

EXHIBIT Y

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

AQUA PENNSYLVANIA WASTEWATER, INC.

DOCKET NO. A-2022-3033138

AQUA STATEMENT NO. 5

**DIRECT TESTIMONY OF
DYLAN W. D'ASCENDIS**

February 2023

1 **DIRECT TESTIMONY OF**
2 **DYLAN W. D'ASCENDIS**

3 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.**

4 A. My name is Dylan W. D'Ascendis. My business address is 3000 Atrium Way, Suite 200,
5 Mount Laurel, NJ 08054.

6
7 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

8 A. I am employed by ScottMadden, Inc. ("ScottMadden") as Partner.

9
10 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL EDUCATION AND EXPERIENCE.**

11 A. I offer expert testimony on behalf of investor-owned utilities on rate of return issues and
12 class cost of service issues. I am a Utility Valuation Expert ("UVE") in the Commonwealth
13 of Pennsylvania approved by the Pennsylvania Public Utility Commission ("PUC" or the
14 "Commission") (Utility Code 9919278). I also assist in preparing rate filings, including,
15 but not limited to, revenue requirements and original cost and lead/lag studies. I am a
16 graduate of the University of Pennsylvania, where I received a Bachelor of Arts degree in
17 Economic History. I also hold a Masters of Business Administration from Rutgers
18 University with a concentration in Finance and International Business, which was
19 conferred with high honors. I am a Certified Rate of Return Analyst ("CRRA") and a
20 Certified Valuation Analyst ("CVA"). My full professional qualifications, including my
21 expert witness appearances, are provided in Attachment A.

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Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?

A. Yes. I have testified before the Commission on several occasions as shown on Attachment A.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to describe the fair market value appraisal of the wastewater operations of the City of Beaver Falls (“Beaver Falls” or the “City”) that my staff and I performed on behalf of Aqua Pennsylvania Wastewater, Inc (“Aqua”). Beaver Falls is selling their operations to Aqua. Our report is entitled “Valuation Report City of Beaver Falls Wastewater System As of September 7, 2022.” The valuation and its report were developed to meet the criteria established in Section 1329 of the Pennsylvania Public Utility Code (“Code”), 66 Pa.C.S. § 1329 (“Determination of the fair market value of water and wastewater assets”).

In its 2015-2016 legislative session, the Pennsylvania Legislature passed Act 12 of 2016 and Governor Wolf signed into law Section 1329 of the Code establishing the legislative guidelines facilitating the acquisition of municipal water and wastewater systems by private investor-owned utilities and other entities which are rate-regulated by the PUC.

1 **QUALIFICATION AS UTILITY VALUATION EXPERT**

2 **Q. ARE YOU ON THE COMMISSION’S REGISTRY OF UTILITY VALUATION**
3 **EXPERTS?**

4 A. Yes. I am considered a UVE in the Commonwealth of Pennsylvania approved by the PUC
5 (Utility Code 9919278).

6
7 **Q. PLEASE DESCRIBE THE PROCESS BY WHICH SCOTTMADDEN WAS**
8 **PLACED ON THE COMMISSION’S REGISTRY OF UTILITY VALUATION**
9 **EXPERTS.**

10 A. After passage of Section 1329 of the Code, the Commission established an application
11 process by which the Commission would approve and designate firms to be placed on the
12 Commission’s “Registry of Utility Valuation Experts.” ScottMadden submitted its
13 application and the required proof of experience on October 13, 2016 and received
14 confirmation and approval from the Commission of ScottMadden’s placement on the
15 Commission’s UVE Registry on December 7, 2016. ScottMadden has remained on the
16 Commission’s registry ever since.

17
18 **Q. HAVE YOU EVER HAD YOUR PROFESSIONAL CREDENTIALS REVOKED**
19 **OR SUSPENDED?**

20 A. No.

21

22

1 **Q. DO YOU HAVE SPECIFIC EXPERIENCE WITH THE VALUATION AND**
2 **APPRAISAL OF UTILITY ASSETS?**

3 A. Yes. Please see Attachment A for the details of my valuation assignments.
4

5 **Q. HAVE YOU, SCOTTMADDEN, OR ANY OF ITS STAFF DERIVED ANY**
6 **MATERIAL FINANCIAL BENEFIT FROM THE SALE OF BEAVER FALLS'**
7 **ASSETS OTHER THAN FEES FOR YOUR SERVICES RENDERED?**

8 A. No.
9

10 **Q. ARE YOU, SCOTTMADDEN, OR ANY OF ITS STAFF AN IMMEDIATE**
11 **FAMILY MEMBER OF A DIRECTOR, OFFICER, OR EMPLOYEE OF EITHER**
12 **BEAVER FALLS OR AQUA?**

13 A. No.
14

15 **Q. IS SCOTTMADDEN IN COMPLIANCE WITH APPLICABLE PENNSYLVANIA**
16 **LAWS?**

17 A. Yes.
18

19 **Q. DOES SCOTTMADDEN HAVE THE FINANCIAL AND TECHNICAL FITNESS,**
20 **INCLUDING PROFESSIONAL LICENSES AND TECHNICAL**
21 **CERTIFICATIONS, TO PERFORM A FAIR MARKET VALUATION OF THE**
22 **ASSETS OF BEAVER FALLS?**

23 A. Yes.

1 **Q. ARE YOU AWARE OF ANY FACT, INCLUDING BUT NOT LIMITED TO ANY**
2 **POTENTIAL CONFLICT OF INTEREST, THAT WOULD CAST DOUBT UPON**
3 **YOUR ABILITY TO PROVIDE A THOROUGH, OBJECTIVE, UNBIASED, AND**
4 **FAIR VALUATION IN THIS PROCEEDING?**

5 A. No.

6

7 **Q. ARE YOU ADVOCATING FOR ANY PARTY OR OUTCOME?**

8 A. No.

9

10 **FEES PAID FOR UTILITY VALUATION EXPERT SERVICES**

11 **Q. HOW IS SCOTTMADDEN BEING COMPENSATED FOR ITS SERVICES IN**
12 **THIS MATTER?**

13 A. ScottMadden is being compensated on a fee basis, which includes a fixed fee upon delivery
14 of the initial valuation report, and hourly rates for any services rendered thereafter. True,
15 correct, and complete copies of ScottMadden's invoices to Aqua for this matter, as of the
16 date of Application filing, are attached to Aqua's Application as Application Exhibit S1
17 and I incorporate those invoices in my direct testimony as if set forth in their entirety.

18

19 **Q. WILL SCOTTMADDEN RECEIVE FEES FOR ITS SERVICES REGARDLESS**
20 **OF WHETHER THE COMMISSION APPROVES THE PROPOSED**
21 **TRANSACTION OR WHETHER IT CLOSES?**

22 A. Yes.

1 **Q. ARE THESE FEES CONSISTENT WITH COMPENSATION RECEIVED FOR**
2 **SIMILAR SERVICES PROVIDED TO OTHER CLIENTS?**

3 A. Yes.

4

5 **FAIR MARKET VALUATION OF BEAVER FALLS' ASSETS**

6 **Q. PLEASE IDENTIFY EXHIBIT Q TO THE APPLICATION IN THIS**
7 **PROCEEDING?**

8 A. Exhibit Q of Aqua's Application includes my Valuation Report dated September 7, 2022,
9 which I prepared for Aqua to be filed in this proceeding.

10

11 **Q. HOW DO YOU RECOGNIZE IT?**

12 A. I personally prepared and supervised ScottMadden personnel in preparing the Report, and
13 recognize it as ScottMadden's work product.

14

15 **Q. IS APPLICATION EXHIBIT Q A TRUE, COMPLETE, AND ACCURATE COPY**
16 **OF YOUR VALUATION REPORT?**

17 A. Yes, and I incorporate it into my direct testimony as if set forth in its entirety.

18

19 **Q. PLEASE DESCRIBE THE PROCESS BY WHICH YOU PREPARED THE**
20 **VALUATION REPORT.**

21 A. In accordance with Section 1329 of the Code, Aqua and Beaver Falls engaged Gannett
22 Fleming, Inc. ("Gannett Fleming") as the licensed engineer to conduct an assessment of
23 the City's tangible assets. Aqua engaged ScottMadden to prepare the fair market valuation

1 report for their operations. Beaver Falls provided financial statements regarding their
2 operations and a copy of the City of Beaver Falls Engineers Assessment of Wastewater
3 System Assets (“Engineer’s Assessment”) developed by Gannett Fleming as required by
4 Section 1329(a)(4). After those activities and data gathering, we developed the appraisal.

5 The appraisal contains a letter of transmittal; a narrative report explaining our
6 methodology and conclusions; a statement of assumptions and limiting conditions; a
7 statement of the Valuation Analyst’s Representations; a statement of the professional
8 qualifications of Dylan W. D’Ascendis, CVA, CRRA and Matthew R. Howard, CRRA;
9 and various schedules and appendices.

10 The intent of the valuation report is to provide the appraisal results, as well as the
11 entire appraisal work file, in sufficient detail to satisfy the parties’ and Commission’s
12 review requirements of Section 1329 and the Commission’s Final Implementation Order,
13 *In re: Implementation of Section 1329 of the Public Utility Code*, Docket No. M-2016-
14 2543193 (Order entered October 27, 2016). In addition to a copy of my appraisal report, I
15 have provided supporting work papers for the appraisal report. The relevant work papers
16 have been submitted to the Commission with the Application and provided to the statutory
17 advocates in live electronic format. ScottMadden considers the live electronic files, which
18 are in Excel format, to be CONFIDENTIAL.

19
20 **Q. IS THERE ANYTHING THAT YOU WOULD CHANGE IN THE VALUATION**
21 **REPORT SINCE ITS PREPARATION?**

22 A. No.

1 **Q. WAS THE FAIR MARKET VALUATION OF THE CITY’S ASSETS**
2 **DETERMINED IN COMPLIANCE WITH THE UNIFORM STANDARDS OF**
3 **PROFESSIONAL APPRAISAL PRACTICE (“USPAP”)?**

4 A. Yes. Included in ScottMadden’s cover letter is a statement of our report’s compliance with
5 USPAP.
6

7 **Q. DID YOU EMPLOY THE COST, MARKET AND INCOME APPROACHES IN**
8 **PREPARING YOUR VALUATION?**

9 A. Yes. We developed our appraisal utilizing the cost, market, and income approaches as
10 required by USPAP and Section 1329 of the Code. These approaches are summarized
11 below.

12 **Table 1: Summary of Indicated Values**

Valuation Approach	Indicated Value
Cost Approach	\$11,446,928
Market Approach	\$46,817,319
Income Approach	\$39,970,803

13

14 **Q. DID YOU RELY UPON A LICENSED ENGINEER’S ASSESSMENT OF THE**
15 **TANGIBLE ASSETS OF BEAVER FALLS IN PERFORMING YOUR**
16 **VALUATION?**

17 A. Yes. Aqua and Beaver Falls engaged Gannett Fleming as the licensed engineer to conduct
18 an assessment of Beaver Falls’ tangible assets. Beaver Falls provided a copy of the
19 Engineer’s Assessment developed by Gannett Fleming as required by Section 1329(a)(4).
20 A copy of the Engineering Assessment is included as Appendix E to the Valuation Report.

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Q. DID THE ENGINEER’S ASSESSMENT INCLUDE AN INVENTORY OF THE USED AND USEFUL UTILITY PLANT ASSETS TO BE TRANSFERRED COMPILED BY YEAR AND ACCOUNT?

A. Yes.

Q. DID THE ENGINEER’S ASSESSMENT LIST ALL NON-DEPRECIABLE PROPERTY SUCH AS LAND AND RIGHTS-OF-WAY?

A. Yes.

Q. TO THE BEST OF YOUR KNOWLEDGE, WAS THE ENGINEER’S ASSESSMENT DEVELOPED FROM AVAILABLE RECORDS, MAPS, WORK ORDERS, DEBT ISSUE CLOSING DOCUMENTS FUNDING CONSTRUCTION PROJECTS, AND OTHER SOURCES TO ENSURE AN ACCURATE LISTING OF UTILITY PLANT INVENTORY BY UTILITY ACCOUNT?

A. Yes. However, Gannett Fleming noted that in certain instances there was not original cost data available. In those instances, Gannett Fleming developed a current replacement cost based on its estimated probable construction cost.

Q. DO YOU HAVE ANY REASON TO DOUBT THE ACCURACY OF THE ENGINEER’S ASSESSMENT OF THE ASSETS?

A. No.

1 **Q. DID YOU INCORPORATE THE ENGINEER'S ASSESSMENT INTO YOUR**
2 **COST APPROACH IN DEVELOPING YOUR VALUATION?**

3 A. Yes.

4

5 **Q. DID YOU HAVE TO EXERCISE PROFESSIONAL DISCRETION IN**
6 **DEVELOPING ANY ASPECT OF YOUR VALUATION?**

7 A. Yes. The use of professional discretion is detailed throughout ScottMadden's Valuation
8 Report, where applicable.

9

10 **Q. PLEASE DESCRIBE ANY ASSUMPTIONS, EXTRAORDINARY**
11 **ASSUMPTIONS, HYPOTHETICAL CONDITIONS, AND/OR LIMITING**
12 **CONDITIONS THAT YOU APPLIED TO THE VALUATION.**

13 A. The Statement of Assumptions and Limiting Conditions and the Valuation Analyst's
14 Representations are provided in Appendices A and B to ScottMadden's Valuation Report.
15 Three examples of the limiting conditions for this valuation are:

- 16 • Financial statements for the year 2021 were not available; nor were
17 projected capital expenditures as developed by Beaver Falls;
- 18 • The reporting nature of Beaver Falls consumption data made it difficult for
19 ScottMadden to verify their reported consumption totals; and
- 20 • Original costs for certain items were not available, as outlined in the
21 Engineers Assessment.

22

1 **Q. HOW DID YOU DEVELOP THE WEIGHTING APPLIED TO EACH APPROACH**
2 **IN YOUR APPRAISAL AND WHY ARE THE INDIVIDUAL WEIGHTS YOU**
3 **CHOSE APPROPRIATE FOR THE PROPOSED TRANSACTION?**

4 A. No method of valuation will produce the exact value of a business. A valuation study
5 cannot incorporate market conditions at the time of sale or predict a potential investor's
6 desire, or lack thereof, to acquire the business. Beaver Falls' desire to sell additional assets
7 to the potential acquirer may increase the desire of some investors, and as a result, increase
8 the value of both sets of assets. Our valuation and report cannot incorporate these
9 considerations.

10 I have determined the range of values of Beaver Falls based on the relative
11 weighting of the three valuation methods, as will be discussed below. The weightings
12 indicate the value placed on each appraisal method from the valuation expert. In my
13 opinion, the income and market approaches should receive weights of 45%, and the cost
14 approach a weight of 10%. The reason for this is the Cost Approach does not accurately
15 represent Beaver Falls' value as it cannot reflect the revenues from the residents outside
16 the City, which are the majority of Beaver Falls' historical and expected revenues. Beaver
17 Falls' wastewater operations provide wastewater treatment, conveyance, and collection
18 services to residents within the City of Beaver Falls, and wastewater treatment and
19 conveyance services to residents outside the City of Beaver Falls, including customers from
20 Big Beaver Borough, Eastvale Borough, North Sewickley Township, the Borough of
21 Patterson Heights, Patterson Township, West Mayfield Borough, and White Township

1 (collectively, the “Contributing Municipalities”)¹, as well as customers serviced by
2 Dalton’s Service Co. (“Dalton”) which provides sewer hauling services.

3 In this instance, the value of Beaver Falls is not only reflected in its physical assets,
4 but its intermunicipal flow volumes. The indicated result based on the Cost Approach
5 would remain the same regardless of whether the City’s assets continue to serve the
6 Contributing Municipalities or not. The range of values and relative weightings of the
7 valuation approaches are set forth in Table 2, below:

8 **Table 2: Conclusion of Value for Beaver Falls**
9

Valuation Approach	Indicated Value	Weight	Weighted Value
Cost	\$11,446,928	10%	\$1,144,693
Market	\$46,817,319	45%	\$21,067,793
Income	\$39,970,803	45%	\$17,986,861
Indicated Value		100%	\$40,199,347

10
11 **Cost Approach**

12 **Q. REGARDING YOUR APPLICATION OF THE COST APPROACH, WHAT**
13 **METHOD DID YOU USE TO DETERMINE THE COST APPROACH RESULT?**

14 A. I used a trended original cost method to determine the reproduction cost new, less
15 depreciation (“RCNLD”) of Beaver Falls’ assets. In order to arrive at the Reproduction
16 Cost New for Beaver Falls’ assets, I began with the original cost of the assets provided by
17 the Engineer’s Assessment and used the Handy-Whitman Index (“HW Index”) to
18 determine the current reproduction value, or for assets which only a replacement cost was

¹ Referred to as the Joint Sewer Users in the ScottMadden Appraisal.

1 available, to determine an estimated original cost. The HW Index is prepared specifically
2 for electric, gas, and water utilities, and is the only publication of its kind available to the
3 public. The HW Index has been published continuously since 1924. The Index is comprised
4 of historical index values for various accounts prescribed by the NARUC Uniform System
5 of Accounts, as well as for construction, material, and labor, by geographic region of the
6 United States. For assets not included in the HW Index, specifically laboratory equipment,
7 office furniture, computer equipment, audio/video equipment, communication equipment,
8 truck trailers, and storage equipment, I used the Producer Pricing Index. I also used the
9 Consumer Pricing Index for various small tools owned by Beaver Falls.

10 The trended original cost method consists of the development of adjustment factors
11 from the time when the asset was put into service to the current date. For example, an
12 average main (NARUC account 331) placed into service in 1985 with an original cost of
13 \$100,000 would be trended forward by the ratio of the index value at the current date
14 divided by the index value at the time of installation. The index value of NARUC account
15 331 in July 2021 is 911.00, and the index value in 1985 when the assets were installed was
16 254.00, which means the ratio applied to the original cost of the main would be 3.59.² This
17 would translate into a current cost for that main of \$358,661.³

18 The next step in deriving the RCNLD for Beaver Falls' assets is to quantify the
19 amount of physical deterioration, functional obsolescence, and economic obsolescence of
20 the assets. Physical deterioration is caused by use, wear and tear, and the aging process.
21 Functional obsolescence is caused by changes in design or construction to create
22 efficiencies not present in the current asset. Economic obsolescence is a loss in value due

² 911.00 / 254.00 = 3.59.

³ (911.00 / 254.00) x \$100,000 = \$358,661.

1 to external factors not in the control of Beaver Falls such as economic conditions. The most
2 common measure of physical deterioration is the reserve held for depreciation, which is
3 based on the asset's remaining life versus its average useful life. Functional obsolescence
4 is measured by comparing the subject asset to a replacement asset with current technology.
5 The Engineering Assessment found no significant functional obsolescence for Beaver
6 Falls' assets. Economic obsolescence is usually measured by market conditions, which
7 have been supportive towards the water and wastewater industries in the recent past, as
8 well as prospectively, so I do not believe there is significant economic obsolescence present
9 in Beaver Falls' assets. Since the only applicable measure of loss of value is physical
10 deterioration, the useful lives for each asset were determined, and reserves for depreciation
11 were calculated for each Beaver Falls asset if original costs were available. As mentioned
12 previously, certain assets did not have original costs assigned, so I relied upon the
13 estimation of original cost provided by the Engineer's Assessment.

14
15 **Q. HOW DID YOU CALCULATE THE DEPRECIATION RESERVE FOR EACH**
16 **ASSET?**

17 A. First, I determined the useful life for each asset,⁴ then I reduced the original cost of each
18 asset each year by 1/useful life until the asset was fully depreciated or through 2021, which
19 ever one came first and put that value into the depreciation reserve.

20

⁴ Useful lives are based on the System of Accounts for Water and Wastewater Utilities – with 200 or more connections from the Public Utility Commission of Texas with several exceptions. I used a 75-year useful life for mains as determined by the PUC in Docket No. A-2019-3008491, a 50-year useful life for structures, and a 10-year useful life for transportation equipment. My use of both 50 and 10-year useful lives for structures and transportation equipment was not challenged by the parties in Docket No. A-2021-3024681.

1 **Q. WHAT IS THE INDICATED VALUE OF BEAVER FALLS BASED ON THE COST**
2 **APPROACH?**

3 A. Using the HW, and Producers and Consumer Pricing Indices to trend the original cost, less
4 depreciation of Beaver Falls' assets forward, I derived a RCNLD of \$11,446,928 as shown
5 on Schedule 1 of ScottMadden's Valuation Report.

6 As stated above, the value derived from the cost approach is based solely on Beaver
7 Falls' underlying assets, which means it does not take into account the expected cash flows
8 of these assets. This is especially important given the impact of the Contributing
9 Municipalities (as outlined above) that Beaver Falls provides wastewater treatment and
10 conveyance for. Additionally, even though the HW Index takes into account the changes
11 in the cost of various factors over time in different regions throughout the country, it cannot
12 take into account intricacies such as terrain (e.g., mountains in Appalachia versus farmland
13 in Pennsylvania) or changes in development and zoning since original installation. All else
14 remaining equal, different terrains or changes in laws will translate into different
15 timeframes to complete the project, which will directly affect costs.

16

17 **Market Approach**

18 **Q. REGARDING YOUR APPLICATION OF THE MARKET APPROACH, WHAT**
19 **METHODS DID YOU USE TO DETERMINE THE MARKET APPROACH**
20 **RESULT?**

21 A. I used the market value of invested capital to net plant multiple and comparable sales
22 methods.

23

1 **Q. PLEASE DISCUSS THE MARKET VALUE OF INVESTED CAPITAL TO NET**
2 **PLANT METHOD.**

3 A. The market value of invested capital to net plant method applies a market value of invested
4 capital to net plant ratio of a comparable risk group to the original cost less depreciation
5 (“OCLD”) of the subject company to derive an indicated market value. As shown on page
6 2 of Schedule 2 of ScottMadden’s Valuation Report, market value of invested capital to
7 net plant ratios of the water utility proxy group used to derive the weighted average cost of
8 capital (“WACC”) in the income approach range from 1.3723x to 2.4940x. Using Beaver
9 Falls’ OCLD of \$5,003,844,⁵ indicated values range from \$6,866,665 to \$12,479,523, with
10 an average of \$9,496,121 as shown on page 3 of Schedule 2 of ScottMadden’s Valuation
11 Report. Again, since Beaver Falls’ assets do not reflect its full value, this measure would
12 significantly understate the indicated value of Beaver Falls.

13
14 **Q. PLEASE DESCRIBE THE COMPARABLE SALES METHOD.**

15 A. I also researched transactions involving companies who acquired 100% of a water or sewer
16 interest since 2016. That research returned 107 results from around the country, 27 of
17 which were acquisitions in Pennsylvania, which are contained on pages 4-5 of Schedule 2
18 of ScottMadden’s Valuation Report. A common ratio which can be used to determine
19 Beaver Falls’ market value is transaction value per equivalent domestic unit (“EDU”). The
20 purchase price per EDU ratios for the relevant transactions are shown on page 5 of
21 Schedule 2 of ScottMadden’s Valuation Report. As shown on page 5 of Schedule 2 of
22 ScottMadden’s Valuation Report, the nationwide average purchase price to EDU is

⁵ Page 2 of Schedule 1, Column [4]

1 approximately 4.22x, while the Pennsylvania average purchase price to EDU is 6.63x.
2 Given the 9,392 EDUs served by Beaver Falls,⁶ indicated values using this approach range
3 from \$39,667,839 to \$62,260,398.
4

5 **Q. WHAT WERE THE RESULTS OF EACH ANALYSIS YOU PERFORMED?**

6 A. The market value of invested capital to net plant analysis produced an indicated value of
7 \$9,496,121.⁷ The comparable sales method produced a result of \$50,964,118.
8

9 **Q. WHICH RESULTS WERE USED TO DETERMINE YOUR MARKET**
10 **APPROACH RESULT? PLEASE EXPLAIN WHY THESE RESULTS WERE**
11 **USED.**

12 A. I applied a 90% weight to the average comparable sales method and a 10% weight to the
13 market value of invested capital to net plant method to come to an indicated value of
14 \$46,817,319. The reason for these recommended weightings is because, as previously
15 outlined, Beavers Falls' assets do not reflect its value and this measure would significantly
16 understate the indicated value of Beaver Falls. Given the number of comparable sales
17 transactions Nationwide and in Pennsylvania, the comparable sales method was
18 determined to be most applicable in this case.
19

⁶ Calculated as total consumption divided by the average residential consumption: $109,238,000 / 2,880 = 37,930$; $356,245,793 / 37,930 = 9,392$. Average residential consumption based on customers within the City of Beaver Falls.

⁷ Indicated Market Value of Net Plant Based on Average Market Value Invested Capital to Net Plant Ratio.

1 **Income Approach**

2 **Q. WHAT ASSUMPTIONS DID YOU EMPLOY TO DEVELOP YOUR INCOME**
3 **APPROACH RESULT?**

4 A. In determining the indicated value using the income approach, I made assumptions
5 regarding Beaver Falls’ operating revenue, operating expenses, and capital requirements.

6 The vast majority of Beaver Falls’ revenues are tied to fees for the collection,
7 treatment, and conveyance of wastewater for customers within the City, and fees for
8 treatment and conveyance of wastewater for the Contributing Municipalities and Dalton.
9 As such, revenues are dependent on two factors; population growth and rate increases.

10 In regard to rate increases, given capital improvements identified by Aqua, and
11 detailed below, it was determined that yearly rate increases of 10% for the period 2022-
12 2027 were necessary to recover those capital outlays, which I applied to Charges for
13 Services both inside and outside the City. Subsequent to that period, I applied 3% increases
14 for inside and outside City customers consistent with the City’s ordinance authorizing
15 yearly increases of 3% for both sewer users within Beaver Falls and for the Contributing
16 Municipalities on December 8, 2020.⁸

17 General operating expenses for the City are primarily comprised of administrative,
18 wage and benefit maintenance, operational, contractual, utility, and various miscellaneous
19 expenses. All expenses are assumed to increase at the projected level of the Consumer Price
20 Index⁹ (“CPI”).

⁸ ScottMadden applied a 3% rate increase for the years 2021 and 2022 as consistent with the Beaver Falls Ordinance; see, ScottMadden’s Valuation Report, Appendix G.

⁹ I employed a CPI projection of 2.25% per year, based on the long-term CPI projection published by *Blue Chip Financial Forecasts*. See, *Blue Chip Financial Forecasts*, Vol. 40, No. 12, December 1, 2021 at 14; Appendix H, at 23.

1 Regarding the Repairs and Maintenance expense, ScottMadden assumed this
2 expense would be comparable to the 2019 amount due to the corrective action plan Beaver
3 Falls is under. The expense was increased by the projected CPI through 2025, which is
4 when the corrective action plan is scheduled to be completed. Stating in 2026,
5 ScottMadden assumed the expense would be comparable to the 2020 level grown at the
6 projected CPI through 2026, and subsequently grown at the projected CPI into perpetuity.

7 Regarding the Sewer Line Reimbursement expense, based on information from
8 Beaver Falls, ScottMadden understood the expense to be non-operational in nature.
9 Because it does not reflect the ongoing operations of Beaver Falls, it was removed.

10 For the expected system improvements for the period used in the income approach,
11 because Beaver Falls did not have an internal capital improvement plan as noted above, I
12 relied on the needed capital improvements as outlined by Aqua. I sought to only include
13 projects that addressed issues of safety, compliance, and equipment failure. Those projects
14 are outlined in Table 1 of my appraisal (also shown on page 5 of Schedule 3 of
15 ScottMadden's Valuation Report). For the period 2022, I relied on the median yearly level
16 of capital improvements based on Aqua's projections (\$569,250). Lastly, for the period
17 2033, I grew the median level of capital improvements by the projected CPI through 2033
18 (\$727,109), and subsequently into perpetuity.

19
20 **Q. WHAT DISCOUNT RATE DID YOU USE TO CALCULATE YOUR INCOME**
21 **APPROACH?**

22 **A.** The discount rate is the investor-required expected rate of return on the assets. An investor
23 in any company needs to be compensated for the risk of that investment, and a higher level

1 of risk equates to a higher required rate of return. The overall rate of return in this instance
2 is defined by the WACC. I have calculated a discount rate which relates to the traditional
3 method of financing for publicly-traded water companies, which uses an equal mix
4 between debt and equity capital.

5 For the common equity cost rate, I applied the Discounted Cash Flow (“DCF”),
6 Risk Premium (“RPM”) and Capital Asset Pricing Models (“CAPM”) to a proxy group of
7 publicly-traded water companies and a group of non-regulated companies comparable in
8 total risk to the water utility group. Application of these cost of common equity models to
9 these groups results in an indicated cost of common equity of 10.19% which is presented
10 in Appendix H of ScottMadden’s Valuation Report.

11 The representative capital structure is a hypothetical capital structure based on the
12 range of capital structures for fiscal year 2020 of the publicly-traded proxy group
13 companies used to derive the cost of common equity.¹⁰ For the debt cost rate used in the
14 WACC calculation, I used a 30-day average Moody’s A2 public utility bond rate of
15 3.04%.¹¹ Table 3 below illustrates the assumed WACC of an investor-owned water utility.

16 **Table 3: Assumed WACC for Water Utility Company**

17

Type of Capital	Cost Rate	Ratio	Weighted Cost
Long-Term Debt	3.04%	50.00%	1.52%
Common Equity	10.19%	<u>50.00%</u>	<u>5.10%</u>
Total		100.00%	6.62%

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¹⁰ The range of equity ratios of the proxy group companies were from 40.05% to 59.28% at 2020 fiscal year end.

¹¹ ScottMadden Valuation Report, Appendix H, at 2.

1 **Q. IF YOU USED A TERMINAL VALUE IN YOUR DISCOUNTED CASH FLOW**
2 **ANALYSIS WHAT IS THE NUMBER OF YEARS OVER WHICH THE CASH**
3 **FLOWS ARE CONSIDERED?**

4 A. I considered those cash flows over 29 years (2022 – 2050).

5
6 **Q. WHAT IS THE INDICATED VALUE OF BEAVER FALLS USING THE INCOME**
7 **APPROACH?**

8 A. Inputting the estimated revenue, expense, and capital expenditure data into the model
9 resulted in an indicated value of \$39,970,803.

10

11

CONCLUSION

12 **Q. WHAT IS YOUR CONCLUSION REGARDING THE FAIR MARKET VALUE OF**
13 **BEAVER FALLS’ WASTEWATER OPERATIONS TO BE PURCHASED BY**
14 **AQUA?**

15 A. The fair market value of Beaver Falls’ wastewater operations is \$40,199,347 as of
16 September 7, 2022. The results of my appraisal and conclusions are summarized in the
17 following table:

1
2

Table 4: Conclusion of Value for Beaver Falls

Valuation Approach	Indicated Value	Weight	Weighted Value
Cost	\$11,446,928	10%	\$1,144,693
Market	\$46,817,319	45%	\$21,067,793
Income	\$39,970,803	45%	\$17,986,861
Indicated Value		100%	\$40,199,347

3

4 **Q. DID YOU MAKE ANY UPDATES TO YOUR APPRAISAL AFTER IT WAS**
5 **SUBMITTED TO THE BUYER, AND IF SO, WHAT WAS THE UPDATE, WHEN**
6 **WAS IT MADE, AND WHY WAS IT NECESSARY?**

7 A. I did not update or revise my appraisal after it was submitted to the Buyer.

8

9 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

10 A. Yes. However, I reserve the right to supplement my testimony as additional issues and
11 facts arise during the course of the proceeding.

Summary

Dylan is an experienced consultant and a Certified Rate of Return Analyst (CRRA) and Certified Valuation Analyst (CVA). He has served as a consultant for investor-owned and municipal utilities and authorities for 13 years. Dylan has extensive experience in rate of return analyses, class cost of service, rate design, and valuation for regulated public utilities. He has testified as an expert witness in the subjects of rate of return, cost of service, rate design, and valuation before 30 regulatory commissions in the U.S., one Canadian province, an American Arbitration Association panel, and the Superior Court of Rhode Island.

He also maintains the benchmark index against which the Hennessy Gas Utility Mutual Fund performance is measured.

Areas of Specialization

- Regulation and Rates
- Utilities
- Mutual Fund Benchmarking
- Capital Market Risk
- Financial Modeling
- Valuation
- Regulatory Strategy
- Rate Case Support
- Rate of Return
- Cost of Service
- Rate Design

Recent Expert Testimony Submission/Apearances

<i>Jurisdiction</i>	<i>Topic</i>
■ Massachusetts Department of Public Utilities	Rate of Return
■ New Jersey Board of Public Utilities	Rate of Return
■ Hawaii Public Utilities Commission	Cost of Service, Rate Design
■ South Carolina Public Service Commission	Return on Common Equity
■ American Arbitration Association	Valuation

Recent Assignments

- Provided expert testimony on the cost of capital for ratemaking purposes before numerous state utility regulatory agencies
- Maintains the benchmark index against which the Hennessy Gas Utility Mutual Fund performance is measured
- Sponsored valuation testimony for a large municipal water company in front of an American Arbitration Association Board to justify the reasonability of their lease payments to the City
- Co-authored a valuation report on behalf of a large investor-owned utility company in response to a new state regulation which allowed the appraised value of acquired assets into rate base

Recent Publications and Speeches

- Co-Author of: “Decoupling, Risk Impacts and the Cost of Capital”, co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. The Electricity Journal, March, 2020.
- Co-Author of: “Decoupling Impact and Public Utility Conservation Investment”, co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. Energy Policy Journal, 130 (2019), 311-319.
- “Establishing Alternative Proxy Groups”, before the Society of Utility and Regulatory Financial Analysts: 51st Financial Forum, April 4, 2019, New Orleans, LA.
- “Past is Prologue: Future Test Year”, Presentation before the National Association of Water Companies 2017 Southeast Water Infrastructure Summit, May 2, 2017, Savannah, GA.
- Co-author of: “Comparative Evaluation of the Predictive Risk Premium Model™, the Discounted Cash Flow Model and the Capital Asset Pricing Model”, co-authored with Richard A. Michelfelder, Ph.D., Rutgers University, Pauline M. Ahern, and Frank J. Hanley, The Electricity Journal, May, 2013.
- “Decoupling: Impact on the Risk and Cost of Common Equity of Public Utility Stocks”, before the Society of Utility and Regulatory Financial Analysts: 45th Financial Forum, April 17-18, 2013, Indianapolis, IN.

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Regulatory Commission of Alaska				
Alaska Power Company	09/20	Alaska Power Company; Goat Lake Hydro, Inc.; BBL Hydro, Inc.	Tariff Nos. TA886-2; TA6-521; TA4-573	Capital Structure
Alaska Power Company	07/16	Alaska Power Company	Docket No. TA857-2	Rate of Return
Alberta Utilities Commission				
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	01/20	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	2021 Generic Cost of Capital, Proceeding ID. 24110	Rate of Return
Arizona Corporation Commission				
EPCOR Water Arizona, Inc.	06/20	EPCOR Water Arizona, Inc.	Docket No. WS-01303A-20-0177	Rate of Return
Arizona Water Company	12/19	Arizona Water Company – Western Group	Docket No. W-01445A-19-0278	Rate of Return
Arizona Water Company	08/18	Arizona Water Company – Northern Group	Docket No. W-01445A-18-0164	Rate of Return
Arkansas Public Service Commission				
CenterPoint Energy Resources Corp.	05/21	CenterPoint Arkansas Gas	Docket No. 21-004-U	Return on Equity
Colorado Public Utilities Commission				
Summit Utilities, Inc.	04/18	Colorado Natural Gas Company	Docket No. 18AL-0305G	Rate of Return
Atmos Energy Corporation	06/17	Atmos Energy Corporation	Docket No. 17AL-0429G	Rate of Return
Delaware Public Service Commission				
Delmarva Power & Light Co.	11/20	Delmarva Power & Light Co.	Docket No. 20-0149 (Electric)	Return on Equity
Delmarva Power & Light Co.	10/20	Delmarva Power & Light Co.	Docket No. 20-0150 (Gas)	Return on Equity
Tidewater Utilities, Inc.	11/13	Tidewater Utilities, Inc.	Docket No. 13-466	Capital Structure
Public Service Commission of the District of Columbia				
Washington Gas Light Company	09/20	Washington Gas Light Company	Formal Case No. 1162	Rate of Return
Federal Energy Regulatory Commission				
LS Power Grid California, LLC	10/20	LS Power Grid California, LLC	Docket No. ER21-195-000	Rate of Return
Florida Public Service Commission				
Tampa Electric Company	04/21	Tampa Electric Company	Docket No. 20210034-EI	Return on Equity
Peoples Gas System	09/20	Peoples Gas System	Docket No. 20200051-GU	Rate of Return
Utilities, Inc. of Florida	06/20	Utilities, Inc. of Florida	Docket No. 20200139-WS	Rate of Return
Hawaii Public Utilities Commission				
Launiupoko Irrigation Company, Inc.	12/20	Launiupoko Irrigation Company, Inc.	Docket No. 2020-0217 / Transferred to 2020-0089	Capital Structure
Lanai Water Company, Inc.	12/19	Lanai Water Company, Inc.	Docket No. 2019-0386	Cost of Service / Rate Design
Manele Water Resources, LLC	08/19	Manele Water Resources, LLC	Docket No. 2019-0311	Cost of Service / Rate Design
Kaupulehu Water Company	02/18	Kaupulehu Water Company	Docket No. 2016-0363	Rate of Return
Aqua Engineers, LLC	05/17	Puhi Sewer & Water Company	Docket No. 2017-0118	Cost of Service / Rate Design

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Hawaii Resources, Inc.	09/16	Laie Water Company	Docket No. 2016-0229	Cost of Service / Rate Design
Illinois Commerce Commission				
Utility Services of Illinois, Inc.	02/21	Utility Services of Illinois, Inc.	Docket No. 21-0198	Rate of Return
Ameren Illinois Company d/b/a Ameren Illinois	07/20	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 20-0308	Return on Equity
Utility Services of Illinois, Inc.	11/17	Utility Services of Illinois, Inc.	Docket No. 17-1106	Cost of Service / Rate Design
Aqua Illinois, Inc.	04/17	Aqua Illinois, Inc.	Docket No. 17-0259	Rate of Return
Utility Services of Illinois, Inc.	04/15	Utility Services of Illinois, Inc.	Docket No. 14-0741	Rate of Return
Indiana Utility Regulatory Commission				
Aqua Indiana, Inc.	03/16	Aqua Indiana, Inc. Aboite Wastewater Division	Docket No. 44752	Rate of Return
Twin Lakes, Utilities, Inc.	08/13	Twin Lakes, Utilities, Inc.	Docket No. 44388	Rate of Return
Kansas Corporation Commission				
Atmos Energy	07/19	Atmos Energy	19-ATMG-525-RTS	Rate of Return
Kentucky Public Service Commission				
Duke Energy Kentucky, Inc.	06/21	Duke Energy Kentucky, Inc.	2021-00190	Return on Equity
Bluegrass Water Utility Operating Company	10/20	Bluegrass Water Utility Operating Company	2020-00290	Return on Equity
Louisiana Public Service Commission				
Southwestern Electric Power Company	12/20	Southwestern Electric Power Company	Docket No. U-35441	Return on Equity
Atmos Energy	04/20	Atmos Energy	Docket No. U-35535	Rate of Return
Louisiana Water Service, Inc.	06/13	Louisiana Water Service, Inc.	Docket No. U-32848	Rate of Return
Maryland Public Service Commission				
Washington Gas Light Company	08/20	Washington Gas Light Company	Case No. 9651	Rate of Return
FirstEnergy, Inc.	08/18	Potomac Edison Company	Case No. 9490	Rate of Return
Massachusetts Department of Public Utilities				
Unitil Corporation	12/19	Fitchburg Gas & Electric Co. (Elec.)	D.P.U. 19-130	Rate of Return
Unitil Corporation	12/19	Fitchburg Gas & Electric Co. (Gas)	D.P.U. 19-131	Rate of Return
Liberty Utilities	07/15	Liberty Utilities d/b/a New England Natural Gas Company	Docket No. 15-75	Rate of Return
Minnesota Public Utilities Commission				
Northern States Power Company	11/20	Northern States Power Company	Docket No. E002/GR-20-723	Rate of Return
Mississippi Public Service Commission				
Atmos Energy	03/19	Atmos Energy	Docket No. 2015-UN-049	Capital Structure
Atmos Energy	07/18	Atmos Energy	Docket No. 2015-UN-049	Capital Structure
Missouri Public Service Commission				
Spire Missouri, Inc.	12/20	Spire Missouri, Inc.	Case No. GR-2021-0108	Return on Equity
Indian Hills Utility Operating Company, Inc.	10/17	Indian Hills Utility Operating Company, Inc.	Case No. SR-2017-0259	Rate of Return

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Raccoon Creek Utility Operating Company, Inc.	09/16	Raccoon Creek Utility Operating Company, Inc.	Docket No. SR-2016-0202	Rate of Return
Public Utilities Commission of Nevada				
Southwest Gas Corporation	08/20	Southwest Gas Corporation	Docket No. 20-02023	Return on Equity
New Hampshire Public Utilities Commission				
Aquarion Water Company of New Hampshire, Inc.	12/20	Aquarion Water Company of New Hampshire, Inc.	Docket No. DW 20-184	Rate of Return
New Jersey Board of Public Utilities				
Middlesex Water Company	05/21	Middlesex Water Company	Docket No. WR21050813	Rate of Return
Atlantic City Electric Company	12/20	Atlantic City Electric Company	Docket No. ER20120746	Return on Equity
FirstEnergy	02/20	Jersey Central Power & Light Co.	Docket No. ER20020146	Rate of Return
Aqua New Jersey, Inc.	12/18	Aqua New Jersey, Inc.	Docket No. WR18121351	Rate of Return
Middlesex Water Company	10/17	Middlesex Water Company	Docket No. WR17101049	Rate of Return
Middlesex Water Company	03/15	Middlesex Water Company	Docket No. WR15030391	Rate of Return
The Atlantic City Sewerage Company	10/14	The Atlantic City Sewerage Company	Docket No. WR14101263	Cost of Service / Rate Design
Middlesex Water Company	11/13	Middlesex Water Company	Docket No. WR1311059	Capital Structure
New Mexico Public Regulation Commission				
Southwestern Public Service Company	01/21	Southwestern Public Service Company	Case No. 20-00238-UT	Return on Equity
North Carolina Utilities Commission				
Piedmont Natural Gas Co.Inc.	03/21	Piedmont Natural Gas Co., Inc.	Docket No. G-9, Sub 781	Return on Equity
Duke Energy Carolinas, LLC	07/20	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1214	Return on Equity
Duke Energy Progress, LLC	07/20	Duke Energy Progress, LLC	Docket No. E-2, Sub 1219	Return on Equity
Aqua North Carolina, Inc.	12/19	Aqua North Carolina, Inc.	Docket No. W-218 Sub 526	Rate of Return
Carolina Water Service, Inc.	06/19	Carolina Water Service, Inc.	Docket No. W-354 Sub 364	Rate of Return
Carolina Water Service, Inc.	09/18	Carolina Water Service, Inc.	Docket No. W-354 Sub 360	Rate of Return
Aqua North Carolina, Inc.	07/18	Aqua North Carolina, Inc.	Docket No. W-218 Sub 497	Rate of Return
North Dakota Public Service Commission				
Northern States Power Company	11/20	Northern States Power Company	Case No. PU-20-441	Rate of Return
Public Utilities Commission of Ohio				
Aqua Ohio, Inc.	05/16	Aqua Ohio, Inc.	Docket No. 16-0907-WW-AIR	Rate of Return
Pennsylvania Public Utility Commission				
Vicinity Energy Philadelphia, Inc.	04/21	Vicinity Energy Philadelphia, Inc.	Docket No. R-2021-3024060	Rate of Return
Delaware County Regional Water Control Authority	02/20	Delaware County Regional Water Control Authority	Docket No. A-2019-3015173	Valuation
Valley Energy, Inc.	07/19	C&T Enterprises	Docket No. R-2019-3008209	Rate of Return
Wellsboro Electric Company	07/19	C&T Enterprises	Docket No. R-2019-3008208	Rate of Return
Citizens' Electric Company of Lewisburg	07/19	C&T Enterprises	Docket No. R-2019-3008212	Rate of Return
Steeltown Borough Authority	01/19	Steeltown Borough Authority	Docket No. A-2019-3006880	Valuation
Mahoning Township, PA	08/18	Mahoning Township, PA	Docket No. A-2018-3003519	Valuation

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
SUEZ Water Pennsylvania Inc.	04/18	SUEZ Water Pennsylvania Inc.	Docket No. R-2018-000834	Rate of Return
Columbia Water Company	09/17	Columbia Water Company	Docket No. R-2017-2598203	Rate of Return
Veolia Energy Philadelphia, Inc.	06/17	Veolia Energy Philadelphia, Inc.	Docket No. R-2017-2593142	Rate of Return
Emporium Water Company	07/14	Emporium Water Company	Docket No. R-2014-2402324	Rate of Return
Columbia Water Company	07/13	Columbia Water Company	Docket No. R-2013-2360798	Rate of Return
Penn Estates Utilities, Inc.	12/11	Penn Estates, Utilities, Inc.	Docket No. R-2011-2255159	Capital Structure / Long-Term Debt Cost Rate
South Carolina Public Service Commission				
Blue Granite Water Co.	12/19	Blue Granite Water Company	Docket No. 2019-292-WS	Rate of Return
Carolina Water Service, Inc.	02/18	Carolina Water Service, Inc.	Docket No. 2017-292-WS	Rate of Return
Carolina Water Service, Inc.	06/15	Carolina Water Service, Inc.	Docket No. 2015-199-WS	Rate of Return
Carolina Water Service, Inc.	11/13	Carolina Water Service, Inc.	Docket No. 2013-275-WS	Rate of Return
United Utility Companies, Inc.	09/13	United Utility Companies, Inc.	Docket No. 2013-199-WS	Rate of Return
Utility Services of South Carolina, Inc.	09/13	Utility Services of South Carolina, Inc.	Docket No. 2013-201-WS	Rate of Return
Tega Cay Water Services, Inc.	11/12	Tega Cay Water Services, Inc.	Docket No. 2012-177-WS	Capital Structure
Tennessee Public Utility Commission				
Piedmont Natural Gas Company	07/20	Piedmont Natural Gas Company	Docket No. 20-00086	Return on Equity
Public Utility Commission of Texas				
Southwestern Public Service Company	02/21	Southwestern Public Service Company	Docket No. 51802	Return on Equity
Southwestern Electric Power Company	10/20	Southwestern Electric Power Company	Docket No. 51415	Rate of Return
Virginia State Corporation Commission				
Virginia Natural Gas, Inc.	04/21	Virginia Natural Gas, Inc.	PUR-2020-00095	Return on Equity
Massanutten Public Service Corporation	12/20	Massanutten Public Service Corporation	PUE-2020-00039	Return on Equity
Aqua Virginia, Inc.	07/20	Aqua Virginia, Inc.	PUR-2020-00106	Rate of Return
WGL Holdings, Inc.	07/18	Washington Gas Light Company	PUR-2018-00080	Rate of Return
Atmos Energy Corporation	05/18	Atmos Energy Corporation	PUR-2018-00014	Rate of Return
Aqua Virginia, Inc.	07/17	Aqua Virginia, Inc.	PUR-2017-00082	Rate of Return
Massanutten Public Service Corp.	08/14	Massanutten Public Service Corp.	PUE-2014-00035	Rate of Return / Rate Design

Valuation Engagements:

SPONSOR	DATE	ASSETS VALUED	DESCRIPTION
City of York, PA	06/2021	Wastewater Operations	Authored Valuation Report, which will be a part of an Act 12 Filing

SPONSOR	DATE	ASSETS VALUED	DESCRIPTION
Aqua New Jersey, Inc.	05/2021	Confidential Wastewater Operations in NJ	Authored Valuation Report for internal purposes
Aqua New Jersey, Inc.	05/2021	Confidential Water and Wastewater Operations in NJ	Authored Valuation Report for internal purposes
Aqua Ohio, Inc.	05/2021	Confidential Water Operations in OH	Authored Valuation Report for internal purposes
Aqua Pennsylvania, Inc.	04/2021	Confidential Wastewater Operations in PA	Authored Valuation Report for internal purposes
Aqua New Jersey, Inc.	04/2021	Confidential Wastewater Operations in NJ	Authored Valuation Report for internal purposes
Aqua Pennsylvania, Inc.	02/2021	Confidential Wastewater Operations in PA	Authored Valuation Report for internal purposes
Artesian Water Company, Inc.	01/2021	Wastewater Operations for Delaware City, DE	Authored valuation report for internal purposes
EPCOR Distribution and Transmission, Inc., Alberta Canada	12/2020	Fiber Optic Cable Assets	Fiber optic cable available for lease for Internal purposes
EPCOR Distribution and Transmission, Inc., Alberta Canada	12/2020	Duct Bank Assets	Duct banks available for lease for Internal purposes
Borough of Lewistown, PA	08/2020	Water Operations	Authored valuation report for internal purposes
Artesian Water Company, Inc.	06/2020	Wastewater Operations for Town of Frankford, DE	Authored valuation report for internal purposes
Foster Township, PA	04/2020	Water Operations	Authored valuation report for internal purposes
City of Erie, PA	04/2020	Water Operations	Authored valuation report for internal purposes
Delaware County Regional Water Quality Control Authority	02/2020	Wastewater Operations	Authored Valuation Report, which will be a part of an Act 12 Filing
Aqua North Carolina, Inc.	02/2020	Confidential Water Operations in NC	Authored Valuation Report for internal purposes
Aqua New Jersey, Inc.	02/2020	Confidential Water Operations in NJ	Authored Valuation Report for internal purposes
Aqua Ohio, Inc.	11/2019	Confidential Wastewater Operations in OH	Authored Valuation Report for internal purposes
Steelton Water Authority	06/2018	Water Operations	Authored Valuation Report, which will be a part of an Act 12 Filing
Sara Golvinveaux McGinnes Trust	04/2018	Electric Operations of Block Island Power Company	Authored Valuation Report for Superior Court Trial
Mahoning Township, PA	09/2017	Water and Sewer Assets	Authored Valuation Report, which is part of an Act 12 Filing
Atmos Energy Corporation	09/2016	Intrastate Natural Gas Pipeline	Authored Valuation for internal purposes.
Springfield Township, PA	08/2014	Water and Sewer Assets	Co-Authored Valuation Report, which was part of House Bill 1379 Filing (similar to PA Act 12)
Aqua Illinois, Inc.	07/2014	Village of Glenview, IL (North Maine Utilities) Sewer Assets	Co-Authored Valuation report for internal purposes
Erie City Water Authority, Erie, PA	12/2013	Water Assets	Sponsored Valuation Testimony in Arbitration Hearing
City of Allentown, PA	12/2012	Water and Sewer Assets	Assisted in the generation of Valuation Report