

EXHIBIT AA

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

AQUA PENNSYLVANIA, INC.

DOCKET NO. A-2022-3034143

AQUA STATEMENT NO. 7

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

FAIR MARKET VALUE APPRAISAL

**MUNICIPAL AUTHORITY OF THE BOROUGH OF SHENANDOAH
WATER SYSTEM ASSETS**

October 2022

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 PUC (Utility Code 9919278). I also assist in preparing
14 rate filings, including, but not limited to, revenue requirements and original cost and
15 lead/lag studies. I am a graduate of the University of Pennsylvania, where I received a
16 Bachelor of Arts degree in Economic History. I also hold a Masters of Business
17 Administration from Rutgers University with a concentration in Finance and International
18 Business, which was conferred with high honors. I am a Certified Rate of Return Analyst
19 (“CRRA”) and a Certified Valuation Analyst (“CVA”). My full professional
20 qualifications, including my expert witness appearances, are provided in Attachment A.

1 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PENNSYLVANIA**
2 **PUBLIC UTILITY COMMISSION?**

3 A. Yes. I have testified before the Pennsylvania Public Utility Commission (“Commission”
4 or “PUC”) on several occasions as shown on Attachment A.

5
6 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS**
7 **PROCEEDING?**

8 A. The purpose of my Direct Testimony is to describe the fair market value appraisal of the
9 water operations of the Municipal Authority of the Borough of Shenandoah (“MABS”) that
10 my staff and I performed on behalf of the Borough of Shenandoah (“Shenandoah” or the
11 “Borough”). MABS is selling their operations to Aqua Pennsylvania, Inc. (“Aqua”). Our
12 report is entitled “Valuation Report Borough of Shenandoah Water System September 7,
13 2022.” The appraisal and its report were developed to meet the criteria established in
14 Section 1329 of the Pennsylvania Public Utility Code (“Code”), 66 Pa. C.S. § 1329
15 (“Determination of the fair market value of water and wastewater assets”).

16 In its 2015-2016 legislative session, the Pennsylvania Legislature passed Act 12 of
17 2016 and Governor Wolf signed into law Section 1329 of the Code establishing the
18 legislative guidelines facilitating the acquisition of municipal water and wastewater
19 systems by private investor-owned utilities and other entities which are rate-regulated by
20 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 an UVE in the Commonwealth of Pennsylvania approved by the PUC (Utility
5 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.

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 MABS' ASSETS**
7 **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 **AQUA, SHENANDOAH, OR MABS?**

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 MABS?**

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. As set
15 forth in ScottMadden’s service agreement, ScottMadden will be compensated by payment
16 of \$15,000 upon delivery of the appraisal report, and another \$15,000 payment 180 days
17 after the appraisal report is delivered. All services rendered subsequent to the delivery of
18 the report will be charged on a time and materials basis and will be billed the month after
19 the expense was incurred. The appraisal and report were completed in September 2022,
20 the first \$15,000 invoice will be issued in October 2022 and the second \$15,000 invoice
21 will be issued in March 2023.

1 **Q. WILL SCOTTMADDEN RECEIVE FEES FOR ITS SERVICES REGARDLESS**
2 **OF WHETHER THE COMMISSION APPROVES THE PROPOSED**
3 **TRANSACTION OR WHETHER IT CLOSES?**

4 A. Yes.

5
6 **Q. ARE THESE FEES CONSISTENT WITH COMPENSATION RECEIVED FOR**
7 **SIMILAR SERVICES PROVIDED TO OTHER CLIENTS?**

8 A. Yes.

9

10 **FAIR MARKET VALUATION OF SHENANDOAH'S ASSETS**

11 **Q. PLEASE IDENTIFY EXHIBIT R TO THE APPLICATION IN THIS**
12 **PROCEEDING?**

13 A. Exhibit R of Aqua's Application includes my appraisal report dated September 7, 2022,
14 which I prepared for MABS to be filed in this proceeding.

15

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

17 A. I personally prepared and supervised ScottMadden personnel in preparing the report and
18 recognize it as ScottMadden's work product.

19

20 **Q. IS APPLICATION EXHIBIT R A TRUE, COMPLETE, AND ACCURATE COPY**
21 **OF YOUR VALUATION REPORT?**

22 A. Yes, and I incorporate it into my Direct Testimony as if set forth in its entirety.

1 **Q. PLEASE DESCRIBE THE PROCESS BY WHICH YOU PREPARED THE**
2 **VALUATION REPORT.**

3 A. In accordance with Section 1329 of the Code, Aqua and Shenandoah engaged Pennoni
4 Associates Inc. (“Pennoni”) as the licensed engineer to conduct an assessment of MABS’
5 tangible assets. Shenandoah engaged ScottMadden to prepare the fair market valuation
6 report for their operations. Shenandoah provided financial statements regarding MABS’
7 operations and a copy of the Municipal Authority of the Borough of Shenandoah Water
8 System Engineering Assessment and Original Cost (“Engineer’s Assessment”) developed
9 by Pennoni as required by Section 1329(a)(4). After those activities and data gathering,
10 we developed the appraisal.

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

16 The intent of the valuation report is to provide the appraisal results, as well as the
17 entire appraisal work file, in sufficient detail to satisfy the parties’ and Commission’s
18 review requirements of Section 1329 and the Commission’s Final Implementation Order,
19 *In re: Implementation of Section 1329 of the Public Utility Code*, Docket No. M-2016-
20 2543193 (Order entered October 27, 2016). In addition to a copy of my appraisal report, I
21 have provided supporting work papers for the appraisal report. The relevant work papers
22 have been submitted to the Commission with the Application and provided to the public

1 advocates in live electronic format. ScottMadden considers the live electronic files, which
2 are in Excel format, to be CONFIDENTIAL.

3
4 **Q. IS THERE ANYTHING THAT YOU WOULD CHANGE IN THE VALUATION**
5 **REPORT SINCE ITS PREPARATION?**

6 A. No.

7
8 **Q. WAS THE FAIR MARKET VALUATION OF THE MABS' ASSETS**
9 **DETERMINED IN COMPLIANCE WITH THE UNIFORM STANDARDS OF**
10 **PROFESSIONAL APPRAISAL PRACTICE ("USPAP")?**

11 A. Yes. Included in ScottMadden's cover letter is a statement of our report's compliance with
12 USPAP.

13
14 **Q. DID YOU EMPLOY THE COST, MARKET AND INCOME APPROACHES IN**
15 **PREPARING YOUR VALUATION?**

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

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

Valuation Approach	Indicated Value
Cost Approach	\$19,512,766
Market Approach	\$19,715,721
Income Approach	\$15,072,434

1 **Q. DID YOU RELY UPON A LICENSED ENGINEER’S ASSESSMENT OF THE**
2 **TANGIBLE ASSETS OF MABS IN PERFORMING YOUR VALUATION?**

3 A. Yes. Aqua and Shenandoah engaged Pennoni as the licensed engineer to conduct an
4 assessment of MABS’ tangible assets. Shenandoah provided a copy of the Engineer’s
5 Assessment developed by Pennoni as required by Section 1329(a)(4). A copy of the
6 Engineer’s Assessment is included as Exhibit D to the Application.

7
8 **Q. DID THE ENGINEER’S ASSESSMENT INCLUDE AN INVENTORY OF THE**
9 **USED AND USEFUL UTILITY PLANT ASSETS TO BE TRANSFERRED**
10 **COMPILED BY YEAR AND ACCOUNT?**

11 A. Yes.

12
13 **Q. DID THE ENGINEER’S ASSESSMENT LIST ALL NON-DEPRECIABLE**
14 **PROPERTY SUCH AS LAND AND RIGHTS-OF-WAY?**

15 A. Yes.

16
17 **Q. TO THE BEST OF YOUR KNOWLEDGE, WAS THE ENGINEER’S**
18 **ASSESSMENT DEVELOPED FROM AVAILABLE RECORDS, MAPS, WORK**
19 **ORDERS, DEBT ISSUE CLOSING DOCUMENTS FUNDING CONSTRUCTION**
20 **PROJECTS, AND OTHER SOURCES TO ENSURE AN ACCURATE LISTING OF**
21 **UTILITY PLANT INVENTORY BY UTILITY ACCOUNT?**

22 A. Yes.

1 **Q. DO YOU HAVE ANY REASON TO DOUBT THE ACCURACY OF THE**
2 **ENGINEER'S ASSESSMENT INVENTORY OF THE ASSETS?**

3 A. No.

4

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

7 A. Yes.

8

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

11 A. Yes. The use of professional discretion is detailed throughout Application Exhibit R,
12 where applicable.

13

14 **Q. PLEASE DESCRIBE ANY ASSUMPTIONS, EXTRAORDINARY**
15 **ASSUMPTIONS, HYPOTHETICAL CONDITIONS, AND/OR LIMITING**
16 **CONDITIONS THAT YOU APPLIED TO THE VALUATION.**

17 A. The Statement of Assumptions and Limiting Conditions and the Valuation Analyst's
18 Representations are provided in Appendices A and B to Exhibit R of the Application. Two
19 examples of the limiting conditions for this valuation are:

20 • A comprehensive internal budget or capital expenditure plan was not
21 available; and

22 • Original costs for certain items were not available, as outlined in the
23 Engineer's Assessment.

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. MABS desire to sell additional assets to the
7 potential acquirer may increase the desire of some investors, and as a result, increase the
8 value of both sets of assets. Our valuation and report cannot incorporate these
9 considerations.

10 I have determined the range of values of MABS assets based on the relative
11 weighting of the three valuation methods. The weightings indicate the value placed on each
12 appraisal method from the valuation expert. In my opinion, all three approaches should
13 receive equal weight. The range of values and relative weightings of the valuation
14 approaches are set forth in Table 2, below:

15 **Table 2: Conclusion of Value for MABS**
16

Valuation Approach	Indicated Value	Weight	Weighted Value
Cost	\$19,512,766	1/3	\$6,504,255
Market	\$19,715,721	1/3	\$6,571,907
Income	\$15,072,434	1/3	\$5,024,145
Indicated Value		100%	\$18,100,307

1 **Cost Approach**

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

4 A. I used a trended original cost method to determine the original cost new, less depreciation
5 (“RCNLD”) of MABS’ assets. In order to arrive at the Reproduction Cost New for MABS’
6 assets, I began with the original cost of the assets provided by the Engineer’s Assessment
7 and used the Handy-Whitman Index (“HW Index”) to determine the current reproduction
8 value. The HW Index is prepared specifically for electric, gas, and water utilities, and is
9 the only publication of its kind available to the public. The HW Index has been published
10 continuously since 1924. The Index is comprised of historical index values for various
11 accounts prescribed by the NARUC Uniform System of Accounts, as well as for
12 construction, material, and labor, by geographic region of the United States. For assets not
13 included in the HW Index, specifically office furniture, office machinery and equipment,
14 automobiles and trucks, communication equipment, audio/video equipment, and
15 machinery, I used the Producer Pricing Index.

16 The trended original cost method consists of the development of adjustment factors
17 from the time when the asset was put into service to the current date. For example, an
18 average main (NARUC account 331) placed into service in 1985 with an original cost of
19 \$100,000 would be trended forward by the ratio of the index value at the current date
20 divided by the index value at the time of installation. The index value of NARUC account
21 331 in January 2021 is 883.00, and the index value in 1985 when the assets were installed

1 was 254.00, which means the ratio applied to the original cost of the main would be 3.48.¹
2 This would translate into a current cost for that main of \$347,638.²

3 The next step in deriving the RCNLD for MABS' assets is to quantify the amount
4 of physical deterioration, functional obsolescence, and economic obsolescence of the
5 assets. Physical deterioration is caused by use, wear and tear, and the aging process.
6 Functional obsolescence is caused by changes in design or construction to create
7 efficiencies not present in the current asset. Economic obsolescence is a loss in value due
8 to external factors not in the control of MABS, such as economic conditions. The most
9 common measure of physical deterioration is the reserve held for depreciation, which is
10 based on the asset's remaining life versus its average useful life. Functional obsolescence
11 is measured by comparing the subject asset to a replacement asset with current technology.
12 The Engineer's Assessment found no significant functional obsolescence for MABS'
13 assets. Economic obsolescence is usually measured by market conditions, which have been
14 supportive towards the water and wastewater industries in the recent past, as well as
15 prospectively, so I do not believe there is significant economic obsolescence present in
16 MABS' assets. Since the only applicable measure of loss of value is physical deterioration,
17 the useful lives for each asset were determined, and reserves for depreciation were
18 calculated for each MABS asset if original costs were available. As mentioned previously,
19 certain assets did not have original costs assigned, so I relied upon the estimation of original
20 cost provided by the Engineer's Assessment.

¹ 883.00 / 254.00 = 3.48.

² (883.00 / 254.00) x \$100,000 = \$347,638.

1 **Q. HOW DID YOU CALCULATE THE DEPRECIATION RESERVE FOR EACH**
2 **ASSET?**

3 A. First, I determined the useful life for each asset,³ then I reduced the original cost of each
4 asset each year by 1/useful life until the asset was fully depreciated or through 2021, which
5 ever one came first and put that value into the depreciation reserve.

6
7 **Q. WHAT IS THE INDICATED VALUE OF MABS' ASSETS BASED ON THE COST**
8 **APPROACH?**

9 A. Using the HW and Producers Pricing Indices to trend the original cost, less depreciation of
10 MABS' assets forward, I derived a Reproduction Cost New minus depreciation of
11 \$19,512,766, as shown on Schedule 1 of Exhibit R.

12 Even though the HW Index takes into account the changes in the cost of various
13 factors over time in different regions throughout the country, it cannot take into account
14 intricacies such as terrain (e.g., mountains in Appalachia versus farmland in Pennsylvania)
15 or changes in development and zoning since original installation. All else remaining equal,
16 different terrains or changes in laws will translate into different timeframes to complete the
17 project, which will directly affect costs.

³ 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 PUC Staff in Docket No. A-2019-3015173.

1 **Market Approach**

2 **Q. REGARDING YOUR APPLICATION OF THE MARKET APPROACH, WHAT**
3 **METHODS DID YOU USE TO DETERMINE THE MARKET APPROACH**
4 **RESULT?**

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

7
8 **Q. PLEASE DISCUSS THE MARKET VALUE OF INVESTED CAPITAL TO NET**
9 **PLANT METHOD.**

10 A. The market value of invested capital to net plan method applies a market value of invested
11 capital to net plant ratio of a comparable risk group to the original cost less depreciation
12 (“OCLD”) of the subject company to derive an indicated market value. As shown on page
13 2 of Schedule 2 of Exhibit R, market value of invested capital to net plant ratios of the
14 water utility proxy group used to derive the weighted average cost of capital (“WACC”) in
15 the income approach range from 1.3946x to 2.5205x. Using MABS’ OCLD of
16 \$6,971,360,⁴ indicated values range from \$9,721,930 to \$ 17,571,014, with an average of
17 \$13,481,456 as shown on page 3 of Schedule 2 of Exhibit R.

18
19 **Q. PLEASE DESCRIBE THE COMPARABLE SALES METHOD.**

20 A. I also researched transactions involving companies who acquired 100% of a water or sewer
21 interest since 2016. That research returned 95 results from around the country, 22 of which
22 were acquisitions in Pennsylvania, which are contained on pages 4-5 of Schedule 2 of

⁴ Page 1 of Schedule 1, Column [4]

1 Exhibit R. A common ratio which can be used to determine MABS' market value is
2 transaction value per equivalent domestic unit ("EDU"). The purchase price per EDU ratios
3 for the relevant transactions are shown on page 5 of Schedule 2 of Exhibit R. As shown
4 on page 5 of Schedule 2 of Exhibit R, the nationwide average purchase price to EDU is
5 4.11x, while the Pennsylvania average purchase price to EDU is 6.82x. Given the 4,749
6 EDUs served by MABS,⁵ indicated values using this approach range from \$19,519,540 to
7 \$32,380,431.

8
9 **Q. WHAT WERE THE RESULTS OF EACH ANALYSIS YOU PERFORMED?**

10 A. The market value of invested capital to net plant analysis produced an indicated value of
11 \$13,481,456. The comparable sales method produced a result of \$25,949,986.

12
13 **Q. WHICH RESULTS WERE USED TO DETERMINE YOUR MARKET**
14 **APPROACH RESULT? PLEASE EXPLAIN WHY THESE RESULTS WERE**
15 **USED.**

16 A. I used the average value of the market value of invested capital to net plant method and I
17 used an average of the Pennsylvania average multiple and Nationwide average multiple of
18 the comparable sales method. Averaging the values of these two methods came to an
19 indicated value of \$19,715,721.

⁵ Calculated as total consumption divided by the average residential consumption: $81,752,417 / 2,666 = 30,665$; $145,640,417 / 30,665 = 4,749$. Average residential consumption and total consumption based on active customers served by MABS.

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 MABS' operating revenue, operating expenses, and capital requirements.

6 The vast majority of MABS' revenues are tied to fees for the treatment and
7 distribution of water for customers served by MABS within the Borough and surrounding
8 municipalities. As such, revenues are dependent on two factors; population growth and
9 rate increases.

10 Upon review of U.S. census data, I conclude that the population served by MABS
11 will decline by 0.70% a year going forward. Based on this, I applied a population growth
12 factor of -0.70% to Charges for Services each year into perpetuity beginning 2022.

13 In regard to rate increases, I determined that yearly rate increases of 5% starting
14 2022 and into perpetuity were necessary in order to recover capital outlays.

15 General operating expenses for MABS are primarily comprised of purification
16 system expenses, distribution system expenses, pumping system expenses, and various
17 operational and administrative expenses. All expenses are assumed to increase at the
18 projected level of the Consumer Price Index⁶ ("CPI").

19 For the expected system improvements for the period used in the income approach,
20 I relied on conversations with MABS' representatives who indicated that MABS would
21 need to deploy approximately \$30 million in the next 25 years. In 2021, I applied the actual

⁶ I employed a CPI projection of 2.15% per year, based on the long-term CPI projection published by *Blue Chip Financial Forecasts*. See, *Blue Chip Financial Forecasts*, Vol. 39, No. 12, December 1, 2020 at 14; Appendix G, at 23.

1 capital spend for MABS, increased it to \$750,000 in 2022, and increased the capital spend
2 from 2022 forward at the rate of inflation into perpetuity.

3
4 **Q. WHAT DISCOUNT RATE DID YOU USE TO CALCULATE YOUR INCOME**
5 **APPROACH?**

6 A. The discount rate is the investor-required expected rate of return on the assets. An investor
7 in any company needs to be compensated for the risk of that investment, and a higher level
8 of risk equates to a higher required rate of return. The overall rate of return in this instance
9 is defined by the WACC. I have calculated a discount rate which relates to the traditional
10 method of financing for publicly-traded water companies, which uses an equal mix
11 between debt and equity capital.

12 For the common equity cost rate, I applied the Discounted Cash Flow (“DCF”),
13 Risk Premium (“RPM”) and Capital Asset Pricing Models (“CAPM”) to a proxy group of
14 publicly-traded water companies and a group of non-regulated companies comparable in
15 total risk to the water utility group. Application of these cost of common equity models to
16 these groups results in an indicated cost of common equity of 10.10% which is presented
17 in Appendix G of Exhibit R.

18 The representative capital structure is a hypothetical capital structure based on the
19 range of capital structures for fiscal year 2019 of the publicly-traded proxy group
20 companies used to derive the cost of common equity.⁷ For the debt cost rate used in the

⁷ The range of equity ratios of the proxy group companies were from 40.53% to 68.13% at 2019 fiscal year end.

1 WACC calculation, I used a 30-day average Moody's A2 public utility bond rate of
2 2.94%.⁸ Table 3 below illustrates the assumed WACC of an investor-owned water utility.

3 **Table 3: Assumed WACC for Water Utility Company**
4

Type of Capital	Cost Rate	Ratio	Weighted Cost
Long-Term Debt	2.94%	50.00%	1.47%
Common Equity	10.10%	<u>50.00%</u>	<u>5.05%</u>
Total		100.00%	6.52%

5
6
7 **Q. IF YOU USED A TERMINAL VALUE IN YOUR DISCOUNTED CASH FLOW**
8 **ANALYSIS WHAT IS THE NUMBER OF YEARS OVER WHICH THE CASH**
9 **FLOWS ARE CONSIDERED?**

10 A. I considered those cash flows over 29 years (2021 – 2050).

11
12 **Q. WHAT IS THE INDICATED VALUE OF MABS USING THE INCOME**
13 **APPROACH?**

14 A. Inputting the estimated revenue, expense, and capital expenditure data into the model
15 resulted in an indicated value of \$15,072,434.

⁸ Exhibit R, Appendix G, at 2.

1 **CONCLUSION**

2 **Q. WHAT IS YOUR CONCLUSION REGARDING THE FAIR MARKET VALUE OF**
3 **MABS' ASSETS TO BE PURCHASED BY AQUA?**

4 A. The fair market value of MABS' Assets is \$18,100,307 as of September 7, 2022. The
5 results of my appraisal and conclusions are summarized in the following table:

6 **Table 4: Conclusion of Value for MABS**
7

Valuation Approach	Indicated Value	Weight	Weighted Value
Cost	\$19,512,766	1/3	\$6,504,255
Market	\$19,715,721	1/3	\$6,571,907
Income	\$15,072,434	1/3	\$5,024,145
Indicated Value		100%	\$18,100,307

8
9 **Q. DID YOU MAKE ANY UPDATES TO YOUR APPRAISAL AFTER IT WAS**
10 **SUBMITTED TO THE SELLER, AND IF SO, WHAT WAS THE UPDATE, WHEN**
11 **WAS IT MADE, AND WHY WAS IT NECESSARY?**

12 A. I did not update or revise my appraisal after it was submitted to the Seller.
13

14 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

15 A. Yes. However, I reserve the right to supplement my Direct Testimony as additional issues
16 and 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

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Indian Hills Utility Operating Company, Inc.	10/17	Indian Hills Utility Operating Company, Inc.	Case No. SR-2017-0259	Rate of Return
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Citizens' Electric Company of Lewisburg	07/19	C&T Enterprises	Docket No. R-2019-3008212	Rate of Return
Steelton Borough Authority	01/19	Steelton Borough Authority	Docket No. A-2019-3006880	Valuation
Mahoning Township, PA	08/18	Mahoning Township, PA	Docket No. A-2018-3003519	Valuation
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
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)



Attachment A: Professional Qualifications of
Dylan W. D'Ascendis, CRRA, CVA
Partner

SPONSOR	DATE	ASSETS VALUED	DESCRIPTION
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