EXHIBIT X TESTIMONY OF HAROLD WALKER, III

AQUA PENNSYLVANIA WASTEWATER, INC. BRYN MAWR, PENNSYLVANIA

DIRECT TESTIMONY OF HAROLD WALKER, III

FAIR MARKET VALUE APPRAISAL

EAST NORRITON TOWNSHIP WASTEWATER SYSTEM ASSETS

July 2019

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VALUATION AND RATE CONSULTANTS, LLC



Valley Forge, Pennsylvania

TABLE OF CONTENTS

INTRODUCTION	2
QUALIFICATION AS UTILITY VALUATION EXPERT	4
FEES PAID FOR UTILITY VALUATION EXPERT SERVICES	7
FAIR MARKET VALUATION OF WASTEWATER SYSTEM'S ASSETS	8
Cost Approach	14
Income Approach	15
Market Approach	20
CONCLUSION	22
APPENDIX A	A-1

1		INTRODUCTION
2	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.
3	A.	My name is Harold Walker III and my business address is P.O. Box 80794, Valley Forge,
4		Pennsylvania.
5	Q.	BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
6	A.	I am employed by Gannett Fleming Valuation and Rate Consultants, LLC ("Gannett
7		Fleming") as Manager, Financial Studies.
8	Q.	WOULD YOU DESCRIBE BRIEFLY GANNETT FLEMING?
9	A.	Yes. Since 1915, Gannett Fleming and its predecessors have been helping clients in public
10		pricing policy and related financial matters for managerial purposes, before regulatory
11		commissions and courts of law. Gannett Fleming is registered as a Utility Valuation Expert
12		("UVE") in the Commonwealth of Pennsylvania. Gannett Fleming is also a registered
13		Municipal Advisor with the SEC and I am a licensed Municipal Advisor Representative
14		(Series 50) with the Municipal Securities Rulemaking Board ("MSRB") and the Financial
15		Industry Regulatory Authority ("FINRA"). Gannett Fleming is a subsidiary of Gannett
16		Fleming, Inc.
17	Q.	WHAT ARE YOUR RESPONSIBILITIES AS MANAGER, FINANCIAL STUDIES
18		OF GANNETT FLEMING?
19	A.	I supervise and develop financial and economic studies on behalf of investor-owned and
20		municipally owned water, wastewater, electric, natural gas distribution and transmission,

oil pipeline, and telephone utilities, as well as resource-recovery companies.

1 Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND YOUR EDUCATIONAL

2 BACKGROUND AND EMPLOYMENT EXPERIENCE?

- 3 A. My educational background, business experience and qualifications are provided in a
- 4 Curriculum Vitae included as Appendix A.

5 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PENNSYLVANIA

6 PUBLIC UTILITY COMMISSION?

- 7 A. Yes. I have testified before the Pennsylvania Public Utility Commission ("Commission"
- 8 or "PUC"), as well as other state regulatory commissions, on many occasions, as shown on
- 9 Appendix A.

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10 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

- 11 A. My testimony describes and explains the fair market value appraisal of the East Norriton
- Township's wastewater system assets ("Wastewater System") that I and staff, working
- under my direction, performed. Gannett Fleming was engaged by Aqua Pennsylvania
- Wastewater, Inc. ("Aqua") to perform this appraisal. Our report is entitled "East Norriton
- Township Wastewater System Assets Fair Market Value Appraisal at February 28, 2019."
- The appraisal and its report was 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 Act 12 into law adding Section 1329 of the Code which established the legislative requirements facilitating the acquisition of municipal and regional water and wastewater systems by private investor-owned utilities and other
- entities which are rate-regulated by the Commission. This legislation was intended to

facilitate the acquisition of water and wastewater systems in order to facilitate capital improvements to the water and or wastewater properties.

QUALIFICATION AS UTILITY VALUATION EXPERT

- 4 Q. IS GANNETT FLEMING ON THE COMMISSION'S REGISTRY OF UTILITY
- 5 VALUATION EXPERTS?
- 6 A. Yes. Gannett Fleming is a UVE in the Commonwealth of Pennsylvania approved by the PUC (Utility Code 9919244).
- 8 Q. PLEASE DESCRIBE THE PROCESS BY WHICH GANNETT FLEMING WAS
- 9 PLACED ON THE COMMISSION'S REGISTRY OF UTILITY VALUATION
- 10 EXPERTS.

A. After passage of Section 1329 of the Code, the Commission established an application process by which the Commission would approve and designate firms to be placed on the Commission's "Registry of Utility Valuation Experts." To be included on the registry, the UVEs must establish their qualifications. Gannett Fleming submitted its original application and the required proof of experience in September of 2016 and received confirmation and approval from the Commission of Gannett Fleming's placement on the Commission's UVE Registry in December of 2016. Renewal of Commission's UVE Registry must be done annually. Gannett Fleming submitted its 2018 renewal application and the required proof of experience in December of 2017 and received confirmation and approval from the Commission of Gannett Fleming's placement on the Commission's UVE Registry in January of 2018. Again in 2018, Gannett Fleming submitted its 2019 renewal application and the required proof of experience in December of 2018 and received

- confirmation and approval from the Commission of Gannett Fleming's placement on the
- 2 Commission's UVE Registry in January of 2019.
- 3 Q. HAVE YOU EVER HAD YOUR PROFESSIONAL CREDENTIALS REVOKED
- 4 OR SUSPENDED?
- 5 A. No.
- 6 Q. DO YOU HAVE SPECIFIC EXPERIENCE WITH THE VALUATION AND
- 7 APPRAISAL OF UTILITY ASSETS?
- Yes. In addition to serving as an expert witness on various financial and economic matters 8 Α. 9 before utility regulatory commissions for over 30 years, I have also provided valuation of utility assets services for more than 20 years. In that capacity I have testified on valuation 10 matters before the Commission and sponsored or adopted Gannett Fleming's UVE 11 appraisals in Section 1329 of the Public Utility Code in the New Garden Township 12 proceeding, the Limerick Township proceeding, the East Bradford Township proceeding, 13 the Mahoning Township proceeding, the Exeter Township proceeding and in the 14 Cheltenham Township proceeding. In addition to testifying in 1329 proceedings, I have 15 also testified and filed reports on valuation matters in California, Illinois, New Hampshire 16 and Pennsylvania in courts of law and regulatory commissions.¹ 17
- Q. HAVE YOU OR GANNETT FLEMING OR ANY OF ITS STAFF DERIVED ANY
 MATERIAL FINANCIAL BENEFIT FROM THE SALE OF WASTEWATER
 SYSTEM'S ASSETS OTHER THAN FEES FOR YOUR SERVICES RENDERED?
- 21 A. No.

¹ An electronic link to the PA PUC Dockets where I have testified in the last two years is provided in response to Section 1329 Application Standard Data Requests 15-d. All other testimony relating to valuation is more than two years old and therefore, is not provided.

- 1 Q. ARE YOU OR GANNETT FLEMING OR ANY OF ITS STAFF AN IMMEDIATE
- 2 FAMILY MEMBER OF A DIRECTOR, OFFICER, OR EMPLOYEE OF EITHER
- 3 AQUA OR EAST NORRITON?
- 4 A. No.
- 5 Q. IS GANNETT FLEMING IN COMPLIANCE WITH APPLICABLE
- 6 PENNSYLVANIA LAWS?
- 7 A. Yes.
- 8 Q. DOES GANNETT FLEMING HAVE THE FINANCIAL AND TECHNICAL
- 9 FITNESS, INCLUDING PROFESSIONAL LICENSES AND TECHNICAL
- 10 CERTIFICATIONS, TO PERFORM A FAIR MARKET VALUATION OF THE
- 11 ASSETS OF EAST NORRITON?
- 12 A. Yes, to be placed on the Commission's "Registry of Utility Valuation Experts" Gannett
- Fleming had to establish their qualifications.
- 14 Q. ARE YOU AWARE OF ANY FACT, INCLUDING BUT NOT LIMITED TO ANY
- 15 POTENTIAL CONFLICT OF INTEREST THAT WOULD CAST DOUBT UPON
- YOUR ABILITY TO PROVIDE A THOROUGH, OBJECTIVE, UNBIASED, AND
- 17 FAIR VALUATION IN THIS PROCEEDING?
- 18 A. No.
- 19 Q. HAVE YOU CORRESPONDED WITH SELLER'S UVE WITH REGARD TO
- THEIR RESPECTIVE FAIR MARKET VALUE APPRAISAL OF THE ASSETS
- 21 AT ISSUE IN THIS CASE?
- 22 A. No.

1		FEES PAID FOR UTILITY VALUATION EXPERT SERVICES
2	Q.	WHAT IS THE GANNETT FLEMING FEE ARRANGEMENT TO DELIVER THE
3		APPRAISAL?
4	Α.	Gannett Fleming is being compensated on an hourly basis. Our fee arrangement is included
5		as Exhibit S1 to the Application. True, correct, and complete copies of Gannett Fleming's
6		invoices to Aqua for this matter, as of the date of Application filing, are also included in
7		Exhibit S1.
8	Q.	WHAT IS THE ESTIMATED TOTAL COMPENSATION THAT GANNETT
9		FLEMING WILL RECEIVE FOR ITS SERVICES IN THIS MATTER?
10	A.	The estimated total compensation that Gannett Fleming will receive for its services in this
11		matter as of the date of Application filing is \$40,000, which represents approximately
12		0.19% of the fair market valuation. I estimate our fee will total \$75,000 if this proceeding
13		is fully litigated, which represents approximately 0.36% of the fair market valuation.
14	Q.	PLEASE DESCRIBE THE PROCESS BY WHICH THIS COMPENSATION WAS
15		NEGOTIATED?
16	A.	Gannett Fleming submitted a proposal to provide the required services in April 2019, which
17		Aqua accepted.
18	Q.	ARE THESE FEES CONSISTENT WITH COMPENSATION RECEIVED FOR
19		SIMILAR SERVICES PROVIDED TO OTHER CLIENTS?
20	A.	Yes.
21	Q.	WILL GANNETT RECEIVE ITS FEE REGARDLESS OF WHETHER THE
22		COMMISSION APPROVES THE PROPOSED TRANSACTION OR WHETHER
23		IT CLOSES?

- 1 A. Yes. 66 Pa. C.S. § 1329(a)(3) mandates that I comply with the Uniform Standards of
- 2 Professional Appraisal Practice ("USPAP") when developing an appraisal. Under the
- 3 USPAP, I cannot perform the appraisal with bias and acceptance of a fee contingent on a
- 4 particular outcome like closing or Commission approval would violate the Ethics Rule.

5 Q. ARE YOU ADVOCATING FOR ANY PARTY OR OUTCOME?

- 6 A. No. I perform the appraisal with impartiality, objectivity, and independence, and without
- accommodation of personal interests. I have not performed this appraisal assignment with
- bias and I am not advocating the cause or interest of any party or issue. Further, I have not
- 9 accepted this or any assignment that includes the reporting of predetermined opinions and
- 10 conclusions.

11 FAIR MARKET VALUATION OF WASTEWATER SYSTEM'S ASSETS

- 12 Q. PLEASE IDENTIFY EXHIBIT Q TO THE APPLICATION IN THIS
- 13 **PROCEEDING?**
- 14 A. Exhibit Q of Aqua's Application includes Gannett Fleming's appraisal report dated June
- 15 20, 2019.
- 16 Q. HOW DO YOU RECOGNIZE IT?
- 17 A. I personally prepared, and also directed and supervised Gannett Fleming personnel in
- preparing, the report, and recognize it as Gannett Fleming's work product.
- 19 Q. IS EXHIBIT Q A TRUE, COMPLETE, AND ACCURATE COPY OF YOUR
- 20 VALUATION REPORT?
- 21 A. Yes, and I incorporate it into my direct testimony as if set forth in its entirety.
- 22 Q. PLEASE DESCRIBE THE PROCESS BY WHICH YOU PREPARED THE
- 23 VALUATION REPORT.

In accordance with Section 1329 of the Code, Aqua engaged Gannett Fleming to prepare the fair market valuation report of the Wastewater System. Aqua provided financial statements and budget statements from East Norriton regarding the Wastewater System and a copy of the Engineering Assessment² as required by Section 1329(a)(4). In addition, Gannett Fleming reviewed the assets, reviewed additional information provided by Aqua and or the Township and conducted additional research regarding the Township and the Wastewater System, including a site visit. After those activities and data gathering, we developed the appraisal.

A.

The appraisal contains a letter of transmittal; a table of contents detailing all the sections of the report and work papers; and a narrative report explaining our methodology and conclusions.

The intent of the valuation report is to provide the appraisal results, as well as the entire appraisal work file, in sufficient detail to satisfy the parties' and Commission's review requirements of Section 1329 and the Commission's Final Implementation Order, In re: Implementation of Section 1329 of the Public Utility Code, Docket No. M-2016-2543193 (Order Entered October 27, 2016) and Final Supplemental Implementation Order In re: Implementation of Section 1329 of the Public Utility Code, Docket No. M-2016-2543193 (Order Entered February 28, 2019). In addition to a copy of the appraisal report, I have provided supporting work papers for the appraisal report in Exhibit Q to Aqua's Application. The relevant work papers have also been submitted to the Commission and provided to the public advocates in CONFIDENTIAL live electronic format.

 $^{^2}$ "East Norriton Township Sewage Facilities Assessment February 2019" and related files prepared by Carroll Engineering Corporation.

1 Q. IS THERE ANYTHING THAT YOU WOULD CHANGE IN THE VALUATION 2 REPORT SINCE ITS PREPARATION? 3 Α. No. WAS THE FAIR MARKET VALUATION OF THE WASTEWATER SYSTEM 4 Q. 5 ASSETS DETERMINED IN COMPLIANCE WITH USPAP? 6 Α. Yes. Our fair market valuation was determined in compliance with USPAP 2018-2019 7 Edition. 8 DID YOU EMPLOY THE COST, MARKET AND INCOME APPROACHES IN Q. 9 PREPARING YOUR VALUATION? 10 A. Yes. 11 **ASSUMPTIONS** Q. DID YOU INCLUDE ANY EXTRAORDINARY OR 12 HYPOTHETICAL CONDITIONS IN DEVELOPING YOUR APPRAISAL? 13 A. No. 14 Q. DID YOU INCLUDE ANY LIMITING CONDITIONS IN DEVELOPING YOUR 15 APPRAISAL? 16 Yes. We accepted all information and data provided by East Norriton Township and Aqua Α. 17 as it pertains to this assignment "as is" after a limited review. That is, we neither audited 18 nor verified any data, engineering assessment, financial record or operating data provided 19 for this assignment. We assumed all title to all assets included in the appraisal is good and 20 marketable and no hazardous conditions or materials exist which could affect the assets. 21 Q. PLEASE SUMMARIZE YOUR RESULTS OF THE APPLICATION OF THE 22 COST, MARKET AND INCOME APPROACHES.

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Please see the below table:

Approach	Indicated Value	Weight	Weighted Value
Cost Approach	\$33,467,936	37.50%	\$12,550,476
Market Approach	24,368,094	37.50%	9,138,035
Income Approach	10,383,787	25.00%	2,595,947
		100%	\$24,284,458
Conclusion			\$24,284,000

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Q. PLEASE FURTHER DESCRIBE EACH APPROACH IN THE DEVELOPMENT OF YOUR APPRAISAL

We developed our appraisal utilizing the cost, income, and market approaches as required by USPAP and Section 1329 of the Code. We used seven methods under the Cost, Market and Income Approaches to valuation: Original Cost Method, Reproduction Cost Method, Capitalization of Earnings Method, Market Multiple Discounted Cash Flow Method, Capitalization Discounted Cash Flow Method, Market Multiples Method, and the Selected Transactions Method.

The results from the capitalization of earnings method, market multiple discounted cash flow method and the capitalization discounted cash flow method form the basis for our Income Approach. Our Market Approach is supported by the market multiples method and selected transactions method. The results from the original cost method form the basis for our reproduction cost method, and both methods form the basis for our Cost Approach. These approaches are summarized below.

Cost Approach. The cost approach utilized the original cost method and reproduction cost method. The reproduction cost method was calculated by trending (trended cost method) the asset inventory from the original cost new method. The original cost method determined the original cost new measure of the cost of the assets when first

constructed based on the information contained in the Engineering Assessment. The original cost new inventory was trended using the Handy Whitman Index of Public Utility Construction Costs for the water industry to produce the reproduction cost new. The calculated accrued depreciation was determined for the original cost new and for the reproduction cost new as of February 28, 2019. The calculated accrued depreciation was based on the assets' attained ages, and the service life of the assets. The cost basis of depreciable assets was reduced annually by the accumulated depreciation to reflect the loss in the service value of the assets since being constructed. All land and land rights were valued at original cost.

Income Approach. The income approach utilized the capitalization of earning (cash flow) method and the discounted cash flow method. The capitalization of earning method converted a single base economic income number to a value by dividing it by a capitalization rate. The discounted cash flow method used estimates of future debt free net cash flow and discounted them to arrive at a present value or price of the cash flows. The capitalization rate and the discount rate were developed based on market debt and equity rates at the appraisal date. The discounted cash flow method reflected two types of discounted cash flow analyses, the EBIT and EBITDA terminal value model and a capitalization of terminal value model.³

Market Approach. The market approach was developed based on the market multiples method and the selected transaction method. The market multiples method was based on the market price data of publicly traded corporations engaged in the same or a similar line of business as the Wastewater System. The market price data of these

³ EBIT is earnings before interest and taxes and EBITDA is earnings before interest, tax, depreciation and amortization.

1	comparable publicly traded corporations was used to calculate the market multiples for the
2	comparable publicly traded corporations at the appraisal date. The selected transactions
3	method used certain public information relating to the purchase or sales of businesses
4	involved in the same or a similar business line as the Wastewater System to calculated
5	market multiples at the time of transaction (sale/purchase). The calculated market
6	multiples determined by the market multiples method and the selected transaction method
7	were then multiplied by the corresponding Wastewater System financial and operating
8	statistic to produce an indicated value for the Wastewater System.

- 9 Q. PLEASE STATE THE NUMBER OF CUSTOMERS YOU USED IN DEVELOPING

 10 YOUR APPRAISAL AND THE SOURCE OF THAT NUMBER.
- 11 A. The number of customers I used was 4,966. This customer count number was provided by
 12 Aqua.
- Q. DID YOU MAKE ANY UPDATES TO YOUR APPRAISAL AFTER IT WAS
 SUBMITTED TO THE SELLER/BUYER, AND IF SO, WHAT WAS THE
 UPDATE, WHEN WAS IT MADE, AND WHY WAS IT NECESSARY?
- 16 A. I updated my appraisal based on a revised engineering assessment.
- 17 Q. DID YOU PERFORM AN ON-SITE INSPECTION OF THE WASTEWATER
 18 SYSTEM?
- 19 A. Yes. Gannett Fleming viewed the wastewater system assets on May 1, 2019.
- Q. DID YOU RELY UPON A LICENSED ENGINEER'S ASSESSMENT OF THE
 TANGIBLE ASSETS OF THE WASTEWATER SYSTEM IN PERFORMING
 YOUR VALUATION?

- 1 A. Yes. Aqua provided a copy of the Engineering Assessment and this information was 2 incorporated into our Cost Approach in our appraisal.
- 3 Cost Approach
- 4 Q. DID YOU USE THE REPRODUCTION COST OR THE REPLACEMENT COST
- 5 IN YOUR COST APPROACH?
- 6 A. We utilized the original cost new (OCN) to calculate the trended original cost (TOC)
- 7 measures, or the reproduction cost of the depreciable assets by multiplying the OCN by
- 8 specific cost indices. We used the TOC method because the mandated use of the
- 9 Engineering Assessment's original cost essentially dictates the use of TOC over the
- reproduction cost or the replacement cost methods.
- 11 Q. WHAT INDEX, IF ANY, DID YOU USE FOR THAT METHOD?
- 12 A. The original cost new inventory was trended using the Handy Whitman Index of Public
- 13 Utility Construction Costs for the water industry to produce the reproduction cost new.
- 14 Q. UNDER YOUR APPLICATION OF THE COST APPROACH WHAT ASSETS DID
- 15 YOU VALUE OR TREND DIFFERENTLY FROM OTHER ASSETS AND WHY
- 16 WAS THAT NECESSARY?
- 17 A. Handy Whitman does not publish indices for all plant accounts. Accordingly, in limited
- instances when Handy Whitman plant account indices were not available we used the U.S.
- Bureau of Labor Statistics, Producer Price Index which best matches the assets being
- 20 trended.⁴
- 21 Q. UNDER YOUR APPLICATION OF THE COST APPROACH, WHAT YEAR-END
- 22 DATE DID YOU USE FOR CALCULATING THE DEPRECIATION RESERVE?

⁴ The plant accounts which Handy Whitman indices were not available included: 391.70 Transportation Equipment; 394.70 Laboratory Equipment; 396.70 Communication Equipment; and 397.70 Miscellaneous Equipment.

- 1 Α. We used the date of February 28, 2019. HOW DID YOU DETERMINE THE DEPRECIATION PARAMETERS OF 2 0. SURVIVAL/RETIREMENT CHARACTERISTICS AND SERVICE LIVES FOR 3 THE UTILITY PROPERTY UNDER THE COST APPROACH? 4 5 We determined the average service lives of depreciable assets based on the materials used A. 6 for construction and how long the depreciable assets are likely to meet service demands. 7 WHY ARE THOSE PARAMETERS APPROPRIATE? 0. 8 We believe our average service lives of depreciable assets are appropriate based on our A. 9 experience of having determined average service lives for numerous other water and 10 wastewater utilities and given the fact they resemble those used by other Pennsylvania wastewater companies. 11 12 **Income Approach** 0. REGARDING YOUR APPLICATION OF THE INCOME APPROACH, WHAT 13 METHOD DID YOU USE TO DETERMINE THE INCOME APPROACH 14 15 RESULT? 16 I used the Capitalization of Earnings Method, Market Multiple Discounted Cash Flow Α. 17 Method ("Market Multiple DCF"), and Capitalization Discounted Cash Flow Method 18 ("Capitalization DCF"). I refer to the Market Multiple DCF and the Capitalization DCF 19 collectively as the DCF method. WHAT ASSUMPTIONS DID YOU EMPLOY TO DEVELOP YOUR INCOME 20 O. **APPROACH RESULT?** 21
- A. All general assumptions are listed on page 3 of Exhibit 13, page 5 of Exhibit 14 and page 5 of Exhibit 15.

0. DID YOU USE AOUA'S CAPITALIZATION RATE OR THEIR DISCOUNT RATE 2 IN YOUR INCOME APPROACH TO VALUATION?

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No. Use of Agua's capitalization rate or their discount rate in an income approach to valuation is not consistent with the standard of value of fair market value because the "buyer" under the standard of value of fair market value is not a specific entity (i.e., Aqua), but rather a hypothetical buyer. Use of Aqua's capitalization rate or their discount rate in an income approach to valuation is only used under the standard of value of investment value.⁵ In accordance with Section 1329 of the Code, the standard of value is fair market value, not investment value.

PLEASE EXPLAIN THE CAPITALIZATION RATE AND THE DISCOUNT RATE 0. USED IN YOUR INCOME APPROACH TO VALUATION.

The capitalization rate used in the capitalization of earnings method and the discount rate used in the DCF method are related. The discount rate is the opportunity cost rate related to the risk of the cash flows. The capitalization rate is simply the discount rate minus the expected growth rate. If no growth is assumed, the capitalization rate is equal to the discount rate.

As explained previously, under the standard of value of fair market value the "buyer" is not a specific entity (i.e., Aqua), but rather a hypothetical buyer. Accordingly, the hypothetical bidder/buyer may range from large regional municipal authorities ("MUNI") to investor owned utilities ("IOU"). For a MUNI, the appropriate discount rate is the current municipal revenue bond yield on February 28, 2019 of 3.81%.

⁵ Pratt, Shannon P. "Defining Standards of Value." Valuation 34, no. 2, June 1989.

http://www.appraisers.org/docs/default-source/college-of-fellows-articles/defining-standards-of-value.pdf.

appropriate IOU discount rate is the current net of tax overall cost of capital (weighted average cost of capital) on February 28, 2019 and ranges from 6.91% to 8.29%.

For a MUNI, the appropriate discount rate is the current municipal revenue bond, 3.81%, because debt is the only major source of capital available to finance an acquisition (developed on Exhibit 19, pages 2-5). Although a MUNI likely carries equity on their books (balance sheet), all existing equity is already invested in other assets and therefore, cannot be used to finance an acquisition. For valuation purposes, an embedded cost of debt, or the historical cost of all debt issuances outstanding is not used because this capital is already invested in assets. Whereas the marginal cost of debt, 3.81%, at the valuation date is used in accordance with accepted valuation practice and used for market valuation purposes.

As discussed previously, for an IOU, the appropriate discount rate is the net of tax overall cost of capital (weighted average cost of capital), 6.91% to 8.29% (developed on Exhibit 19, pages 2-7). In this instance, the net of tax overall cost of capital (weighted average cost of capital) is based on the Comparable Group's market value capital structure of 21.1% debt and 78.9% equity, a market cost of debt of 4.25% and a range of market cost of equity of 7.94% to 9.69% based on the Comparable Group's market value CAPM on February 28, 2019. The Comparable Group's net of tax overall cost of capital (weighted

⁶ Both the American Society of Appraisers, ASA Business Valuation Standards, 2009, and the National Association of Certified Valuation Analysts, Professional Standards, 2007, use the same definition: "Weighted Average Cost of Capital (WACC). The cost of capital (discount rate) determined by the weighted average, at market values, of the cost of all financing sources in the business enterprise's capital structure."

⁷ For example, when a municipal or government entity, such as the Commonwealth of Pennsylvania, finances construction of a road or bridge, they only consider the marginal debt cost despite having "equity" reflected on their books (balance sheet).

⁸ For example of the net of tax overall cost of capital, see http://www.investinganswers.com/financial-dictionary/financial-statement-analysis/weighted-average-cost-capital-wacc-2905. Also see http://www.wallstreetmojo.com/weighted-average-cost-capital-wacc/, or http://accountingexplained.com/misc/corporate-finance/wacc.

average cost of capital) is used as a proxy to conform to the "hypothetical buyer" or "hypothetical seller" of fair market valuation. Use of the buyer's net of tax overall cost of capital (weighted average cost of capital) would produce an investment valuation, not a fair market valuation. The supporting documentation for the development of the MUNI and IOU discount rates are shown on pages 2 to 8 of Exhibit 19.

Q. WHY IS THE NET OF TAX OVERALL COST OF CAPITAL APPROPRIATE TO USE?

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The net of tax overall cost of capital is appropriate because the cash flows being discounted are after tax, or net of tax. The income approach uses estimates of future free cash flow and discounts them to arrive at a present value or price of the cash flows. Generally, this analysis begins with an estimate of the Debt Free Net Cash Flow over the next five to twenty years along with a terminal value. In each year, the Debt Free Net Cash Flow is comprised of projected EBIT, minus income taxes, plus projected depreciation and amortization, plus or minus projected changes in net cash working capital, less projected capital expenditures.

Q. WHAT IS THE BASIS FOR THE GROWTH RATE USED TO CALCULATE THE CAPITALIZATION RATE USED IN THE INCOME APPROACH?

The growth rate used to calculate the capitalization rate reflects the growth in the Debt Free Net Cash Flow subsequent to the terminal value year. For East Norriton Township, the growth rate of 0.1% was used based on growth in population and local political constraints limiting growth. Under both MUNI and IOU ownership a growth rate of 0.4% was used based on the projected growth in population (0.1%), projected inflation (2.5%) and the actual growth in the Debt Free Net Cash Flow in the years prior to the terminal value year.

1	Under MUNI ownership the average growth in the Debt Free Net Cash Flow for the last
2	two years prior to the terminal value year was 0.6% and 0.5% under IOU ownership. A
3	growth of 0.4% was deemed reasonable based on the aforesaid.

4 Q. WHAT UTILITY EARNINGS REPORT WAS USED TO CREATE THE CAPITAL 5 STRUCTURE USED IN YOUR APPRAISAL?

A.

As documented previously in footnotes 5 and 7, book value capitalization is not used in fair market valuation determination. Therefore, we did not use the 6.84% Comparable Group's DSIC (distribution system improvement charge) related net of tax overall cost of capital in our valuation because a "hypothetical buyer" cannot finance an acquisition at such a rate and therefore, its use would provide a meaningless result. The aforementioned 6.84% DSIC related cost was determined based on the Comparable Group's book value capital structure of 45.2% debt and 54.8% equity, a cost of debt of 4.25% and a DSIC cost of equity of 9.95% based on the September 2018 Earnings Report.

If we used the 6.84% Comparable Group's DSIC related net of tax overall cost of capital in our valuation shown on Exhibit 15, the results of the Capitalization DCF would show a range of value for the Wastewater System of \$8.1 million to \$8.4 million. Further, the results of the Market Multiple DCF would show a value of \$11.1 million and collectively, the DCF method based on the IOU ownership scenario and a 0.4% growth assumption would indicate a value of \$9.8 million.

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

1 Α. The use of a "terminal value" in a Discounted Cash Flow analyses is reasonable and is in 2 accordance with accepted valuation practice. Simply put, the "terminal value" is a mathematical shortcut to avoid having to show and/or calculate annual Debt Free Net Cash 3 Flows for hundreds of time periods, or hundreds of years. Within the Discounted Cash 4 5 Flow analyses, the "terminal value" is simply a point in the time in which the growth in 6 annual Debt Free Net Cash Flows changes from multiple growth rates to a constant growth 7 rate. For example, in our Discounted Cash Flow analyses, the growth rate of annual Debt 8 Free Net Cash Flows during time periods 1 through 13 changes multiple times due to the 9 various general assumptions listed in the Fair Market Value appraisal report. Subsequent 10 to time period 13, the growth in annual Debt Free Net Cash Flows is a constant growth 11 rate. Accordingly, period 13, or year 13, is the "terminal value" year in our DCF method.

12 Market Approach

- 13 Q. REGARDING YOUR APPLICATION OF THE MARKET APPROACH, WHAT
- 14 METHODS DID YOU USE TO DETERMINE THE MARKET APPROACH
- 15 **RESULT?**
- 16 A. I used the market multiples method and the selected transaction method.
- 17 Q. WHAT ASSUMPTIONS, ANALYSES, AND/OR ADJUSTMENTS DID YOU
- 18 MAKE UNDER EACH METHOD?
- 19 A. The general assumptions used for the market multiples method are listed on page 1 of
- 20 Exhibit 16. No assumptions were made under the selected transaction method.
- 21 Q. REGARDING YOUR APPLICATION OF THE MARKET MULTIPLES
- 22 METHOD, DID YOU LIMIT YOUR PROXY GROUP USED FOR CALCULATING

1		MARKET VALUE TO ONLY COMPANIES WHICH ENGAGE IN
2		PENNSYLVANIA FAIR MARKET VALUE ACQUISITIONS?
3	A.	No.
4	Q.	REGARDING YOUR APPLICATION OF THE COMPARABLE SALES USED TO
5		ESTABLISH THE VALUATION, DID YOU LIMIT THE TRANSACTIONS
6		SELECTED TO THOSE THAT YOU PREVIOUSLY APPRAISED?
7	A.	No.
8	Q.	PLEASE STATE THE COMPARABLE TRANSACTIONS YOU USED IN
9		DEVELOPING YOUR MARKET APPROACH.
10	A.	Please see Application Exhibit Q (the Gannett Fleming appraisal), Exhibit 17, pages 2 and
11		3, which shows that I reviewed the following transactions ⁹ in developing the selected
12		transactions method:
13		Sale of the City of McKeesport to Pennsylvania American Water Company in
14		2017.
15		• Sale of New Garden Township Sewer Authority to Aqua in 2017.
16		• Sale of Limerick Township Wastewater to Aqua in 2017.
17		• Sale of East Bradford Township Wastewater to Aqua in 2018.
18		Sale of Mahoning Township Water and Wastewater systems to Suez Water
19		Pennsylvania in 2018.
20		As a check on the transactions I studied, that are listed above, I also reviewed the
21		proposed purchase of Connecticut Water Service, Inc by SJW Group (Exhibit 17 page 4)
22		which was announced in 2018 and is currently in progress.

⁹ The years listed indicate when the Commission approved each of the transactions.

1 Q. WHAT WERE THE RESULTS OF MARKET APPROACH ANALYSIS YOU

PERFORMED?

A.

A. The results of the market multiples method are shown on page 1 of Exhibit 16 and the results of the selected transactions method are shown on page 1 of Exhibit 17. The conclusion regarding the Market Approach analysis is explained on pages 39 to 40 of our appraisal.

CONCLUSION

Q. WHAT IS YOUR CONCLUSION REGARDING THE FAIR MARKET VALUE OF THE WASTEWATER SYSTEM'S ASSETS TO BE PURCHASED BY AQUA?

Fair market value is defined as "the price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts."

Based on our analysis, as described in our appraisal report, the estimate of the fair market value of the Wastewater System as of February 28, 2019 is \$24,284,000 (rounded). The results of the analyses and calculations are summarized in Table 1 for the Systems as follows:

Valuation Approach	Indicated <u>Value</u>
Cost Approach	\$33,467,936
Income Approach	10,383,787
Market Approach	24,368,094

Table 1

We used seven methods under the Cost, Market and Income Approaches to valuation: Original Cost Method, Reproduction Cost Method, Capitalization of Earnings Method, Market Multiple Discounted Cash Flow Method, Capitalization Discounted Cash Flow Method, Market Multiples Method, and the Selected Transactions Method.

The results from the capitalization of earnings method, market multiple discounted cash flow method and the capitalization discounted cash flow method form the basis for our Income Approach. Our Market Approach is supported by the market multiples method and selected transactions method. The results from the original cost method form the basis for our reproduction cost method, and both methods form the basis for our Cost Approach.

We considered the results of each approach as an indicator of value individually, or as independent indicators of value. Therefore, all three approaches to valuation were given consideration in arriving at our estimate of the fair market value conclusion. In our opinion, each of the valuation approaches utilized in our appraisal is relevant. However, we believe the results produced by the Income Approach to be an outlier given the number of customers served and gave those results less weight. We assign equal weight to the results of the Cost Approach and Market Approach and less weight to the Income Approach. Our conclusion regarding the fair market value can be described by the weightings given the specific results of the three approaches to valuation. The results of our analyses indicate a

- range of value for the Wastewater System of \$10.4 million to \$33.5 million and collectively
- 2 indicate a fair market value of \$24.3 million for the Wastewater System.

3 Q. GENERALLY SPEAKING, IS IT COMMON FOR DIFFERENT APPRAISERS TO

4 REACH VARYING OPINIONS OF FAIR MARKET VALUE?

- 5 A. Yes. I do not think the underlying results of the models employed for valuation purposes
- are ever the same from one appraiser to another appraiser. Further, the conclusion of value
- from one appraiser to another appraiser usually differs as well. I believe these are some of
- 8 the reasons the results of the conclusion of value from two different UVEs are averaged
- 9 under Section 1329, 66 Pa. C.S. § 1329.

10 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

11 A. Yes.

APPENDIX A

Professional Qualifications
of
Harold Walker, III
Manager, Financial Studies
Gannett Fleming Valuation and Rate Consultants, LLC.

EDUCATION

Mr. Walker graduated from Pennsylvania State University in 1984 with a Bachelor of Science Degree in Finance. His studies concentrated on securities analysis and portfolio management with an emphasis on economics and quantitative business analysis. He has also completed the regulation and the rate-making process courses presented by the College of Business Administration and Economics Center for Public Utilities at New Mexico State University. Additionally, he has attended programs presented by The Institute of Chartered Financial Analysts (CFA).

Mr. Walker was awarded the professional designation "Certified Rate of Return Analyst" (CRRA) by the Society of Utility and Regulatory Financial Analysts. This designation is based upon education, experience and the successful completion of a comprehensive examination. He is also a member of the Society of Utility and Regulatory Financial Analysts (SURFA) and has attended numerous financial forums sponsored by the Society. The SURFA forums are recognized by the Association for Investment Management and Research (AIMR) and the National Association of State Boards of Accountancy for continuing education credits.

Mr. Walker is also a licensed Municipal Advisor Representative (Series 50) by Municipal Securities Rulemaking Board (MSRB) and Financial Industry Regulatory Authority (FINRA).

BUSINESS EXPERIENCE

Prior to joining Gannett Fleming Valuation and Rate Consultants, LLC., Mr. Walker was employed by AUS Consultants - Utility Services. He held various positions during his eleven years with AUS, concluding his employment there as a Vice President. His duties included providing and supervising financial and economic studies on behalf of investor owned and municipally owned water, waste water, electric, natural gas distribution and transmission, oil pipeline and telephone utilities as well as resource recovery companies.

In 1996, Mr. Walker joined Gannett Fleming Valuation and Rate Consultants, LLC. In his capacity as Manager, Financial Studies and for the past twenty years, he has continuously studied rates of return requirements for regulated firms. In this regard, he supervised the preparation of rate of return studies in connection with his testimony and in the past, for other individuals. He also assisted and/or developed dividend policy studies, nuclear prudence studies, calculated fixed charge rates for avoided costs involving cogeneration projects, financial decision studies for capital budgeting purposes and developed financial models for determining future capital requirements and the effect of those requirements on investors and ratepayers, valued utility property and common stock for acquisition and divestiture, and assisted in the private placement of fixed capital securities for public utilities.

Head, Gannett Fleming GASB 34 Task Force responsible for developing Governmental Accounting Standards Board (GASB) 34 services, and educating Gannett Fleming personnel and Gannett Fleming clients on GASB 34 and how it may affect them. The GASB 34 related services include inventory of assets, valuation of assets, salvage estimation, annual depreciation rate determination, estimation of depreciation reserve, asset service life determination, asset condition assessment, condition assessment documentation, maintenance estimate for asset preservation, establishment of condition level index, geographic information system (GIS) and data management services, management discussion and analysis (MD&A) reporting, required supplemental information (RSI) reporting, auditor interface, and GASB 34 compliance review.

Mr. Walker was also the Publisher of C.A. Turner Utility Reports from 1988 to 1996. C.A. Turner Utility Reports is a financial publication which provides financial data and related ratios and forecasts covering the utility industry. From 1993 to 1994, he became a contributing author for the <u>Fortnightly</u>, a utility trade journal. His column was the Financial News column and focused mainly on the natural gas industry.

In 2004, Mr. Walker was elected to serve on the Board of Directors of SURFA. Previously, he served as an ex-officio directors as an advisor to SURFA's existing President. In 2000, Mr. Walker was elected President of SURFA for the 2001-2002 term. Prior to that, he was elected to serve on the Board of Directors of SURFA during the period 1997-1998 and 1999-2000. Currently, he also serves on the Pennsylvania Municipal Authorities Association, Electric Deregulation Committee.

EXPERT TESTIMONY

Mr. Walker has submitted testimony or been deposed on various topics before regulatory commissions and courts in 22 states including: Arizona, California, Colorado, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New York, North Carolina, Oklahoma, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia. His testimonies covered various subjects including: fair market value, the taking of natural resources, appropriate capital structure and fixed capital cost rates, depreciation, fair rate of return, purchased water adjustments, synchronization of interest charges for income tax purposes, valuation, cash working capital, lead-lag studies, financial analyses of investment alternatives, and fair value. The following tabulation provides a listing of the electric power, natural gas distribution, telephone, wastewater, and water service utility cases

in which he has been involved as a witness. Additionally, he has been involved in a number of rate proceedings involving small public utilities which were resolved by Option Orders and therefore, are not listed below.

	Client	Docket No.	
Alpena Power	· Company	U-10020	
Armstrong Te	lephone Company -		
Northern	Division	92-0884-T-42T	
Armstrong Te	lephone Company -		
Northern	Division	95-0571-T-42T	
Artesian Wate	er Company, Inc.	90 10	
Artesian Wate	er Company, Inc.	06 158	
Aqua Illinois	Consolidated Water Divisions		
and Cons	solidated Sewer Divisions	11-0436	
Aqua Illinois	Hawthorn Woods		
Wastewa	ter Division	07 0620/07 0621/08 0067	
Aqua Illinois	Hawthorn Woods Water Division	07 0620/07 0621/08 0067	
Aqua Illinois	Kankakee Water Division	10-0194	
Aqua Illinois	Kankakee Water Division	14-0419	
Aqua Illinois	Vermilion Division	07 0620/07 0621/08 0067	
Aqua Illinois	Willowbrook Wastewater Division	07 0620/07 0621/08 0067	
Aqua Illinois	Willowbrook		
Water Di	vision	07 0620/07 0621/08 0067	
Aqua Pennsyl	vania Wastewater Inc	A-2016-2580061	*
Aqua Pennsyl	vania Wastewater Inc	A-2017-2605434	*
Aqua Pennsyl	vania Wastewater Inc	A-2018-3001582	*
Aqua Pennsyl	vania Wastewater Inc	A-2019-3008491	*
	a - Alpha Water Corporation a - Blue Ridge Utility Company,	Pue-2009-00059	
Inc.		Pue-2009-00059	
Aqua Virginia (Wastewater)	a - Caroline Utilities, Inc.	Pue-2009-00059	
Aqua Virginia	a - Caroline Utilities, Inc. (Water) a - Earlysville Forest Water	Pue-2009-00059	
Company		Pue-2009-00059	
Aqua Virginia	a - Heritage Homes of Virginia	Pue-2009-00059	
Aqua Virginia	a - Indian River Water Company	Pue-2009-00059	
Aqua Virginia	a - James River Service Corp.	Pue-2009-00059	

Aqua Virginia - Lake Holiday Utilities, Inc.	
(Wastewater)	Pue-2009-00059
Aqua Virginia - Lake Holiday Utilities, Inc.	
(Water)	Pue-2009-00059
Aqua Virginia - Lake Monticello Services Co.	
(Wastewater)	Pue-2009-00059
Aqua Virginia - Lake Monticello Services Co. (Water)	Pue-2009-00059
Aqua Virginia - Lake Shawnee	Pue-2009-00059
Aqua Virginia - Land'or Utility Company	1 uc-2009-00039
(Wastewater)	Pue-2009-00059
Aqua Virginia - Land'or Utility Company (Water)	Pue-2009-00059
Aqua Virginia - Mountainview Water Company,	
Inc.	Pue-2009-00059
Aqua Virginia - Powhatan Water Works, Inc.	Pue-2009-00059
Aqua Virginia - Rainbow Forest Water Corporation	Pue-2009-00059
Aqua Virginia - Shawnee Land	Pue-2009-00059
Aqua Virginia - Sydnor Water Corporation	Pue-2009-00059
• • •	Pue-2009-00059
Aqua Virginia - Water Distributors, Inc.	18-40
Berkshire Gas Company	R-2009-2106908
Borough of Hanover	
Borough of Hanover	R-2012-2311725
Borough of Hanover	R-2014-242830
Chaparral City Water Company	W 02113a 04 0616
California-American Water Company	CIVCV156413
Connecticut-American Water Company	99-08-32
Connecticut Water Company	06 07 08
Citizens Utilities Company	
Colorado Gas Division	-
Citizens Utilities Company	
Vermont Electric Division	5426
Citizens Utilities Home Water Company	R 901664
Citizens Utilities Water Company	
of Pennsylvania	R 901663
City of Bethlehem - Bureau of Water	R-00984375
City of Bethlehem - Bureau of Water	R 00072492
City of Bethlehem - Bureau of Water	R-2013-2390244
City of Dubois - Bureau of Water	R-2013-2350509

City of Dubois – Bureau of Water	R-2016-2554150	
City of Lancaster Sewer Fund	R-00005109	
City of Lancaster Sewer Fund	R-00049862	
City of Lancaster Sewer Fund	R-2012-2310366	
City of Lancaster Water Fund	R-00984567	
City of Lancaster Water Fund	R-00016114	
City of Lancaster Water Fund	R 00051167	
City of Lancaster Water Fund	R-2010-2179103	
City of Lancaster Water Fund	R-2014-2418872	
Coastland Corporation	15-cvs-216	
Consumers Pennsylvania Water Company		
Roaring Creek Division	R-00973869	
Consumers Pennsylvania Water Company		
Shenango Valley Division	R-00973972	
Country Knolls Water Works, Inc.	90 W 0458	
East Resources, Inc West Virginia Utility	06 0445 G 42T	
Elizabethtown Water Company	WR06030257	
Exeter Township	A-2018-3004933	*
Hampton Water Works Company	DW 99-057	
Hidden Valley Utility Services, LP	R-2018-3001306	
Hidden Valley Utility Services, LP	R-2018-3001307	
Illinois American Water Company	16-0093	
Indian Rock Water Company	R-911971	
Indiana Natural Gas Corporation	38891	
Jamaica Water Supply Company	-	
Kentucky American Water Company, Inc.	2007 00134	
Middlesex Water Company	WR 89030266J	
Millcreek Township Water Authority	55 198 Y 00021 11	*
Missouri-American Water Company	WR 2000-281	
Missouri-American Water Company	SR 2000-282	
Mount Holly Water Company	WR06030257	
New Jersey American Water Company	WR 89080702J	
New Jersey American Water Company	WR 90090950J	
New Jersey American Water Company	WR 03070511	
New Jersey American Water Company	WR-06030257	
New Jersey American Water Company	WR08010020	
New Jersey American Water Company	WR10040260	

New Jersey American Water Company	WR11070460	
New Jersey American Water Company	WR15010035	
New Jersey American Water Company	WR17090985	
Newtown Artesian Water Company	R-911977	
Newtown Artesian Water Company	R-00943157	
Newtown Artesian Water Company	R-2009-2117550	
Newtown Artesian Water Company	R-2011-2230259	
Newtown Artesian Water Company	R-2017-2624240	
North Maine Utilities	14-0396	*
Northern Indiana Fuel & Light Company	38770	
Oklahoma Natural Gas Company	PUD-940000477	
Pennichuck Water Works, Inc.	DW 04 048	*
Pennichuck Water Works, Inc.	DW 06 073	
Pennichuck Water Works, Inc.	DW 08 073	
Pennsylvania Gas & Water Company (Gas)	R-891261	
Pennsylvania Gas & Water Co. (Water)	R 901726	
Pennsylvania Gas & Water Co. (Water)	R-911966	
Pennsylvania Gas & Water Co. (Water)	R-22404	
Pennsylvania Gas & Water Co. (Water)	R-00922482	
Pennsylvania Gas & Water Co. (Water)	R-00932667	
Public Service Company of North Carolina, Inc.	G-5, Sub 565	
Public Service Electric and Gas Company	ER181010029	
Public Service Electric and Gas Company	GR18010030	
Presque Isle Harbor Water Company	U-9702	
St. Louis County Water Company	WR-2000-844	
Suez Water New Jersey, Inc.	WR18050593	
Suez Water Owego-Nichols, Inc.	17-W-0528	
Suez Water Pennsylvania, Inc.	R-2018-3000834	
Suez Water Pennsylvania, Inc.	A-2018-3003519	*
Suez Water Pennsylvania, Inc.	A-2018-3003517	*
Suez Water Rhode Island, Inc.	Docket No. 4800	
Town of North East Water Fund	9190	
United Water New Rochelle	W-95-W-1168	
United Water Toms River	WR-95050219	
Valley Water Systems, Inc.	06 10 07	
Virginia American Water Company	PUR-2018-00175	
West Virginia-American Water Company	15-0676-W-42T	

West Virginia-American Water Company	15-0675-S-42T
Wilmington Suburban Water Corporation	94-149
York Water Company	R-901813
York Water Company	R-922168
York Water Company	R-943053
York Water Company	R-963619
York Water Company	R-994605
York Water Company	R-00016236

^{* -} Testimony related to valuation