raw water main to the plant. Filtered water is dosed with sodium hydroxide (pH adjustment), sodium hypochlorite (disinfectant), zinc orthophosphate (corrosion inhibitor), and fluorosilicic acid (tooth decay prevention) at the inlet of a 4 MG clear well. Finished water is stored in an 8 MG circular welded steel treated water storage tank, located adjacent to the Hemlock Reservoir, and then flows by gravity to the distribution system.

The WTP is operated by three operators and one maintenance technician 8 hours/day, 5 days a week. Other times, the plant runs unattended with remote monitoring from Aquarion's central control facility at Stamford. The power demand in the plant is tightly controlled and most of the energy intensive activities are done outside the peak power demand period in the main power supply grid. Aquarion received a significant refund check from the power provider for reducing energy use in the WTP during peak demand hours. I&C systems and in-line analyzers are similar to the arrangements at the Easton WTP.

The plant uses proven and innovative DAF/DMF water treatment technologies with a compact stacked design. Overall, the Hemlock WTP treats high quality surface water from the Hemlock Reservoir and produces good quality treated water.

Table B-3. Putnam Water Treatment Plant

Name of Water Supply System	Greenwich and New York Supply Zones
Year commissioned	1926
Design Capacity	20 MGD
Plant Type	Conventional Dual Media Filter (DMF) plant treating good quality water from the Putnam Reservoir
General Plant Condition	Good
General Operations	24/7 operator controlled plant. A Partnership for Safe Water plant producing treated water conforming to regulatory requirements.

The Putnam WTP treats surface water from the Putnam Reservoir. A significant capital improvement program (around \$25 million) consisting of a series of Initial Capital Improvements (ICIs) was completed in 2012 to replace the original clearwell with a new, larger (3.2-million-gallon capacity) dual-cell clear well. The program also included construction of a new chemical feed and storage building. The plant still has the original mixing basins, sedimentation basins, and filter basins. The filters were upgraded in 2006-2007 to include new underdrains and air scour systems. The Putnam WTP includes two mixing basins, two sedimentation basins (one open and another covered), 16 dual media filters (8 single cell filters and 8 double cell filters), a clearwell, a chemical feed and storage building, residual processing units, and pump stations. The plant also has a chlorine dioxide feed and storage system (installed in 2014), that is in the filter building, to combat occasional filter clogging algae. Alum, sodium hydroxide, polymer and purate (chlorine dioxide) are added to the mixing basin. From the mixing basin, water flows through the sedimentation basin(s) to dual media filters. Filtered water is treated with sodium hydroxide (pH adjustment), sodium hypochlorite (disinfectant), zinc orthophosphate (corrosion inhibitor), and fluorosilicic acid (fluoride) before entering the 3.2 MG clearwell. A high-service pump station transfers finished water to an elevated storage tank on the plant site. Finished water from the clear well also flows via three gravity mains to the New York and Greenwich distribution systems.

The residuals treatment facility (installed in 1999) includes settling, thickening, and centrifuge dewatering units. From the thickener, the residuals are fed directly into a single Humboldt centrifuge and dewatered residuals from the centrifuge are dropped into a roll-off storage container via belt conveyor and sent off-site for disposal.

The WTP has 12 operators who work in shifts around the clock, 7 days a week. The plant has been a member of the AWWA's Partnership for Safe Water (PSW) Program for over 14 years and received the PSW Director's Award for Outstanding Performance in 2015.

I&C system is based on General Electric, GE-Fanuc programmable logic controllers with two workstations running Wonderware HMI software. The SCADA control system and HMI software are similar to that at the Easton and Hemlocks WTPs. The control system, analytical equipment and sensing devices are recent installations and utilize up-to-date technology.

Table B-4. Holyoke Wastewater Treatment Plant and CSO Facility

Wastewater System Name	Holyoke, MA
Year commissioned	2007
Design Capacity	37 MGD Secondary Treatment; 103 MGD CSO Treatment
Plant Type	Full secondary treatment including new influent screw pumps and grit removal, mechanical screens, primary clarifiers, activated sludge biological treatment, secondary clarifiers, disinfection, sludge thickening and dewatering, and a state-of-the-art CSO treatment facility
General Plant Condition	Very Good
General Operations and Permit Compliance	Plant consistently produces high-quality treated effluent in compliance with NPDES permit

The Holyoke WPCF is a secondary biological facility originally constructed in the 1970s. The City contracted Aquarion to implement a number of Initial Capital Improvements (ICIs) at the WPCF in tandem with the construction of the new Combined Sewer Overflow (CSO) Abatement Facility. ICI projects completed by the Aquarion team increased the design capacity from 26 mgd to 37 mgd and included:

- The headworks facilities were retrofitted to include new grit removal equipment, modified influent pumping and odor control improvements.
- Aeration system improvements included new aeration mixers, oxygen supply piping, system controls, and liquid oxygen storage tanks.
- Sludge thickening equipment for waste activated sludge (WAS) was installed.
- Extensive odor control facilities were installed throughout the WWTP.
- The original chlorine gas system was abandoned and replaced with a new liquid sodium hypochlorite disinfection system.
- Construction of a new CSO treatment facility capable of treating up to 103 mgd (the largest CSO treatment facility located on the Connecticut River).

The net result of the above improvements is that the operations staff can better manage and operate the treatment facility at a lower cost and higher design flow.