PLACE: Via WebEx Videoconference

DATE: Wednesday, July 8, 2020

TIME: 9:00 a.m. - 11:58 p.m.

DOCKET NO.: W-218, Sub 526

BEFORE: Commissioner ToNola D. Brown-Bland, Presiding

Chair Charlotte A. Mitchell

Commissioner Lyons Gray

Commissioner Daniel G. Clodfelter

Commissioner Kimberly W. Duffley

Commissioner Jeffrey A. Hughes

Commissioner Floyd B. McKissick, Jr.

IN THE MATTER OF:

Application by Aqua North Carolina, Inc.,

202 MacKenan Court, Cary, North Carolina 27511,

for Authority to Adjust and Increase Rates

for Water and Sewer Utility Service in

All of Its Service Areas in North Carolina.

VOLUME: 2

Noteworthy Reporting Services, LLC

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T A B L E O F C O N T E N T S

E X A M I N A T I O N S

E X H I B I T S

P R O C E E D I N G S

COMMISSIONER BROWN-BLAND: Good morning. Let's come to order and go on the record. I'm Commissioner ToNola D. Brown-Bland, presiding commissioner. And with me this morning via remote means are Chair Charlotte A. Mitchell and Commissioners Lyons Gray, Daniel G. Clodfelter, Kimberly W. Duffley, Jeffrey A. Hughes, and Floyd B. McKissick, Jr.

I now call and resume for hearing Docket Number W-218, Sub 526 in the matter of application by Aqua North Carolina, Inc., 202 MacKenan Court, Cary, North Carolina 27511, for authority to increase rates for water and sewer utility service in all of its service areas in North Carolina.

On December 31, 2019, Aqua North Carolina Inc., hereafter Aqua Company or Applicant, filed an application with the Commission seeking authority to increase its rates for water and sewer utility service in all its service areas in North Carolina. Simultaneously, Aqua filed the direct testimony and exhibits of Shannon V. Becker, Amanda Berger, Dylan D'Ascendis, and Edward Thill and direct testimony of Joseph Pearce and

Dean Gearhart.

In this application as filed, the Company requests an 11.2 percent increase over the total revenue generated by the current rates with the exception of approved tariff revisions to both purchased water and sewer systems. The application states that the requested increase is necessary primarily due to increased capital investment and operating costs required to comply with service and regulatory obligations, increased operating expenses to maintain or upgrade the existing level of service, and changes in consumption, which occurred during the test year and continued through the application filing.

Pursuant to North Carolina law and past order of the Commission, a rate adjustment mechanism for recovery of reasonable and prudent investments for certain eligible water and sewer system improvements completed and placed in service between general rate cases has been approved for Aqua. The mechanism allows for recovery of those investment costs through a billing surcharge. The Company's application notes that the projects being recovered through the current approved surcharge will be moved into the base rates set and adjusted in this case, and the surcharge will reset to zero where it will remain unless and until future water and sewer improvements are placed in service and are approved for recovery using the surcharge between this rate case and the next.

Also in its application, Aqua proposes to initiate a conservation rate pilot program, which includes a revenue reconciliation component for residential and irrigation customers in four systems in its Aqua water rate division as well as its Fairways water rate division. The Company also requests elimination of adjustments to calculated disallowed excess capacity costs in the Aqua sewer rate division made in previous cases.

On February 14, 2020, the Commission issued an order establishing general rate case, scheduling hearings, and requiring customer notice. The order scheduled public hearings throughout the Company's service territory for the purpose of hearing from customers regarding the Company's application and quality of service, and scheduled a hearing in Raleigh to begin on June 23, 2020 at 9:30 a.m. for the purpose of receiving testimony from the parties' expert witnesses.

By order of the Commission issued on March 31, 2020, the public hearings were postponed following issuance of the Governor's executive order declaring a state of emergency and restricting public gatherings to slow and limit the spread of the coronavirus.

On April 29, 2020, the Office of Attorney General intervened pursuant to North Carolina General Statute 62-20, and the Public Staff's intervention is recognized pursuant to North Carolina General Statute 62-15(d).

On June 11, 2020, Aqua filed a petition for deferral of revenue recovery, or in the alternative, for approval of customer notice in undertaking to place rates in effect under bond pending file order on the application for increase in rates.

On June 12th, Aqua filed the rebuttal testimony of Edward Thill, Joseph Pearce, and George Kunkel, Paul Hanley, Dean Gearhart, and Amanda Berger.

On June 15, 2020, Aqua filed a rebuttal and revised rebuttal joint testimony of witnesses

Becker and Pearce.

On John 19, 2020, Aqua filed revised rebuttal testimony of witness Berger and witness Thill. Through the Company's rebuttal testimony, it gave notice that it was withdrawing both its requests to recover financing costs not authorized in the last rate case related to the Johnston County sewer transmission fees and its proposed consumption adjustment mechanism requested pursuant to North Carolina General Statute 62-133.12(a).

On June 22, 2020, the Public Staff filed corrected joint testimony and exhibits of witnesses Henry and Junis and the corrected testimony of witness Junis.

On June 23, 2020, the evidentiary hearing was convened in Raleigh at 9:30 a.m. in the Commission's hearing room as scheduled, and was recessed to resume on July 6, 2020 at 1:30 p.m. by virtual means using the WebEx electronic platform.

On June 26, 2020, all parties filed separate consents to hearing by remote means.

On June 29, 2020, the Commission issued an order rescheduling the public hearing to be held on August 3, 2020 by virtual remote means, and provided for customer notice of same.

On July 1, 2020, the Company moved for expedited approval of revised notices of temporary rates in order to lower the rates it elects to put in effect subject to refund of any amount that may finally -- that may be finally determined by the Commission to being excessive. That motion was allowed, and revised customer notices were approved by order dated July 2nd.

Also on July 1st, Aqua and the Public Staff filed Partial Settlement Agreement and Stipulation, pursuant to which they informed the Commission that the Company no longer seeks deferred accounting treatment for capital improvements that were placed in service between rate cases, and that the Company no longer requests authority to apply a conservation normalization factor to address revenue stability issues related to fluctuations or changes in customer consumption.

Following communications with all parties regarding status of the case and the agreement of all parties to waive cross examination of certain witnesses, the presiding Commissioner, on request of the Public Staff and the Company, has excused those witnesses with the exception of witnesses Gearhart and Henry from appearing at the evidentiary hearing today, and has also all requested the Company notify all parties that the hearing would resume on July 8, 2020 at 9 a.m. Shortly, or as the hearing progresses, we will hear on the record the names of the witnesses who were excused.

Pursuant to North Carolina General Statute 163A-159(e), I remind members of the Commission of our duty to avoid conflicts of interest and inquire at this time as to whether any Commissioner has any known conflicts of interest with respect to this docket.

COMMISSIONER CLODFELTER: No conflict.

COMMISSIONER BROWN-BLAND: Let the record reflect that no conflicts were identified. And I now call on counsel for the parties for their appearances, and I will start with the Applicant.

MS. SANFORD: Good morning, Commissioner Brown-Bland, Commissioners, and colleagues at the Public Staff and Attorney General. I am Jo Anne Sanford at Sanford Law Office representing Aqua North Carolina in this proceeding. I would like to not only introduce myself, but introduce my colleagues on the Aqua side, and I will tell you not only who we are but where we are, because I think that helps us understand as we go forward. So with your permission, I'll take just a minute or two to do that.

With me in the call this morning -- and I'm going to differentiate the methods people are using to participate or attend -- but with me on the call as a participant is Bob Bennink, who is in a separate location. I am in Aqua's Cary office. Shannon Becker, who will be our first witness, is in this office. And as we will all note, he is in a separate room from me, and we'll notice that he has a window and I do not. So I'm in another conference room with Robin Lambeth.

Other Aqua participants include those who have worked on this case, and those who will be witnesses before you. They are mostly in this building in Cary at Aqua's headquarters. They are separately located from witness Becker and from myself. And in order to deal with bandwidth issues, they are -- I believe I'm correct to say this, but they are simply watching this proceeding on the Commission's website.

A last word about that is that, just as a piece of information about what we're all dealing with the virus, Aqua had begun to bring people back into this office in a staged kind of way as many, many businesses are doing. However, in the past few days, I think, they have reversed that decision and have sent people home. Only essential members of their staff are here in this building. Which, of course, on the one hand, makes it a little easier for us as we try to conduct this proceeding from here, but on the other hand, it's just a measure of the times.

So we thank you very much for your courtesies and for the flexibility, and with that, I am through with our introductions.

COMMISSIONER BROWN-BLAND: All right. Thank you, Ms. Sanford. That was actually very helpful to know where people are and help us with, you know, the integrity issues that are introduced by the fact that we are in this remote situation. So thank you very much for that thoughtfulness.

Now I will turn to the Attorney General.

MS. TOWNSEND: Good morning. Teresa Townsend and Margaret Force here for the Attorney General's Office representing the using and consuming public, and also the citizens of the state in this important matter of public interest. Ms. Force and I are both in the same room. Of course, I'm in front of the camera. She is off to the side, but she is also here in the same room with me at this time.

COMMISSIONER BROWN-BLAND: All right. Thank you, Ms. Townsend.

And the Public Staff?

MS. JOST: Good morning. Megan Jost with the Public Staff appearing on behalf of the using and consuming public. Appearing with me are William Grantmyre and William Creech. We are all in our individual offices here in the Dobbs Building. We also have witnesses Windley Henry, Charles Junis, and Meg Franklin also, I believe, in their individual offices here in the Dobbs Building.

COMMISSIONER BROWN-BLAND: All right. Thank you, Ms. Jost. By my account, that's all the appearances I need. Okay. All right. Are there any preliminary matters?

MS. SANFORD: If this -- yes, ma'am. If this is a good time for the Commission, Mr. Bennink is prepared to move into the record a number of documents.

COMMISSIONER BROWN-BLAND: All right. Sounds good. Go right ahead, Mr. Bennink.

MR. BENNINK: Thank you. We'll move in the individual testimony as we proceed. Let me ask you a question -- first of all, I'll move in the documents that we want in evidence. And then, if you prefer, I could move in the direct testimony of those witnesses who will not be making appearances today.

COMMISSIONER BROWN-BLAND: That would be good.

MR. BENNINK: All right. In terms of the documents, all documents submitted as part of Aqua's application for general rate increase filed on December 31, 2019, including all NCUC Form 1 items, both confidential and nonconfidential. Do you want me to stop as I go for a ruling or just proceed?

COMMISSIONER BROWN-BLAND: Proceed for a

little bit. We'll see how many we can take.

MR. BENNINK: All right. Second, all documents filed as part of Aqua's first Rule R1-17(f) compliance filing made on January 24, 2020.

Third, all documents filed as part of Aqua's second Rule R1-17(f) compliance filing made on January 29, 2020.

Fourth, revised Exhibit O, page 8 of 11 to the Company's rate case application filed on January 29, 2020.

Five, certificate of service filed on March 10, 2020, indicating that the Company provided the Commission-required notices of hearings to its customers.

Six, Aqua's updates to NCUC Form 1 items 16, 18, and 19, both confidential and nonconfidential, items filed on April 21st and 22nd, 2020.

Seventh, Aqua's verified response to the Public Staff's motion to compel filed April 24, 2020.

COMMISSIONER BROWN-BLAND: All right. Let's stop right there for a minute. To this point, Mr. Bennink has described and moved into evidence seven documents. If there is no objection?

(No response.)

COMMISSIONER BROWN-BLAND: I'm not seeing or hearing any. Without objection, those seven items will be received into evidence.

(All documents submitted as part of Aqua's application for general rate increase filed on December 31, 2019, including all NCUC Form 1 items, both confidential and nonconfidential; all documents filed as part of Aqua's first Rule R1-17(f) compliance filing made on January 24, 2020; all documents filed as part of Aqua's second Rule R1-17(f) compliance filing made on January 29, 2020; Revised Exhibit O, page 8 of 11 to the Company's rate case application filed on January 29, 2020; certificate of service filed on March 10, 2020, indicating that the Company provided the Commission-required notices of hearings to its customers;

Aqua's updates to NCUC Form 1 items 16, 18, and 19, both confidential and nonconfidential, items filed on April 21st and 22nd, 2020; and Aqua's verified response to the Public Staff's motion to compel filed April 24, 2020; were admitted into evidence.)

COMMISSIONER BROWN-BLAND: And, Mr. Bennink, they are not marked at this time, but you've adequately described them, so I think we are good. And if you need to refer to them at a later time, we'll have them marked and identified. All right. Continue.

MR. BENNINK: (No response.)

COMMISSIONER BROWN-BLAND: That was the first seven. You're on mute, Bob -- Mr. Bennink. So that was the first seven. You're still on mute. There you go.

MR. BENNINK: The eighth item is Aqua's notice of withdrawal of application for approval of water and sewer system improvement charge rate adjustments pursuant to G.S. 62-133.12 filed on May 8, 2020.

The ninth item is Aqua's notice of change of corporate name from Aqua America, Inc. to Essential Utilities, Inc. filed on May 13, 2020.

Item 10 is Aqua's filing of three revised exhibits to direct testimony of Company witnesses Shannon V. Becker and Edward Thill. The revised exhibits replaced Becker Direct Exhibit Number 3 and Thill Direct Exhibits Numbers 3 and Number 5.

COMMISSIONER BROWN-BLAND: Mr. Bennink.

MR. BENNINK: Yes.

COMMISSIONER BROWN-BLAND: Are you -- with regard to those, will they -- they are already marked and identified. Will they be coming in with the direct testimony? Or you want -- are you asking them to be received into evidence at this time?

MR. BENNINK: No, that's fine. We'll move them in at that time.

COMMISSIONER BROWN-BLAND: Okay.

MR. BENNINK: Okay. Aqua's petition for approval of an order allowing deferral of revenues in lieu of rates under bond, or, alternatively, notice of intent to place temporary rates in effect subject to an undertaking to refund pursuant to G.S. 62-135 filed June 11, 2020.

The next item is revisions to rebuttal testimony. We'll move that in, that will be -- those have been filed. These are revisions to rebuttal testimony exhibits filed by Aqua witnesses Amanda Berger and Edward Thill. So we'll move -- that will be part when we move in their testimony.

Aqua's motion for approval of an order approving form of revised notices of temporary rates subject to an undertaking to refund pursuant to G.S. 62-135 filed on July 1, 2020.

The next item is Aqua's undertaking to refund filed July 1, 2020.

The next item is partial settlement agreement and stipulation filed by Aqua and the Public Staff on July 1, 2020.

And the last item we have is the Aqua's confidential filing made at the request of presiding Commissioner Brown-Bland which was filed on July 7, 2020.

COMMISSIONER BROWN-BLAND: All right. Without objection, that's seven additional items that Mr. Bennink described he would move into evidence at this time. With regard to the last item, which is confidential, it will be received, and it will remain marked confidential for the record. Without objection, all the additional seven items will be received into evidence.

(Aqua's notice of withdrawal of application for approval of water and sewer system improvement charge rate adjustments pursuant to G.S. 62-133.12 filed on May 8, 2020; Aqua's notice of change of corporate name from Aqua America, Inc. to Essential Utilities, Inc. filed on May 13, 2020; Aqua's petition for approval of an order allowing deferral of revenues in lieu of rates under bond, or, alternatively, notice of intent to place temporary rates in effect subject to an undertaking to refund pursuant to G.S. 62-135 filed June 11, 2020; Aqua's motion for approval of an order approving form of revised notices of temporary rates subject to an undertaking to refund pursuant to

G.S. 62-135 filed on July 1, 2020; Aqua's undertaking to refund filed July 1, 2020; Partial Settlement Agreement and Stipulation filed by Aqua and the Public Staff on July 1, 2020; and Aqua's confidential filing made at the request of presiding Commissioner Brown-Bland which was filed on July 7, 2020; were admitted into evidence.)

COMMISSIONER BROWN-BLAND: And he described a couple of other items, but they will be moved in at the time of testimony of those witnesses.

Are there any questions or follow-up with regard to those items?

(No response.)

COMMISSIONER BROWN-BLAND: All right. There being none, thank you, Mr. Bennink.

MR. BENNINK: If it's okay, I will proceed to -- there are two witnesses who filed -- prefiled -- prefiled direct testimony who will not be appearing. I can move their testimony into the record if you'd like at this point.

COMMISSIONER BROWN-BLAND: Go right ahead.

MR. BENNINK: All right. The first is the direct testimony of Dylan D'Ascendis consisting of 67 pages, and D'Ascendis Direct Exhibit Number 1 consisting of schedules DWD 1 through DWD 9.

COMMISSIONER BROWN-BLAND: All right. Without objection, that motion will be allowed, and the testimony of Dylan D'Ascendis -- the direct testimony will be received into evidence at this time, and as well as they attached exhibit and schedules. They will be received into evidence. The testimony will be treated as if given orally from the witness stand, the Exhibit 1 and the schedules will come into evidence and will remain marked and identified as they were marked when prefiled.

(D'Ascendis Direct Exhibit Number 1 with Schedules DWD 1 through DWD 9 was admitted into evidence.)

(Whereupon, the prefiled direct testimony of Dylan D'Ascendis was copied into the record as if given orally from the stand.)

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. W-218, SUB 526

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

IN THE MATTER OF
APPLICATION BY AQUA NORTH CAROLINA, INC.,
202 MACKENAN COURT, CARY, NORTH CAROLINA 27511,
FOR AUTHORITY TO ADJUST AND INCREASE RATES FOR WATER AND SEWER UTILITY SERVICE IN ALL SERVICE AREAS IN NORTH CAROLINA

PREFILED DIRECT TESTIMONY OF
DYLAN W. D'ASCENDIS, CRRA, CVA
ON BEHALF OF
AQUA NORTH CAROLINA, INC.

December 31, 2019

TABLE OF CONTENTS

I. INTRODUCTION

A. WITNESS IDENTIFICATION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Dylan W. D'Ascendis. My business address is 3000 Atrium Way, Suite 241, Mount Laurel, NJ 08054.

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

A. I am a Director at ScottMadden, Inc.

B. BACKGROUND AND QUALIFICATIONS

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE AND EDUCATIONAL BACKGROUND.

A. I offer expert testimony on behalf of investor-owned utilities on rate of return issues and class cost of service issues. I also assist in the preparation of rate filings, including but not limited to revenue requirements and original cost and lead/lag studies. I am a graduate of the University of Pennsylvania, where I received a Bachelor of Arts degree in Economic History. I also hold a Masters of Business Administration from Rutgers University with a concentration in Finance and International Business, which was conferred with high honors. I am a Certified Rate of Return Analyst ("CRRA") and a Certified Valuation Analyst ("CVA"). My full professional qualifications are provided in Appendix A.

II. PURPOSE OF TESTIMONY

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

A. The purpose of my testimony is to present evidence on behalf of Aqua North Carolina, Inc. ("Aqua North Carolina" or the "Company") about the appropriate capital structure and corresponding cost rates the Company should be given the opportunity to earn on its jurisdictional rate base.

Q. HAVE YOU PREPARED AN EXHIBIT IN SUPPORT OF YOUR RECOMMENDATION?

A. Yes. I have prepared D'Ascendis Exhibit No. 1, which consists of Schedules DWD-1 through DWD-9.

Q. WHAT IS YOUR RECOMMENDED COST OF CAPITAL FOR AQUA NORTH CAROLINA?

A. I recommend the North Carolina Utilities Commission (the "Commission") authorize the Company the opportunity to earn an overall rate of return of 7.18% based on a test year ending September 30, 2019. The ratemaking capital structure consists of 50.00% long-term debt at an embedded debt cost rate of 4.25%, and 50.00% common equity at my recommended common equity cost rate of 10.10%. The overall rate of return is summarized on page 1 of Schedule DWD-1 and in Table 1 below:

TABLE 1: SUMMARY OF OVERALL RATE OF RETURN

TYPE OF CAPITAL	RATIOS	COST RATE	WEIGHTED COST RATE
Long-Term Debt	50.00%	4.25%	2.13%
Common Equity	50.00%	10.10%	5.05%
Total	100.00%		7.18%

III. SUMMARY

Q. PLEASE SUMMARIZE YOUR RECOMMENDED COMMON EQUITY COST RATE.

A. My recommended common equity cost rate of 10.10% is summarized on page 2 of Schedule DWD-1. I have assessed the market-based common equity cost rates of companies of relatively similar, but not necessarily identical, risk to Aqua North Carolina. Using companies of relatively comparable risk as proxies is consistent with the principles of fair rate of return established in the *Hope*[1] and *Bluefield*[2] cases. No proxy group can be identical in risk to any single company, so there must be an evaluation of relative risk between the company and the proxy group to see if it is appropriate to make adjustments to the proxy group's indicated rate of return.

My recommendation results from the application of several cost of common equity models, specifically the Discounted Cash Flow ("DCF") model, the Risk Premium Model ("RPM"), and the Capital Asset Pricing Model

1 *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).
2 *Bluefield Water Works Improvement Co. v. Public Serv. Comm'n*, 262 U.S. 679 (1922).

("CAPM"), to the market data of a proxy group of six water companies ("Utility Proxy Group") whose selection criteria will be discussed below. In addition, I also applied the DCF, RPM, and CAPM to a proxy group of domestic, non-price regulated companies comparable in total risk to the Utility Proxy Group ("Non-Price Regulated Proxy Group").

The results derived from each are as follows:

TABLE 2: SUMMARY OF COMMON EQUITY COST RATE

	Utility Proxy Group
Discounted Cash Flow Model	8.81%
Risk Premium Model	10.12
Capital Asset Pricing Model	9.35
Cost of Equity Models Applied to Comparable Risk, Non-Price Regulated Companies	11.29
Indicated Common Equity Cost Rate Before Adjustment	9.80%
Size Adjustment	0.20
Flotation Cost Adjustment	0.07
Recommended Common Equity Cost Rate After Adjustments	10.10%

After analyzing the indicated common equity cost rates derived through these models, I conclude that a common equity cost rate of 9.80% for the Company is indicated before any Company-specific adjustments. The indicated common equity cost rate was then adjusted upward by 0.20% to reflect Aqua North Carolina's smaller relative size as compared with the members of the Utility Proxy Group, resulting in a size-adjusted indicated common equity cost rate of 10.00%. The indicated common equity cost rate was adjusted upward again by an additional 0.07% to reflect flotation costs. These adjustments result in a size and flotation cost-adjusted ROE of 10.07%, which I have rounded to 10.10%. I recommend the Commission consider a common equity cost rate of 10.10% for use in setting rates for the Company.

IV. <u>GENERAL PRINCIPLES</u>

Q. WHAT GENERAL PRINCIPLES HAVE YOU CONSIDERED IN ARRIVING AT YOUR RECOMMENDED COMMON EQUITY COST RATE OF 10.10%?

A. In unregulated industries, the competition of the marketplace is the principal determinant of the price of products or services. For regulated public utilities, regulation must act as a substitute for marketplace competition. Assuring that the utility can fulfill its obligations to the public, while providing safe and reliable service at all times, requires a level of earnings sufficient to maintain the integrity of presently invested capital. Sufficient earnings also permit the attraction of needed new capital at a reasonable cost, for which the utility must compete with other firms of comparable risk, consistent with the fair rate of return standards established by the U.S. Supreme Court in the previously cited *Hope* and *Bluefield* decisions. Consequently, marketplace data must be relied on in assessing a common equity cost rate appropriate for ratemaking purposes. Just as the use of the market data for the proxy group adds reliability to the informed expert's judgment used in arriving at a recommended common equity cost rate, the use of multiple generally accepted common equity cost rate models also adds reliability and accuracy when arriving at a recommended common equity cost rate.

A. BUSINESS RISK

Q. PLEASE DEFINE BUSINESS RISK AND EXPLAIN WHY IT IS IMPORTANT TO THE DETERMINATION OF A FAIR RATE OF RETURN.

A. Business risk is the riskiness of a company's common stock without the use of debt and/or preferred capital. Examples of such general business risks faced by all utilities (*i.e.*, electric, natural gas distribution, and water) include size, the quality of management, the regulatory environment in which utilities operate, customer mix and concentration of customers, service territory growth, and capital intensity. All of these have a direct bearing on earnings.

Consistent with the basic financial principle of risk and return, business risk is important to the determination of a fair rate of return, because the higher the level of risk, the higher the rate of return investors demand.

Q. WHAT BUSINESS RISKS DO THE WATER AND WASTEWATER INDUSTRIES FACE IN GENERAL?

A. Water and wastewater utilities have an ever-increasing responsibility to be stewards of the environment from which water supplies are drawn in order to preserve and protect essential natural resources of the United States.

This increased environmental stewardship is a direct result of compliance with the Safe Water Drinking Act and response to continuous monitoring by the Environmental Protection Agency ("EPA") and state and local governments of the water supply for potential contaminants and their resultant regulations. This, plus aging infrastructure, necessitate additional capital investment in the distribution and treatment of water, exacerbating the pressure on free cash flows arising from increased capital expenditures for infrastructure repair and replacement. The significant amount of capital investment and, hence, high capital intensity, is a major risk factor for the water and wastewater utility industry.

Value Line Investment Survey ("*Value Line*") observes the following about the water utility industry:

> The basic fundamentals of the water industry are slow to change. Currently, most of the companies here are in the midst of large construction projects aimed at upgrading and modernizing the nation's aging water infrastructure. In previous decades, in order to maintain artificially low water rates for both residential and commercial accounts, many utilities deferred spending the capital required to maintain these assets. With many of these pipes laid in the 1950s, the average age of many pipes is the is over 60 year[sic].
>
> * * *
>
> One of the main underpinnings of the industry's improved operational performance has been a positive regulatory climate. Often, natural gas and electric utilities have very contentious relationships with state authorities. Many times these companies are not allowed to recoup all of the investments they have made because the costs would be passed on to

> ratepayers. Shareholders end up absorbing some losses. By contrast, on the whole, water companies and the states they operate in, have been working together with the same aim of modernizing the water system. Authorities realize the investment is needed, and as long as the work is done efficiently, they permit companies to earn an equitable return.[3]

The water and wastewater industry also experience low depreciation rates. Depreciation rates are one of the principal sources of internal cash flows for all utilities (through a utility's depreciation expense), and are vital for a company to fund ongoing replacements and repairs of water and wastewater systems. Water / wastewater utility assets have long lives, and therefore have long capital recovery periods. As such, they face greater risk due to inflation, which results in a higher replacement cost per dollar of net plant.

Substantial capital expenditures, as noted by *Value Line,* will require significant financing. The three sources of financing typically used are debt, equity (common and preferred), and cash flow. All three are intricately linked to the opportunity to earn a sufficient rate of return as well as the ability to achieve that return. Consistent with *Hope* and *Bluefield*, the return must be sufficient to maintain credit quality as well as enable the attraction of necessary new capital, be it debt or equity capital. If unable to raise debt or equity capital, the utility must turn to either retained earnings or free cash

[3] *Value Line Investment Survey*, October 11, 2019.

flow,[4] both of which are directly linked to earning a sufficient rate of return. The level of free cash flow represents a utility's ability to meet the needs of its debt and equity holders. If either retained earnings or free cash flow is inadequate, it will be nearly impossible for the utility to attract the needed capital for new infrastructure investment necessary to ensure quality service to its customers. An insufficient rate of return can be financially devastating for utilities as well as a public safety issue for their customers.

The water and wastewater utility industry's high degree of capital intensity and low depreciation rates, coupled with the need for substantial infrastructure capital spending, require regulatory support in the form of adequate and timely rate relief, particularly a sufficient authorized return on common equity, so that the industry can successfully meet the challenges it faces.

B. FINANCIAL RISK

Q. PLEASE DEFINE FINANCIAL RISK AND EXPLAIN WHY IT IS IMPORTANT TO THE DETERMINATION OF A FAIR RATE OF RETURN.

A. Financial risk is the additional risk created by the introduction of debt and preferred stock into the capital structure. The higher the proportion of debt and preferred stock in the capital structure, the higher the financial risk (*i.e.* likelihood of default). Therefore, consistent with the basic financial principle

[4] Free Cash Flow = Operating Cash Flow (Funds From Operations) minus Capital Expenditures.

of risk and return, investors demand a higher common equity return as compensation for bearing higher default risk.

Q. CAN BOND AND CREDIT RATINGS BE A PROXY FOR THE COMBINED BUSINESS AND FINANCIAL RISK (*I.E.*, INVESTMENT RISK OF AN ENTERPRISE)?

A. Yes, similar bond ratings/issuer credit ratings reflect, and are representative of, similar combined business and financial risks (*i.e.*, total risk) faced by bond investors.[5] Although specific business or financial risks may differ between companies, the same bond/credit rating indicates that the combined risks are roughly similar, albeit not necessarily equal, as the purpose of the bond/credit rating process is to assess credit quality or credit risk and not common equity risk.

Q. THAT BEING SAID, DO RATING AGENCIES REFLECT COMPANY SIZE IN THEIR BOND RATINGS?

A. No. Neither S&P nor Moody's have minimum company size requirements for any given rating level. This means, all else equal, a relative size analysis needs to be conducted for companies with similar bond ratings.

[5] Risk distinctions within S&P's bond rating categories are recognized by a plus or minus, i.e., within the A category, an S&P rating can be at A+, A, or A-. Similarly, risk distinctions for Moody's ratings are distinguished by numerical rating gradations, i.e., within the A category, a Moody's rating can be A1, A2 and A3.

V. CAPITAL STRUCTURE

Q. WHAT CAPITAL STRUCTURE RATIOS DO YOU RECOMMEND BE EMPLOYED IN DEVELOPING AN OVERALL FAIR RATE OF RETURN APPROPRIATE FOR THE COMPANY?

A. I recommend the use of a ratemaking capital structure consisting of 50.00% long-term debt and 50.00% common equity as shown on page 1 of Schedule DWD-1. This capital structure is based on a test year capital structure for Aqua North Carolina, ending September 30, 2019.

Q. HOW DOES YOUR PROPOSED RATEMAKING COMMON EQUITY RATIO OF 50.00% FOR AQUA NORTH CAROLINA COMPARE WITH THE EQUITY RATIOS MAINTAINED BY THE COMPANIES IN YOUR UTILITY PROXY GROUP?

A. My proposed ratemaking common equity ratio of 50.00% for Aqua North Carolina is reasonable and consistent with the range of common equity ratios maintained, on average, by the companies in the Utility Proxy Group on which I base my recommended common equity cost rate. As shown on page 2 of Schedule DWD-2, the common equity ratios of the Utility Proxy Group range from 43.40% to 63.46%, with a midpoint of 53.43% and an average of 54.75% in 2018. The equity ratio, on average, maintained by the Utility Proxy Group is higher than the equity ratio requested by the Company.

In my opinion, a capital structure consisting of 50.00% long-term debt and 50.00% common equity is appropriate for ratemaking purposes for Aqua

North Carolina in the current proceeding because it is comparable, but conservative, to the average capital structure ratios (based on total permanent capital) maintained by the water companies in the Utility Proxy Group on whose market data I base my recommended common equity cost rate.

Q. WHAT COST RATE FOR LONG-TERM DEBT IS MOST APPROPRIATE FOR USE IN A COST OF CAPITAL DETERMINATION FOR AQUA NORTH CAROLINA?

A. The Company's actual long-term debt cost rate at September 30, 2019 of 4.25% is reasonable and appropriate for use in the calculation of the WACC in this proceeding.

VI. AQUA NORTH CAROLINA, INC. AND THE UTILITY PROXY GROUP

Q. ARE YOU FAMILIAR WITH THE OPERATIONS OF AQUA NORTH CAROLINA?

A. Yes. Aqua North Carolina's operations span the state of North Carolina and are broken into three regions: the Coast, Central, and the West. Aqua North Carolina is headquartered in Cary, NC and serves nearly 300,000 residents in 51 counties and has approximately 80,000 water customers and 20,000 sewer customers. Aqua North Carolina is not publicly-traded.

Q. PLEASE EXPLAIN HOW YOU CHOSE YOUR PROXY GROUP OF SIX WATER COMPANIES.

A. The basis of selection for the Utility Proxy Group was to select those companies which meet the following criteria:

(i) They are included in the Water Utility Group of *Value Line's Standard or Small and Midcap Editions* (October 11, 2019);

(ii) They have 70% or greater of 2018 total operating income and 70% or greater of 2018 total assets attributable to regulated water operations;

(iii) At the time of preparation of this testimony, they had not publicly announced that they were involved in any major merger or acquisition activity (*i.e.*, one publicly-traded utility merging with or acquiring another);

(iv) They have not cut or omitted their common dividends during the five years ending 2018 or through the time of the preparation of this testimony;

(v) They have *Value Line* and Bloomberg adjusted betas;

(vi) They have a positive *Value Line* five-year dividends per share ("DPS") growth rate projection; and

(vii) They have *Value Line*, Reuters, Zacks, or Yahoo! Finance consensus five-year earnings per share ("EPS") growth rate projections.

The following six companies met these criteria: American States Water Co., American Water Works Co., Inc., Artesian Resources, Inc., California Water Service Group, Middlesex Water Co., and York Water Co.

Q. PLEASE DESCRIBE SCHEDULE DWD-2, PAGE 1.

A. Page 1 of Schedule DWD-2 contains comparative capitalization and financial statistics for the six water companies identified above for the years 2014 to 2018.

During the five-year period ending 2018, the historically achieved average earnings rate on book common equity for the group averaged 10.17%. The average common equity ratio based on total permanent capital (excluding short-term debt) was 55.57%, and the average dividend payout ratio was 60.28%.

Total debt to earnings before interest, taxes, depreciation, and amortization ("EBITDA") for the years 2014 to 2018 ranges between 3.42 and 3.98, with an average of 3.56. Funds from operations to total debt range from 23.84% to 26.23%, with an average of 25.11%.

VII. <u>COMMON EQUITY COST RATE MODELS</u>

Q. ARE YOUR COST OF COMMON EQUITY MODELS MARKET-BASED MODELS?

A. Yes. The DCF model is market-based because market prices are used in developing the dividend yield component of the model. The RPM is market-based because the bond ratings and expected bond yields used in the application of the RPM reflect the market's assessment of bond/credit risk. In addition, the use of beta coefficients (β) to determine the equity risk premium reflects the market's assessment of market/systematic risk, since beta coefficients are derived from regression analyses of market prices. The Predictive Risk Premium Model ("PRPM") uses monthly market returns in addition to expectations of the risk-free rate. The CAPM is market-based for many of the same reasons that the RPM is market-based (*i.e.*, the use of expected bond yields and beta coefficients). Selection of the comparable risk non-price regulated companies is market-based because it is based on statistics which result from regression analyses of market prices and reflect the market's assessment of total risk.

A. <u>DISCOUNTED CASH FLOW MODEL</u>

Q. WHAT IS THE THEORETICAL BASIS OF THE DCF MODEL?

A. The theory underlying the DCF model is that the present value of an expected future stream of net cash flows during the investment holding period can be determined by discounting those cash flows at the cost of capital, or the investors' capitalization rate. DCF theory indicates that an investor buys a stock for an expected total return rate, which is derived from cash flows received in the form of dividends plus appreciation in market price (the expected growth rate). Mathematically, the dividend yield on market price plus a growth rate equals the capitalization rate, *i.e.*, the total common equity return rate expected by investors.

Q. WHICH VERSION OF THE DCF MODEL DID YOU USE?

A. I used the single-stage constant growth DCF model.

Q. PLEASE DESCRIBE THE DIVIDEND YIELD YOU USED IN YOUR APPLICATION OF THE DCF MODEL.

A. The unadjusted dividend yields are based on the proxy companies' dividends as of October 18, 2019, divided by the average of closing market prices for the 60 trading days ending October 18, 2019.[6]

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO THE DIVIDEND YIELD.

A. Because dividends are paid periodically (quarterly), as opposed to continuously (daily), an adjustment must be made to the dividend yield. This is often referred to as the discrete, or the Gordon Periodic, version of the DCF model.

DCF theory calls for the use of the full growth rate, or D_1, in calculating the dividend yield component of the model. Since the various companies in the Utility Proxy Group increase their quarterly dividend at various times during the year, a reasonable assumption is to reflect one-half the annual dividend growth rate in the dividend yield component, or $D_{1/2}$. Because the dividend should be representative of the next 12-month period, my adjustment is a conservative approach that does not overstate the dividend yield. Therefore, the actual average dividend yields in Column 1 on page 1 of

[6] See Schedule DWD-3, page 1, Column 1.

Schedule DWD-3 have been adjusted upward to reflect one-half the average projected growth rate shown in Column 5.

Q. PLEASE EXPLAIN THE BASIS OF THE GROWTH RATES YOU APPLIED TO THE UTILITY PROXY GROUP IN YOUR DCF MODEL.

A. Investors with more limited resources than institutional investors are likely to rely on widely available financial information services, such as *Value Line*, Zacks, and Yahoo! Finance. Investors realize that analysts have significant insight into the dynamics of the industries and individual companies they analyze, as well as companies' abilities to effectively manage the effects of changing laws and regulations, and ever-changing economic and market conditions. For these reasons, I used analysts' five-year forecasts of EPS growth in my DCF analysis.

Over the long run, there can be no growth in DPS without growth in EPS. Security analysts' earnings expectations have a more significant influence on market prices than dividend expectations. Thus, the use of earnings growth rates in a DCF analysis provides a better match between investors' market price appreciation expectations and the growth rate component of the DCF.

Q. PLEASE SUMMARIZE THE DCF MODEL RESULTS.

A. As shown on page 1 of Schedule DWD-3, the mean result of the application of the single-stage DCF model is 8.73%, the median result is 8.88%, and the average of the two is 8.81% for the Utility Proxy Group. In arriving at a conclusion for the DCF-indicated common equity cost rate for the Utility

Proxy Group, I have relied on an average of the mean and the median results of the DCF. This approach takes into consideration all the proxy companies' results, while mitigating the high and low outliers of those individual results.

B. THE RISK PREMIUM MODEL

Q. PLEASE DESCRIBE THE THEORETICAL BASIS OF THE RPM.

A. The RPM is based on the fundamental financial principle of risk and return, namely, that investors require greater returns for bearing greater risk. The RPM recognizes that common equity capital has greater investment risk than debt capital, as common equity shareholders are behind debt holders in any claim on a company's assets and earnings. As a result, investors require higher returns from common stocks than from investment in bonds, to compensate them for bearing the additional risk.

While it is possible to directly observe bond returns and yields, investors' required common equity return cannot be directly determined or observed. According to RPM theory, one can estimate a common equity risk premium over bonds (either historically or prospectively), and use that premium to derive a cost rate of common equity. The cost of common equity equals the expected cost rate for long-term debt capital plus a risk premium over that cost rate to compensate common shareholders for the added risk of being unsecured and last-in-line for any claim on the corporation's assets and earnings in the event of a liquidation.

Q. PLEASE EXPLAIN HOW YOU DERIVED YOUR INDICATED COST OF COMMON EQUITY BASED ON THE RPM.

A. I relied on the results of the application of two risk premium methods. The first method is the PRPM, while the second method is a risk premium model using a total market approach.

Q. PLEASE EXPLAIN THE PRPM.

A. The PRPM, published in the *Journal of Regulatory Economics* and *The Electricity Journal*[7] was developed from the work of Robert F. Engle, who shared the Nobel Prize in Economics in 2003 "for methods of analyzing economic time series with time-varying volatility ("ARCH")".[8] Engle found that volatility changes over time and is related from one period to the next, especially in financial markets. Engle discovered that the volatility in prices and returns clusters over time and is therefore highly predictable and can be used to predict future levels of risk and risk premiums.

The PRPM estimates the risk / return relationship directly, as the predicted equity risk premium is generated by the prediction of volatility or risk. The PRPM is not based on an estimate of investor behavior, but rather on the

[7] Autoregressive conditional heteroscedasticity. See "A New Approach for Estimating the Equity Risk Premium for Public Utilities", Pauline M. Ahern, Frank J. Hanley and Richard A. Michelfelder, Ph.D. The Journal of Regulatory Economics (December 2011), 40:261-278 and "Comparative Evaluation of the Predictive Risk Premium Model, the Discounted Cash Flow Model and the Capital Asset Pricing Model for Estimating the Cost of Common Equity", Richard A. Michelfelder, Ph.D, Pauline M. Ahern, Dylan W. D'Ascendis, and Frank J. Hanley, The Electricity Journal (May 2013), 84-89.

[8] www.nobelprize.org.

evaluation of the results of that behavior (*i.e.*, the variance of historical equity risk premiums).

The inputs to the model are the historical returns on the common shares of each company in the Utility Proxy Group minus the historical monthly yield on long-term U.S. Treasury securities through September 2019. Using a generalized form of ARCH, known as GARCH, I calculated each Utility Proxy Group company's projected equity risk premium using Eviews© statistical software. When the GARCH Model is applied to the historical return data, it produces a predicted GARCH variance series[9] and a GARCH coefficient[10]. Multiplying the predicted monthly variance by the GARCH coefficient, then annualizing it[11] produces the predicted annual equity risk premium. I then added the forecasted 30-year U.S. Treasury Bond yield, 2.64%[12], to each company's PRPM-derived equity risk premium to arrive at an indicated cost of common equity. The 30-year Treasury yield is a consensus forecast derived from the *Blue Chip Financial Forecasts ("Blue Chip")*[13]. The mean PRPM indicated common equity cost rate for the Utility Proxy Group is 11.30%, the median is 10.38%, and the average of the two is 10.84%. Consistent with my reliance on the average of the median and mean results of the DCF, I will rely on the average of the mean and median

9 Illustrated on Columns 1 and 2 of page 2 of Schedule DWD-4. In this instance, I have selected the average predicted variance.

10 Illustrated on Column 4 of page 2 of Schedule DWD-4.

11 Annualized Return = (1+Monthly Return)^12 - 1

12 *See*, Column 6 of page 2 of Schedule DWD-4.

13 *Blue Chip Financial Forecasts*, June 1, 2019 at p. 14 and October 1, 2019 at p. 2.

results of the Utility Proxy Group PRPM to calculate a cost of common equity rate of 10.84%.

Q. HAVE YOU REVIEWED THE COMMISSION'S ORDER[14] REGARDING THE PRPM IN THE COMPANY'S LAST RATE CASE?

A. I have. The Commission expressed a concern regarding the use of a specific statistical package to produce the results of the PRPM and were skeptical that investors would place significant weight on the model given that assumption. To clarify, the GARCH methodology, which has been in the public domain since the 1980's, as discussed above, is available in various statistical packages such as EViews®, SAS, RATS, S-Plus and JMulti, which are not cost-prohibitive and provide instructions for using the various statistical methodologies in their software. The software that I used in this proceeding currently costs approximately $1,500 for a single user commercial license. In fact, JMulti is a free downloadable software with GARCH estimation applications. In providing this additional information, it is my hope that the Commission will revisit this concern in its Order in this rate case.

Q. PLEASE EXPLAIN THE TOTAL MARKET APPROACH RPM.

A. The total market approach RPM adds a prospective public utility bond yield to an average of: 1) an equity risk premium that is derived from a beta-

[14] State of North Carolina Utilities Commission, Docket No. W-218, Sub 497, Order approving joint settlement agreement and stipulation, granting partial rate increase, and requiring customer notice, December 18, 2018, at 160.

adjusted total market equity risk premium, and 2) an equity risk premium based on the S&P Utilities Index.

Q. PLEASE EXPLAIN THE BASIS OF THE EXPECTED BOND YIELD OF 4.01% APPLICABLE TO THE UTILITY PROXY GROUP.

A. The first step in the total market approach RPM analysis is to determine the expected bond yield. Because both ratemaking and the cost of capital, including common equity cost rate, are prospective in nature, a prospective yield on similarly-rated long-term debt is essential. I rely on a consensus forecast of about 50 economists of the expected yield on Aaa-rated corporate bonds for the six calendar quarters ending with the first calendar quarter of 2021 and the long-term projections for 2021 to 2025, and 2026 to 2030 from *Blue Chip*. As shown on Line No. 1 of page 3 of Schedule DWD-4, the average expected yield on Moody's Aaa-rated corporate bonds is 3.60%. In order to derive an expected yield on A2-rated public utility bonds, I make an upward adjustment of 0.35%, which represents a recent spread between Aaa corporate bonds and A2-rated public utility bonds, in order to adjust the expected Aaa corporate bond yield to an equivalent Moody's A2-rated public utility bond.[15] Adding that recent 0.35% spread to the expected Aaa corporate bond yield of 3.60% results in an expected A2 public utility bond of 3.95%.

[15] As shown on Line No. 2 and explained in Note 2 of page 3 of Schedule DWD-4.

Since the Utility Proxy Group's average Moody's long-term issuer rating is A2/A3, another adjustment to the expected A2 public utility bond yield is needed to reflect the difference in bond ratings. An upward adjustment of 0.06%, which represents one-sixth of a recent spread between A2 and Baa2 public utility bond yields, is necessary to make the A2 prospective bond yield applicable to an A2/A3 public utility bond.[16] Adding the 0.06% to the 3.95% prospective A2 public utility bond yield results in a 4.01% expected bond yield for the Utility Proxy Group.

Q. PLEASE EXPLAIN HOW THE BETA-DERIVED EQUITY RISK PREMIUM IS DETERMINED.

A. The components of the beta-derived risk premium model are: 1) an expected market equity risk premium over corporate bonds, and 2) the beta coefficient. The derivation of the beta-derived equity risk premium that I applied to the Utility Proxy Group is shown on lines 1 through 9 of page 8 of Schedule DWD-4. The total beta-derived equity risk premium I applied was based on an average of: 1) Ibbotson-based equity risk premiums; 2) *Value Line*-based equity risk premiums; and 3) Bloomberg-based equity risk premium. Each of these is described in turn.

[16] As shown on Line No. 4 and explained in Note 3 on page 3 of Schedule DWD-4.

Q. HOW DID YOU DERIVE A MARKET EQUITY RISK PREMIUM BASED ON LONG-TERM HISTORICAL DATA?

A. To derive a historical market equity risk premium, I used the most recent holding period returns for the large company common stocks from the Stocks, Bonds, Bills, and Inflation ("SBBI") 2019 Yearbook ("SBBI – 2019")[17] less the average historical yield on Moody's Aaa/Aa-rated corporate bonds for the period 1928 to 2018. The use of holding period returns over a very long period of time is appropriate because it is consistent with the long-term investment horizon presumed by investing in a going concern, *i.e.*, a company expected to operate in perpetuity.

SBBI's long-term arithmetic mean monthly total return rate on large company common stocks was 11.62% and the long-term arithmetic mean monthly yield on Moody's Aaa/Aa-rated corporate bonds was 6.08%.[18] As shown on line 1 of page 8 of Schedule DWD-4, subtracting the mean monthly bond yield from the total return on large company stocks results in a long-term historical equity risk premium of 5.54%.

I used the arithmetic mean monthly total return rates for the large company stocks and yields (income returns) for the Moody's Aaa/Aa corporate bonds, because they are appropriate for the purpose of estimating the cost of capital as noted in SBBI – 2019.[19] The use of the arithmetic mean return

[17] SBBI Appendix A Tables: Morningstar Stocks, Bonds, Bills, & Inflation 1926-2018.
[18] As explained in Note 1 on page 9 of Schedule DWD-4.
[19] SBBI – 2019, at 10-22.

rates and yields is appropriate because historical total returns and equity risk premiums provide insight into the variance and standard deviation of returns needed by investors in estimating future risk when making a current investment. If investors relied on the geometric mean of historical equity risk premiums, they would have no insight into the potential variance of future returns because the geometric mean relates the change over many periods to a constant rate of change, thereby obviating the year-to-year fluctuations, or variance, which is critical to risk analysis.

Q. PLEASE EXPLAIN THE DERIVATION OF THE REGRESSION-BASED MARKET EQUITY RISK PREMIUM.

A. To derive the regression analysis-derived market equity risk premium of 8.70%, shown on line 2 of page 8 of Schedule DWD-4, I used the same monthly annualized total returns on large company common stocks relative to the monthly annualized yields on Moody's Aaa/Aa corporate bonds as mentioned above. The relationship between interest rates and the market equity risk premium was modeled using the observed monthly market equity risk premium as the dependent variable, and the monthly yield on Moody's Aaa/Aa corporate bonds as the independent variable. I used a linear Ordinary Least Squares ("OLS") regression, in which the market equity risk premium is expressed as a function of the Moody's Aaa/Aa corporate bonds yield:

$$RP = \alpha + \beta\,(R_{Aaa/Aa})$$

Q. PLEASE EXPLAIN THE DERIVATION OF A PRPM EQUITY RISK PREMIUM.

A. I used the same PRPM approach described previously to develop another equity risk premium estimate. The inputs to the model are the historical monthly returns on large company common stocks minus the monthly yields on Aaa/Aa corporate bonds during the period from January 1928 through September 2019.[20] Using the previously discussed generalized form of ARCH, known as GARCH, the projected equity risk premium is determined using Eviews© statistical software. The resulting PRPM predicted market equity risk premium is 8.12%.[21]

Q. PLEASE EXPLAIN THE DERIVATION OF A PROJECTED EQUITY RISK PREMIUM BASED ON *VALUE LINE* DATA FOR YOUR RPM ANALYSIS.

A. As noted previously, because both ratemaking and the cost of capital are prospective, a prospective market equity risk premium is needed. The derivation of the forecasted or prospective market equity risk premium can be found in Note 4 on page 8 of Schedule DWD-4. Consistent with my calculation of the dividend yield component in my DCF analysis, this prospective market equity risk premium is derived from an average of the three- to five-year median market price appreciation potential by *Value Line* for the 13 weeks ending October 18, 2019, plus an average of the median

[20] Data from January 1926-December 2018 is from SBBI – 2019. Data from January – September 2019 is from Bloomberg Professional Services.

[21] Shown on Line No. 3 on page 8 of Schedule DWD-4.

estimated dividend yield for the common stocks of the 1,700 firms covered in *Value Line*'s Standard Edition.[22]

The average median expected price appreciation is 55%, which translates to an 11.58% annual appreciation, and, when added to the average of *Value Line's* median expected dividend yields of 2.25%, equates to a forecasted annual total return rate on the market of 13.83%. The forecasted Aaa bond yield of 3.60% is deducted from the total market return of 13.83%, resulting in an equity risk premium of 10.23%, shown on page 8, line 4 of Schedule DWD-4.

Q. PLEASE EXPLAIN THE DERIVATION OF AN EQUITY RISK PREMIUM BASED ON THE S&P 500 COMPANIES.

A. Using data from *Value Line*, I calculated an expected total return on the S&P 500 using expected dividend yields and long-term growth estimates as a proxy for capital appreciation. The expected total return for the S&P 500 is 14.52%. Subtracting the prospective yield on Aaa Corporate bonds of 3.60% results in an 10.92% projected equity risk premium.

Q. PLEASE EXPLAIN THE DERIVATION OF AN EQUITY RISK PREMIUM BASED ON BLOOMBERG DATA.

A. Using data from Bloomberg Professional Services, I calculated an expected total return on the S&P 500 using expected dividend yields and long-term growth estimates as a proxy for capital appreciation, identical to the method

[22] As explained in detail in page 2, Note 1 of Schedule DWD-5.

described above. The expected total return for the S&P 500 is 13.16%. Subtracting the prospective yield on Aaa Corporate bonds of 3.60% results in a 9.56% projected equity risk premium.

Q. WHAT IS YOUR CONCLUSION OF A BETA-DERIVED EQUITY RISK PREMIUM FOR USE IN YOUR RPM ANALYSIS?

A. I give equal weight to the six equity risk premiums in arriving at my conclusion of 8.85%.[23]

After calculating the average market equity risk premium of 8.85%, I adjust it by beta to account for the risk of the Utility Proxy Group. As discussed below, the beta coefficient is a meaningful measure of prospective relative risk to the market as a whole and is a logical means by which to allocate a company's, or proxy group's, share of the market's total equity risk premium relative to corporate bond yields. As shown on page 1 of Schedule DWD-5, the average of the mean and median beta coefficient for the Utility Proxy Group is 0.64. Multiplying the beta coefficient of the Utility Proxy Group of 0.64 by the market equity risk premium of 8.85% results in a beta-adjusted equity risk premium of 5.66% for the Utility Proxy Group.

[23] *See,* Line No. 7 on page 8 of Schedule DWD-4.

Q. HOW DID YOU DERIVE THE EQUITY RISK PREMIUM BASED ON THE S&P UTILITY INDEX AND MOODY'S A-RATED PUBLIC UTILITY BONDS?

A. I estimated three equity risk premiums based on S&P Utility Index holding returns, and two equity risk premiums based on the expected returns of the S&P Utilities Index, using *Value Line* and Bloomberg data, respectively. Turning first to the S&P Utility Index holding period returns, I derived a long-term monthly arithmetic mean equity risk premium between the S&P Utility Index total returns of 10.56% and monthly A-rated public utility bond yields of 6.56% from 1928 to 2018 to arrive at an equity risk premium of 4.00%.[24] I then used the same historical data to derive an equity risk premium of 6.30% based on a regression of the monthly equity risk premiums. The final S&P Utility Index holding period equity risk premium involved applying the PRPM using the historical monthly equity risk premiums from January 1928 to September 2019 to arrive at a PRPM-derived equity risk premium of 3.92% for the S&P Utility Index.

I then derived expected total returns on the S&P Utilities Index of 10.25% and 8.94% using data from *Value Line* and Bloomberg Professional Services, respectively, and subtracted the prospective A2-rated public utility bond yield (3.95%[25]), which results in risk premiums of 6.30% and 4.99%,

[24] As shown on Line No. 1 on page 12 of Schedule DWD-4.
[25] Derived on Line No. 3 of page 3 of Schedule DWD-4.

respectively. As with the market equity risk premiums, I averaged each risk premium to arrive at my utility-specific equity risk premium of 5.10%.

Q. WHAT IS YOUR CONCLUSION OF AN EQUITY RISK PREMIUM FOR USE IN YOUR TOTAL MARKET APPROACH RPM ANALYSIS?

A. The equity risk premium I applied to the Utility Proxy Group is 5.38%, which is the average of the beta-derived and the S&P utility equity risk premiums of 5.66% and 5.10%, respectively.[26]

Q. WHAT IS THE INDICATED RPM COMMON EQUITY COST RATE BASED ON THE TOTAL MARKET APPROACH?

A. As shown on Line No. 7 of Schedule DWD-4, page 3, I calculated a common equity cost rate of 9.39% for the Utility Proxy Group based on the total market approach of the RPM.

Q. WHAT ARE THE RESULTS OF YOUR APPLICATION OF THE PRPM AND THE TOTAL MARKET APPROACH RPM?

A. As shown on page 1 of Schedule DWD-4, the indicated RPM-derived common equity cost rate is 10.12%, which gives equal weight to the PRPM (10.84%) and the adjusted market approach results (9.39%).

C. <u>THE CAPITAL ASSET PRICING MODEL</u>

Q. PLEASE EXPLAIN THE THEORETICAL BASIS OF THE CAPM.

A. CAPM theory defines risk as the co-variability of a security's returns with the market's returns as measured by the beta coefficient (β). A beta

[26] As shown on page 7 of Schedule DWD-4.

coefficient less than 1.0 indicates lower variability than the market as a whole, while a beta coefficient greater than 1.0 indicates greater variability than the market.

The CAPM assumes that all other risk (*i.e.*, all non-market or unsystematic risk) can be eliminated through diversification. The risk that cannot be eliminated through diversification is called market, or systematic, risk. In addition, the CAPM presumes that investors require compensation only for systematic risk, which is the result of macroeconomic and other events that affect the returns on all assets. The model is applied by adding a risk-free rate of return to a market risk premium, which is adjusted proportionately to reflect the systematic risk of the individual security relative to the total market as measured by the beta coefficient. The traditional CAPM model is expressed as:

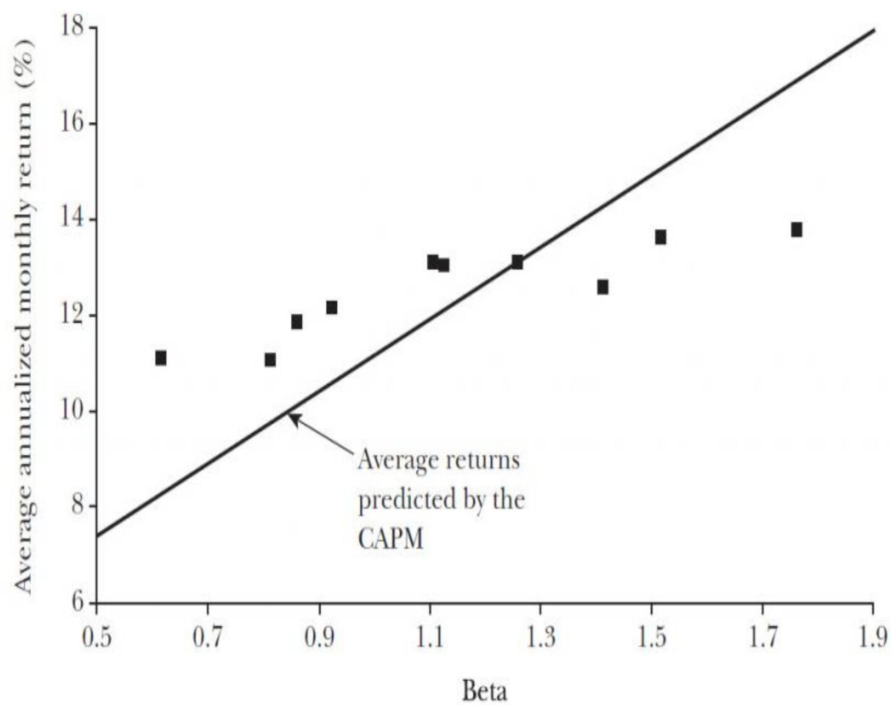
$$R_s = R_f + \beta(R_m - R_f)$$

Where:	R_s	=	Return rate on the common stock
	R_f	=	Risk-free rate of return
	R_m	=	Return rate on the market as a whole
	β	=	Adjusted beta coefficient (volatility of the security relative to the market as a whole)

Numerous tests of the CAPM have measured the extent to which security returns and beta coefficients are related as predicted by the CAPM, confirming its validity. The empirical CAPM ("ECAPM") reflects the reality that while the results of these tests support the notion that the beta coefficient is related to security returns, the empirical Security Market Line ("SML") described by the CAPM formula is not as steeply sloped as the predicted SML.[27] The ECAPM reflects this empirical reality. Fama and French clearly state regarding Figure 2, below, that "[t]he returns on the low beta portfolios are too high, and the returns on the high beta portfolios are too low." [28]

Figure 2 http://pubs.aeaweb.org/doi/pdfplus/10.1257/0895330042162430

Average Annualized Monthly Return versus Beta for Value Weight Portfolios Formed on Prior Beta, 1928–2003



[27] Roger A. Morin, New Regulatory Finance (Public Utility Reports, Inc., 2006), at p. 175. ("Morin")

[28] Eugene F. Fama and Kenneth R. French, "The Capital Asset Pricing Model: Theory and Evidence", *Journal of Economic Perspectives*, Vol. 18, No. 3, Summer 2004 at 33 ("Fama & French"). http://pubs.aeaweb.org/doi/pdfplus/10.1257/0895330042162430

In addition, Morin observes that while the results of these tests support the notion that beta is related to security returns, the empirical SML described by the CAPM formula is not as steeply sloped as the predicted SML. Morin states:

> With few exceptions, the empirical studies agree that … low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted.[29]
>
> * * *
>
> Therefore, the empirical evidence suggests that the expected return on a security is related to its risk by the following approximation:
>
> $$K = R_F + x\,\beta(R_M - R_F) + (1-x)\,\beta(R_M - R_F)$$
>
> where x is a fraction to be determined empirically. The value of x that best explains the observed relationship [is] Return = 0.0829 + 0.0520 β is between 0.25 and 0.30. If x = 0.25, the equation becomes:
>
> $$K = R_F + 0.25(R_M - R_F) + 0.75\,\beta(R_M - R_F)$$[30]

Fama and French provide similar support for the ECAPM when they state:

> The early tests firmly reject the Sharpe-Lintner version of the CAPM. There is a positive relation between beta and average return, but it is too 'flat.'… The regressions consistently find that the intercept is greater than the average risk-free rate… and the coefficient on beta is less than the average excess market return… This is true in the early tests… as well as in more recent cross-section regressions tests, like Fama and French (1992).[31]

Finally, Fama and French further note:

[29] Morin, at 175.
[30] Morin, at 190.
[31] Fama & French, at 32.

> Confirming earlier evidence, the relation between beta and average return for the ten portfolios is much flatter than the Sharpe-Linter CAPM predicts. The returns on low beta portfolios are too high, and the returns on the high beta portfolios are too low. For example, the predicted return on the portfolio with the lowest beta is 8.3 percent per year; the actual return as 11.1 percent. The predicted return on the portfolio with the t beta is 16.8 percent per year; the actual is 13.7 percent.[32]

Clearly, the justification from Morin, Fama, and French along with their reviews of other academic research on the CAPM, validate the use of the ECAPM. In view of theory and practical research, I have applied both the traditional CAPM and the ECAPM to the companies in the Utility Proxy Group and averaged the results.

Q. WHAT BETA COEFFICIENTS DID YOU USE IN YOUR CAPM ANALYSIS?

A. With respect to the beta coefficient, I considered two methods of calculation: the average of the beta coefficients of the Utility Proxy Group companies reported by Bloomberg Professional Services and the average of the beta coefficients of the Utility Proxy Group companies as reported by *Value Line*. While both of those services adjust their calculated (or "raw") beta coefficients to reflect the tendency of the beta coefficient to regress to the market mean of 1.00, *Value Line* calculates the beta coefficient over a five-year period, while Bloomberg's calculation is based on two years of data.

32 *Ibid.,* at 33.

Q. PLEASE DESCRIBE YOUR SELECTION OF A RISK-FREE RATE OF RETURN.

A. As shown in Column 5 on page 1 of Schedule DWD-5, the risk-free rate adopted for both applications of the CAPM is 2.64%. This risk-free rate of 2.64% is based on the average of the *Blue Chip* consensus forecast of the expected yields on 30-year U.S. Treasury bonds for the six quarters ending with the first calendar quarter of 2021 and long-term projections for the years 2021 to 2025 and 2026 to 2030.

Q. WHY IS THE YIELD ON LONG-TERM U.S. TREASURY BONDS APPROPRIATE FOR USE AS THE RISK-FREE RATE?

A. The yield on long-term U.S. Treasury Bonds is almost risk-free and its term is consistent with the long-term cost of capital to public utilities measured by the yields on A-rated public utility bonds; the long-term investment horizon inherent in utilities' common stocks; and the long-term life of the jurisdictional rate base to which the allowed fair rate of return (*i.e.*, cost of capital) will be applied. In contrast, short-term U.S. Treasury yields are more volatile and largely a function of Federal Reserve monetary policy.

Q. PLEASE EXPLAIN THE ESTIMATION OF THE EXPECTED RISK PREMIUM FOR THE MARKET USED IN YOUR CAPM ANALYSES.

A. The basis of the market risk premium is explained in detail in Note 1 on Schedule DWD-5. As discussed previously, the market risk premium is derived from an average of:

(i) Ibbotson-based market risk premiums;

(ii) *Value Line* data-based market risk premiums; and

(iii) Bloomberg data-based market risk premium.

The long-term income return on U.S. Government Securities of 5.12% was deducted from the SBBI - 2019 monthly historical total market return of 11.89%, which results in an historical market equity risk premium of 6.77%.[33] I applied a linear OLS regression to the monthly annualized historical returns on the S&P 500 relative to historical yields on long-term U.S. Government Securities from SBBI - 2019. That regression analysis yielded a market equity risk premium of 9.69%. The PRPM market equity risk premium is 9.14% and is derived using the PRPM relative to the yields on long-term U.S. Treasury securities from January 1926 through September 2019.

The *Value Line*-derived forecasted total market equity risk premium is derived by deducting the forecasted risk-free rate of 2.64%, discussed above, from the *Value Line* projected total annual market return of 13.83%, resulting in a forecasted total market equity risk premium of 11.19%. The S&P 500 projected market equity risk premium using *Value Line* data is derived by subtracting the projected risk-free rate of 2.64% from the projected total return of the S&P 500 of 14.52%. The resulting market equity risk premium is 11.88%.

[33] SBBI – 2019, at Appendix A-1 (1) through .A-1 (3) and Appendix A-7 (19) through A-7 (21).

The S&P 500 projected market equity risk premium using Bloomberg data is derived by subtracting the projected risk-free rate of 2.64% from the projected total return of the S&P 500 of 13.16%. The resulting market equity risk premium is 10.52%.

These six market risk premiums, when averaged, result in an average total market equity risk premium of 9.87%.

Q. WHAT ARE THE RESULTS OF YOUR APPLICATION OF THE TRADITIONAL AND EMPIRICAL CAPM TO THE UTILITY PROXY GROUP?

A. As shown on page 1 of Schedule DWD-5, the mean result of my CAPM/ECAPM analyses is 9.39%, the median is 9.31%, and the average of the two is 9.35%. Consistent with my reliance on the average of mean and median DCF results discussed above, the indicated common equity cost rate using the CAPM/ECAPM is 9.35%.

D. <u>COMMON EQUITY COST RATES FOR A PROXY GROUP OF DOMESTIC, NON-PRICE REGULATED COMPANIES BASED ON THE DCF, RPM, AND CAPM</u>

Q. WHY DO YOU ALSO CONSIDER A PROXY GROUP OF DOMESTIC, NON-PRICE REGULATED COMPANIES?

A. In the *Hope* and *Bluefield* cases, the U.S. Supreme Court did not specify that comparable risk companies had to be utilities. Since the purpose of rate regulation is to be a substitute for the competition of the marketplace, non-price regulated firms operating in the competitive marketplace make an excellent proxy if they are comparable in total risk to the Utility Proxy Group being used to estimate the cost of common equity. The selection of such domestic, non-price-regulated competitive firms theoretically and empirically results in a proxy group which is comparable in total risk to the Utility Proxy Group.

Q. HOW DID YOU SELECT UNREGULATED COMPANIES THAT ARE COMPARABLE IN TOTAL RISK TO THE REGULATED PUBLIC UTILITY PROXY GROUP?

A. In order to select a proxy group of domestic, non-price regulated companies similar in total risk to the Utility Proxy Group, I relied on the beta coefficients and related statistics derived from *Value Line* regression analyses of weekly market prices over the most recent 260 weeks (*i.e.*, five years). Using these selection criteria resulted in a proxy group of ten domestic, non-price regulated firms comparable in total risk to the Utility Proxy Group. Total risk is the sum of non-diversifiable market risk and diversifiable company-specific risks. The criteria used in the selection of the domestic, non-price regulated firms was:

(i) They must be covered by *Value Line Investment Survey* (Standard Edition);

(ii) They must be domestic, non-price regulated companies, *i.e.*, non-utilities;

(iii) Their beta coefficients must lie within plus or minus two standard deviations of the average unadjusted beta coefficient of the Utility Proxy Group; and

(iv) The residual standard errors of the *Value Line* regressions which gave rise to the unadjusted beta coefficients must lie within plus or minus two standard deviations of the average residual standard error of the Utility Proxy Group.

Beta coefficients are a measure of market, or systematic, risk, which is not diversifiable. The residual standard errors of the regressions were used to measure each firm's company-specific, diversifiable risk. Companies that have similar beta coefficients and similar residual standard errors resulting from the same regression analyses have similar total investment risk.

Q. HAVE YOU PREPARED A SCHEDULE WHICH SHOWS THE DATA FROM WHICH YOU SELECTED THE TEN DOMESTIC, NON-PRICE REGULATED COMPANIES THAT ARE COMPARABLE IN TOTAL RISK TO THE UTILITY PROXY GROUP?

A. Yes, the basis of my selection and both proxy groups' regression statistics are shown in Schedule DWD-6.

Q. DID YOU REVIEW THE COMMISSION'S ORDER[34] REGARDING THE USE OF A NON-PRICE REGULATED PROXY GROUP IN THE COMPANY'S LAST RATE CASE?

A. I have. Regarding the use of a Non-Price Regulated Proxy Group, the Commission concluded that since the market model results were different

[34] State of North Carolina Utilities Commission, Docket No. W-218, Sub 497, Order approving joint settlement agreement and stipulation, granting partial rate increase, and requiring customer notice, December 18, 2018, at 160-161.

than the results of those same models applied to the Utility Proxy Group, the two groups could not be similar in risk. In order to provide more information to show similarity between the Utility and Non-Price Regulated Proxy Groups, I have analyzed the coefficients of variation ("CoV")[35] of net profit for each group and the results of that study are shown on page 4 of Schedule DWD-6. As shown, the mean and median CoV of net profit for the Non-Price Regulated Proxy Group are within the range of CoVs of net profit set by the Utility Proxy Group companies. With this additional information, I would hope that the Commission revisit this argument in its Order in this case.

Q. DID YOU CALCULATE COMMON EQUITY COST RATES USING THE DCF, RPM, AND CAPM FOR THE NON-PRICE REGULATED PROXY GROUP?

A. Yes. Because the DCF, RPM, and CAPM have been applied in an identical manner as described above, I will not repeat the details of the rationale and application of each model. One exception is in the application of the RPM, where I did not use public utility-specific equity risk premiums, nor did I apply the PRPM to the individual companies.

Page 2 of Schedule DWD-7 contains the derivation of the DCF cost rates. As shown, the indicated common equity cost rate using the DCF for the

[35] The coefficient of variation is used by investors and economists to determine volatility.

Non-Price Regulated Proxy Group comparable in total risk to the Utility Proxy Group, is 11.63%.

Pages 3 through 5 contain the data and calculations that support the 11.41% RPM cost rate. As shown on Line No. 1 of page 3 of Schedule DWD-7, the consensus prospective yield on Moody's Baa rated corporate bonds for the six quarters ending in the first quarter of 2021, and for the years 2021 to 2025 and 2026 to 2030, is 4.60%.[36]

When the beta-adjusted risk premium of 6.81%[37] relative to the Non-Price Regulated Proxy Group is added to the prospective Baa2-rated corporate bond yield of 4.60%, the indicated RPM cost rate is 11.41%.

Page 6 contains the inputs and calculations that support my indicated CAPM/ECAPM cost rate of 10.44%.

Q. HOW IS THE COST RATE OF COMMON EQUITY BASED ON THE NON-PRICE REGULATED PROXY GROUP COMPARABLE IN TOTAL RISK TO THE UTILITY PROXY GROUP?

A. As shown on page 1 of Schedule DWD-7, the results of the DCF, RPM, and CAPM applied to the Non-Price Regulated Proxy Group comparable in total risk to the Utility Proxy Group are 11.63%, 11.41%, and 10.44%, respectively. The average of the mean and median of these models is 11.29%, which I use as the indicated common equity cost rate for the Non-Price Regulated Proxy Group.

36 *Blue Chip Financial Forecasts*, June 1, 2019, at p. 14 and October 1, 2019, at p. 2.
37 Derived on page 5 of Schedule DWD-7.

VIII. CONCLUSION OF COMMON EQUITY COST RATE BEFORE ADJUSTMENT

Q. WHAT IS THE INDICATED COMMON EQUITY COST RATE BEFORE ADJUSTMENT?

A. Based on the results of the application of multiple cost of common equity models to the Utility Proxy Group and the Non-Price Regulated Proxy Group, the indicated cost of equity before adjustment is 9.80%. I use multiple cost of common equity models as primary tools in arriving at my recommended common equity cost rate, because no single model is so inherently precise that it can be relied on solely to the exclusion of other theoretically sound models. The use of multiple models adds reliability to the estimation of the common equity cost rate, and the prudence of using multiple cost of common equity models is supported in both the financial literature and regulatory precedent.

Based on these common equity cost rate results, I conclude that a common equity cost rate of 9.80% is reasonable, appropriate and indicated for the Company before any adjustment for relative risk between the Company and the Utility Proxy Group is made. The 9.80% indicated ROE is the approximate average of the mean and median results produced by my application of the models as explained above.

IX. ADJUSTMENTS TO THE COMMON EQUITY COST RATE

A. SIZE ADJUSTMENT

Q. IS THERE A WAY TO QUANTIFY A RELATIVE RISK ADJUSTMENT DUE TO AQUA NORTH CAROLINA'S SMALL SIZE RELATIVE TO THE PROXY GROUP?

A. Yes. The Company has greater relative risk than the average company in the Utility Proxy Group because of its smaller size compared with the group, as measured by an estimated market capitalization of common equity for Aqua North Carolina (whose common stock is not publicly-traded).

TABLE 5: SIZE AS MEASURED BY MARKET CAPITALIZATION FOR THE COMPANY AND THE UTILITY PROXY GROUP

	MARKET CAPITALIZATION* ($ Millions)	TIMES GREATER THAN THE COMPANY
Aqua North Carolina	$442.658	
Utility Proxy Group	$5,032.696	11.4x

*From page 1 of Schedule DWD-8.

The Company's estimated market capitalization was at $442.658 million as of October 18, 2019, compared with the market capitalization of the average water company in the Utility Proxy Group of $5.033 billion as of October 18, 2019. The Utility Proxy Group's market capitalization is 11.4 times the size of Aqua North Carolina's estimated market capitalization.

Q. PLEASE EXPLAIN WHY SIZE HAS A BEARING ON BUSINESS RISK.

A. Company size is a significant element of business risk for which investors expect to be compensated through higher returns. Generally, smaller companies are less able to cope with significant events that affect sales, revenues, and earnings. For example, smaller companies face more risk exposure to business cycles and economic conditions, both nationally and locally. Additionally, the loss of revenues from a few larger customers would have a greater effect on a small company than on a much larger company with a larger, more diverse, customer base.

Further evidence of the risk effects of size include the fact that investors demand greater returns to compensate for the lack of marketability and liquidity of the securities of smaller firms. For these reasons, the Commission should authorize a cost of common equity in this proceeding that reflects Aqua North Carolina's relevant risk, including the impact of its small size.

As a result, it is necessary to upwardly adjust the indicated common equity cost rate of 9.80% to reflect Aqua North Carolina's greater risk due to its smaller relative size. The determination is based on the size premiums for portfolios of New York Stock Exchange, American Stock Exchange, and NASDAQ listed companies ranked by deciles for the 1926 to 2018 period. The average size premium for the Utility Proxy Group with a market capitalization of $5.033 billion falls in the 4th decile, while Aqua North Carolina's market capitalization of $442.658 million places the Company in the 9th decile. The size premium spread between the 4th decile and the 9th decile is 1.61%. Even though a 1.61% upward size adjustment is indicated, I apply a size premium of 0.20% to Aqua North Carolina's indicated common equity cost rate.

Q. WHAT IS THE INDICATED COST OF COMMON EQUITY AFTER ADJUSTMENT FOR SIZE?

A. After applying the 0.20% size adjustment to the indicated cost of common equity of 9.80%, a size-adjusted cost of common equity of 10.00% results.

Q. HAVE YOU REVIEWED THE COMMISSION'S ORDER[38] REGARDING THE SIZE ADJUSTMENT IN THE COMPANY'S LAST RATE CASE?

A. I have. The Commission's concerns regarding the size adjustment were that Aqua North Carolina is a part of Aqua America, Inc., which is a large, publicly-traded water company, and whether the size studies presented in the record were applicable to utilities, and that the selection of a 20-basis point adjustment was rather arbitrary.

Q. **SHOULD THE COMMISSION CONSIDER AQUA NORTH CAROLINA AS A STAND-ALONE COMPANY?**

A. Yes, it should. Because it is the rate base of Aqua America's North Carolina operations to which the overall rates of return set forth in this proceeding will be applied, they should be evaluated as a stand-alone entity. To do

[38] State of North Carolina Utilities Commission, Docket No. W-218, Sub 497, Order approving joint settlement agreement and stipulation, granting partial rate increase, and requiring customer notice, December 18, 2018, at 161.

otherwise would be discriminatory, confiscatory and inaccurate. It is also a basic financial precept that the use of the funds invested give rise to the risk of the investment. As Brealey and Myers state:

> The true cost of capital depends on the use to which the capital is put.
>
> ***
>
> ***Each project should be evaluated at its own opportunity cost of capital; the true cost of capital depends on the use to which the capital is put***. (italics and bold in original) [39]

Morin confirms Brealey and Myers when he states:

> Financial theory clearly establishes that the cost of equity is the risk-adjusted opportunity cost of the investors and not the cost of the specific capital sources employed by the investors. The true cost of capital depends on the use to which the capital is put and not on its source. The Hope and Bluefield doctrines have made clear that the relevant considerations in calculating a company's cost of capital are the alternatives available to investors and the returns and risks associated with those alternatives.[40]

Additionally, Levy and Sarnat state:

> The firm's cost of capital is the discount rate employed to discount the firm's average cash flow, hence obtaining the value of the firm. It is also the weighted average cost of capital, as we shall see below. The weighted average cost of capital should be employed for project evaluation… only in cases where the risk profile of the new projects is a "carbon copy" of the risk profile of the firm[41]

39 Richard A. Brealey and Stewart C. Myers, <u>Principles of Corporate Finance,</u> McGraw-Hill, Third Edition, 1988, at pp. 173, 198.

40 Morin, at p. 523.

41 Haim Levy & Marshall Sarnat, <u>Capital Investment and Financial Decisions</u>, Prentice/Hall International, 1986, p. 465.

Although Levy and Sarnat discuss a project's cost of capital relative to a firm's cost of capital, these principles apply equally to the use of a proxy group-based cost of capital. Each company must be viewed on its own merits, regardless of the source of its equity capital. As *Bluefield* clearly states:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; [42]

In other words, it is the "risks and uncertainties" surrounding the property employed for the "convenience of the public" which determines the appropriate level of rates. In this proceeding, the property employed "for the convenience of the public" is the rate base of the North Carolina operations of Aqua America. Thus, it is only the risk of investment in the North Carolina rate base that is relevant to the determination of the cost of common equity to be applied to the common equity-financed portion of that rate base.

In addition, in the Fama and French article previously cited, the authors[43] proposed that their three-factor model include the SMB (Small Minus Big) factor, which indicates that small capitalization firms are more risky than

[42] *Bluefield*, p. 6.
[43] Fama and French, p. 39.

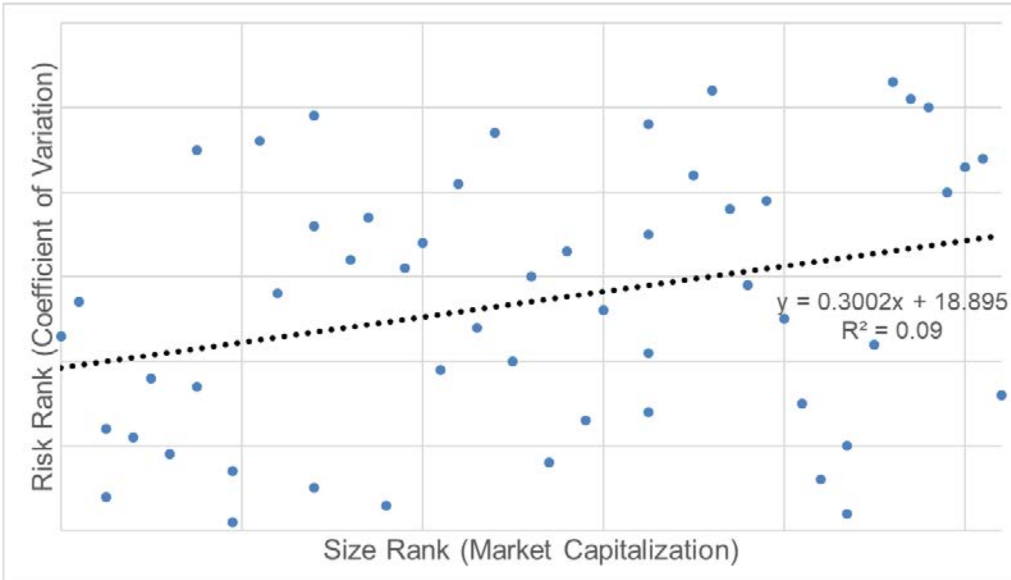
large capitalization firms, confirming that size is a risk factor which must be taken into account in estimating the cost of common equity.

Consistent with the financial principle of risk and return discussed previously and the stand-alone nature of ratemaking, an upward adjustment must be applied to the indicated cost of common equity derived from the cost of equity models of the proxy groups used in this proceeding.

Q. DID YOU PREPARE A STUDY WHICH LINKS COMPANY SIZE AND RISK FOR UTILITY COMPANIES?

A. Yes, I did. In order to provide more information to the Commission in this case, I conducted a study on whether or not the size effect is in fact applicable to utilities. My study included the universe of water, gas, and electric companies included in *Value Line Standard Edition.* From each of the utilities' *Value Line Ratings & Reports*, I calculated the 10-year CoV of net profit (a measure of risk) and current market capitalization (a measure of size) for each company. After ranking the companies by size (largest to smallest) and risk (least risky to most risky), I made a scatter plot of the data, as shown on Chart 1, below:

CHART 1: RELATIONSHIP BETWEEN SIZE AND RISK FOR THE *VALUE LINE* UNIVERSE OF UTILITY COMPANIES[44]



As shown in Chart 1 above, as company size decreases (increasing size rank), the CoV increases, linking size and risk for utilities. The R-Squared of 0.0911 means that approximately 9% of the change in risk rank is explained by the size rank. While a 0.09 R-Squared does not appear to have strong explanatory power, the average R-Squared of the Utility Proxy Group's beta coefficient is 0.0672.[45] The selection of a 20-basis point upward adjustment based on its difference in size given an indicated risk premium of approximately 160 basis points is consistent with the approximate 0.09 R-Squared of the size study applicable to utilities. With

[44] Source of Information: Value Line Investment Survey (Standard Edition).

[45] An R-Squared of 0.0672 indicates that only approximately 7% of the change in risk is explained by beta.

this additional information, I would hope that the Commission revisit this concern in its Order in this case.

B. FLOTATION COST ADJUSTMENT

Q. WHAT ARE FLOTATION COSTS?

A. Flotation costs are those costs associated with the sale of new issuances of common stock. They include market pressure and the essential costs of issuance (*e.g.*, underwriting fees and out-of-pocket costs for printing, legal, registration, etc.).

Q. WHY IS IT IMPORTANT TO RECOGNIZE FLOTATION COSTS IN THE ALLOWED COMMON EQUITY COST RATE?

A. It is important because there is no other mechanism in the ratemaking paradigm through which such costs can be recovered. Because these costs are real and legitimate, recovery of these costs should be permitted. As noted by Dr. Roger Morin:

> The costs of issuing these securities are just as real as operating and maintenance expenses or costs incurred to build utility plants, and fair regulatory treatment must permit recovery of these costs….
>
> The simple fact of the matter is that common equity capital is not free….[Flotation costs] must be recovered through a rate of return adjustment.[46]

[46] Morin, at p. 321.

Q. SHOULD FLOTATION COSTS BE RECOGNIZED ONLY WHEN THERE HAS BEEN AN ISSUANCE DURING THE TEST YEAR OR THERE IS AN IMMINENT POST-TEST YEAR ISSUANCE OF ADDITIONAL COMMON STOCK?

A. No. As noted above, there is no mechanism to recapture such costs in the ratemaking paradigm other than an adjustment to the allowed common equity cost rate. Flotation costs are charged to capital accounts and are not expensed on a utility's income statement. As such, flotation costs are analogous to capital investments reflected on the balance sheet. Recovery of capital investments relates to the expected useful lives of the investment. Since common equity has a very long and indefinite life (assumed to be infinity in the standard regulatory DCF model), flotation costs should be recovered through an adjustment to common equity cost rate, even when there has not been an issuance during the test year or in the absence of an expected imminent issuance of additional shares of common stock.

Historical flotation costs are a permanent loss of investment to the utility and should be accounted for. When any company, including a utility, issues common stock, flotation costs are incurred for legal, accounting, printing fees and the like. For each dollar of issuing market price, a small percentage is expensed and is permanently unavailable for investment in utility rate base. Since these expenses are charged to capital accounts and not expensed on the income statement, the only way to restore the full value of that dollar of issuing price with an assumed investor required return of

10% is for the net investment, $0.95, to earn more than 10% to net back to the investor a fair return on that dollar. In other words, if a company issues stock at $1.00 with 5% in flotation costs, it will net $0.95 in investment. Assuming the investor in that stock requires a 10% return on his or her invested $1.00 (*i.e.*, a return of $0.10), the company needs to earn approximately 10.5% on its invested $0.95 to receive a $0.10 return.

Q. DO THE COMMON EQUITY COST RATE MODELS YOU HAVE USED ALREADY REFLECT INVESTORS' ANTICIPATION OF FLOTATION COSTS?

A. No. All of these models assume no transaction costs. The literature is quite clear that these costs are not reflected in market prices paid for common stocks. For example, Brigham and Daves confirm this and provide the methodology utilized to calculate the flotation adjustment.[47] In addition, Dr. Morin confirms the need for such an adjustment even when no new equity issuance is imminent.[48] Consequently, it is proper to include a flotation cost adjustment when using cost of common equity models to estimate the common equity cost rate.

Q. HOW DID YOU CALCULATE THE FLOTATION COST ALLOWANCE?

A. I modified the DCF calculation to provide a dividend yield that would reimburse investors for issuance costs in accordance with the method cited

[47] Eugene F. Brigham and Phillip R. Daves, Intermediate Financial Management, 9th Edition, Thomson/Southwestern, at p. 342.

[48] Morin, at pp. 327-330.

in literature by Brigham and Daves, as well as by Morin. The flotation cost adjustment recognizes the costs of issuing equity that were incurred by Aqua America, Inc. since January 2001. Based upon the issuance costs shown on page 1 of Schedule DWD-9, an adjustment of 0.07% is required to reflect the flotation costs applicable to the Company.

Q. WHAT IS THE INDICATED COST OF COMMON EQUITY AFTER ADJUSTMENTS FOR SIZE AND FLOTATION COSTS?

After applying the 0.07% flotation cost adjustment to the size-adjusted cost of common equity of 10.00%, an adjusted cost of common equity of 10.07% results.

X. ECONOMIC CONDITIONS IN NORTH CAROLINA

Q. DID YOU CONSIDER THE ECONOMIC CONDITIONS IN NORTH CAROLINA IN ARRIVING AT YOUR RECOMMENDED COST OF COMMON EQUITY?

A. Yes, I did. As the Commission has stated, it "…is and must always be mindful of the North Carolina Supreme Court's command that the Commission's task is to set rates as low as possible consistent with the dictates of the United States and North Carolina Constitutions."[49] In that regard, the cost of common equity should be neither excessive nor

[49] State of North Carolina Utilities Commission, Docket No. E-7, Sub 1026, Order Granting General Rate Increase, Sept. 24, 2013 at 24; see also DEC Remand Order at 40 ("the Commission in every case seeks to comply with the North Carolina Supreme Court's mandate that the Commission establish rates as low as possible within Constitutional limits.").

confiscatory; it should be the minimum amount needed to meet the *Hope* and *Bluefield* Comparable Risk, Capital Attraction, and Financial Integrity standards.

The Commission also has found that the role of cost of capital experts is to determine the investor-required return, not to estimate increments or decrements of that return in connection with consumers' economic environment:

> … adjusting investors' required costs based on factors upon which investors do not base their willingness to invest is an unsupportable theory or concept. The proper way to take into account customer ability to pay is in the Commission's exercise of fixing rates as low as reasonably possible without violating constitutional proscriptions against confiscation of property. This is in accord with the "end result" test of Hope. This the Commission has done.[50]

The Supreme Court agreed, and upheld the Commission's Order on Remand.[51] The North Carolina Supreme Court also made clear, however, that "in retail electric service rate cases the Commission must make findings of fact regarding the impact of changing economic conditions on customers when determining the proper ROE for a public utility."[52] The Commission made such additional findings of fact in its Order on Remand.[53] In light of

[50] State of North Carolina Utilities Commission, Docket No. E-7, Sub 989, Order on Remand, October 23, 2013, at 34 - 35; see also DEC Remand Order at 26 (stating that the Commission is not required to "isolate and quantify the effect of changing economic conditions on consumers in order to determine the appropriate rate of return on equity").

[51] State ex rel. Utils. Comm'n v. Cooper, 366 N.C. 484, 739 S.E.2d 541 (2013) (Cooper I)).

[52] State of North Carolina ex rel. Utilities Commission v. Cooper, 758 S.E.2d 635, 642 (2014) ("Cooper II").

[53] State of North Carolina Utilities Commission, Docket No. E-22, Sub 479, Order on Remand, July 23, 2015, at 4-10.

the 2013 Cooper I decision, I present measures of economic conditions in the state and in the nation for the Commission to consider.

Q. WHAT SPECIFIC MEASURES OF ECONOMIC CONDITIONS HAVE YOU REVIEWED?

A. I have reviewed the following:

(i) Unemployment rates from the United States, North Carolina, and the counties comprising Aqua North Carolina's service territory;

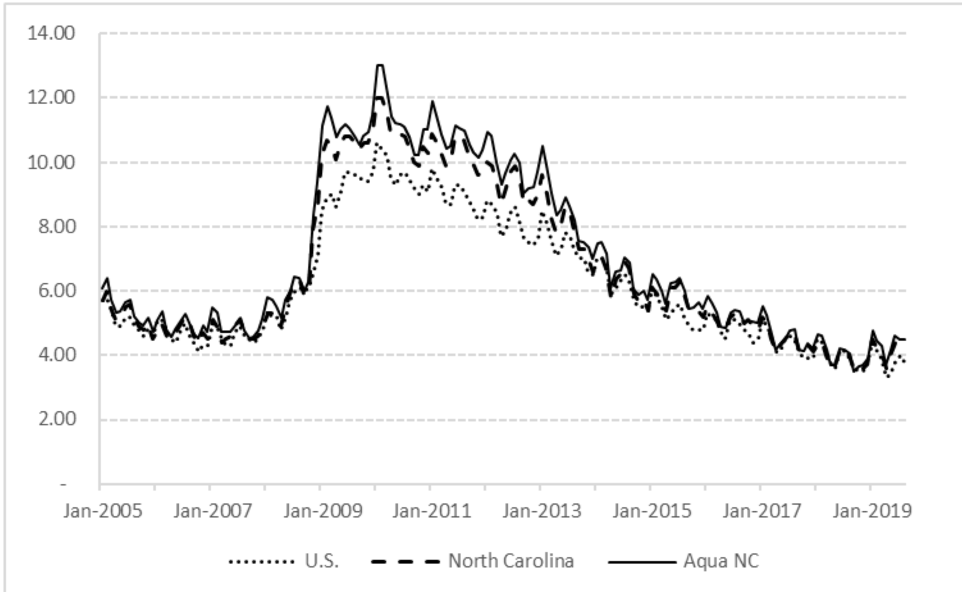
(ii) The growth in Gross National Product ("GDP") in both the United States and North Carolina;

(iii) Median household income in the United States and in North Carolina; and

(iv) National income and consumption trends.

Turning first to the rate of unemployment, it has fallen substantially in North Carolina and the U.S. since late 2009 and early 2010 when the rates peaked at 10.00% and 12.00%, respectively. Although the unemployment rate in North Carolina rather exceeded the national rate during and after the 2008/2009 financial crisis, by late 2013, the two were largely consistent. By August 2019, the unemployment rate had fallen to less than one-half of the 2008/2009 peak levels: 3.80% nationally; and 4.30% in North Carolina. (*see* Chart 2, below).

CHART 2: UNEMPLOYMENT RATE: U.S. NORTH CAROLINA, AND AQUA NORTH CAROLINA[54]



Since the conclusion of the Company's last rate filing in December 2018, the unemployment rate in North Carolina has increased from 3.70% to 4.30%. That 0.60% increase is higher than the U.S. unemployment rate which has increased 0.10% over that same period. Still, over the entire period of 2005 through 2019, the correlation between North Carolina's unemployment rate and the national rate was approximately 99%.

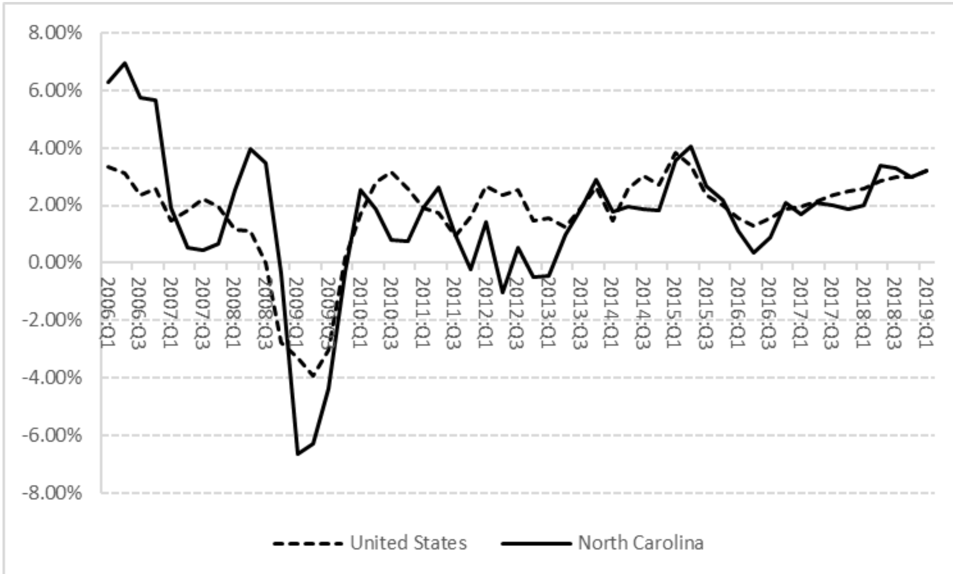
I was also able to review unemployment rates (seasonally unadjusted) in the counties served by Aqua North Carolina. At its peak, which occurred in late 2009 into early 2010, the unemployment rate in those counties reached an average 13.00% (100 basis points higher than the state-wide average); by August 2019 it had fallen to 4.48% (only 18 basis points higher than the

[54] Source of Information: Bureau of Labor Statistics.

state-wide average). Since the conclusion of the Company's last rate filing in December 2018, the counties' unemployment has also risen, from 3.88% to 4.48%. From 2005 through 2019, the correlation in unemployment rates between the counties served by Aqua North Carolina, and the U.S. and North Carolina, were also approximately 99%. In summary, although it remains slightly higher than national and state-wide averages, county-level unemployment has fallen considerably since its peak in early 2010.

Looking at real GDP growth, there also has been a relatively strong correlation between North Carolina and the national economy (approximately 75%). Since the financial crisis, the national rate of growth at times (during portions of 2010 and 2012) outpaced North Carolina. Since the second quarter of 2015, however, growth in the state's real GDP has been consistent with and occasionally exceeded the national growth rate.

CHART 3: REAL GROSS DOMESTIC PRODUCT GROWTH RATE [55]

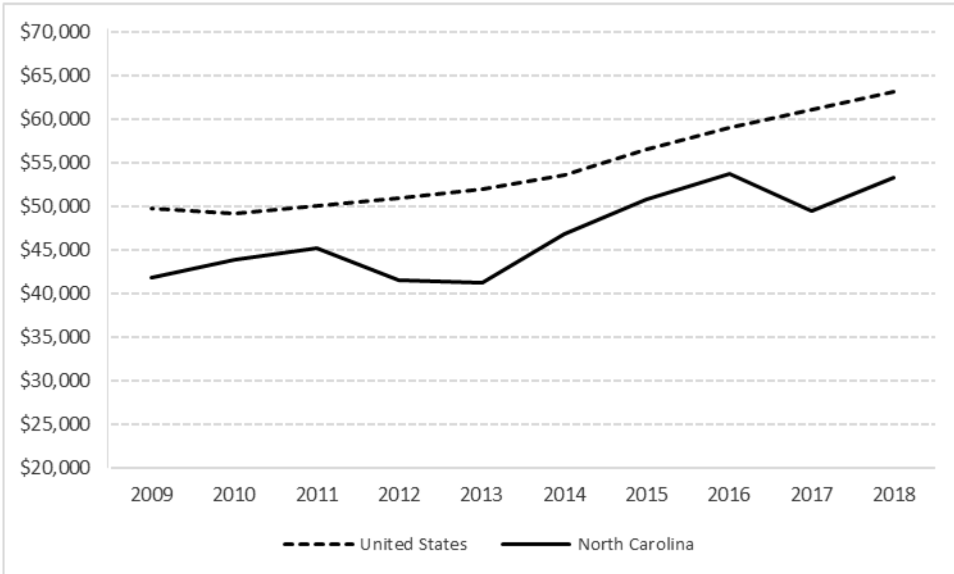


As to median household income, the correlation between North Carolina and the U.S. is relatively strong (approximately 89% from 2005 through 2019). Since 2009 (the years subsequent to the financial crisis), median household income in North Carolina has grown at a similar annual rate as the national median income (2.72% vs. 2.68%; *see* Chart 4, below). To put household income in perspective, the Missouri Economic Research and Information Center reports that in 2018, North Carolina had the 20th lowest cost of living index among the 50 states and the District of Columbia.[56]

55 Source: Bureau of Economic Analysis.

56 Source: https://www.missourieconomy.org/indicators/cost_of_living/ Accessed 11/15/19.

CHART 4: MEDIAN HOUSEHOLD INCOME[57]



Q. PLEASE SUMMARIZE YOUR ANALYSES AND CONCLUSIONS.

A. In its Order on Remand in Docket No. E-22, Sub 479, the Commission observed that economic conditions in North Carolina were highly correlated with national conditions, such that they were reflected in the analyses used to determine the cost of common equity.[58] Those relationships still hold: economic conditions in North Carolina continue to improve from the recession following the 2008/2009 financial crisis, and they continue to be strongly correlated to conditions in the U.S., generally. In particular, unemployment, at both the state and county level, continues to fall and remains highly correlated with national rates of unemployment; real Gross

[57] Source of Information: U.S. Census data.

[58] State of North Carolina Utilities Commission, Docket No. E-22, Sub 479, Order on Remand, July 23, 2015, at 39.

Domestic Product recently has grown faster in North Carolina than the national rate of growth, although the two remain fairly well correlated; and median household income also has grown faster in North Carolina than the rest of the Country, and remains strongly correlated with national levels. In sum, the correlations between state-wide measures of economic conditions noted by the Commission in Docket No. E-22, Sub 479 remain in place and, as such, they continue to be reflected in the models and data used to estimate the cost of common equity.

XI. CONCLUSION OF COMMON EQUITY COST RATE

Q. WHAT IS YOUR RECOMMENDED COST OF COMMON EQUITY FOR AQUA NORTH CAROLINA?

A. Given the indicated cost of common equity of 9.80%, and the size and flotation cost-adjusted cost of common equity of 10.07%, I conclude that a cost of common equity cost rate for the Company of 10.10% is appropriate.

Q. IN YOUR OPINION, IS YOUR PROPOSED COST OF COMMON EQUITY COST RATE OF 10.10% FAIR AND REASONABLE TO AQUA NORTH CAROLINA, ITS SHAREHOLDERS, AND ITS CUSTOMERS, CONSIDERING THE ABOVE ECONOMIC CONDITIONS?

A. Yes, it is.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

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 10 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 17 regulatory commissions in the U.S. and an American Arbitration Association panel.

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
- Capital Market Risk
- Financial Modeling
- Valuation
- Regulatory Strategy and Rate Case Support
- Rate of Return
- Cost of Service
- Rate Design

Recent Expert Testimony Submission/Appearances

Jurisdiction	***Topic***
Illinois Commerce Commission	Cost of Service, Rate Design
New Jersey Board of Public Utilities	Cost of Service, Rate Design
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: “The Impact of Decoupling on the Cost of Capital of Public Utilities”, co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. (Forthcoming)
- “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 ModelTM, 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	07/16	Alaska Power Company	Docket No. TA857-2	Rate of Return
Arizona Corporation Commission				
Arizona Water Company	08/18	Arizona Water Company	Docket No. W01445A-18-0164	Rate of Return
Colorado Public Utilities Commission				
Summit Utilities, Inc.	04/18	Colorado Natural Gas Company	Docket No. 18AL-0305G	Return on Equity
Atmos Energy Corporation	06/17	Atmos Energy Corporation	Docket No. 17AL-0429G	Return on Equity
Delaware Public Service Commission				
Tidewater Utilities, Inc.	11/13	Tidewater Utilities, Inc.	Docket No. 13-466	Capital Structure
Hawaii Public Utilities Commission				
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
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.	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
Louisiana Public Service Commission				
Louisiana Water Service, Inc.	06/13	Louisiana Water Service, Inc.	Docket No. U-32848	Rate of Return
Maryland Public Service Commission				
FirstEnergy, Inc.	08/18	Potomac Edison Company	Case No. 9490	Rate of Return
Massachusetts Department of Public Utilities				
Liberty Utilities	07/15	Liberty Utilities d/b/a New England Natural Gas Company	Docket No. 15-75	Rate of Return
Mississippi Public Service Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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				
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
New Jersey Board of Public Utilities				
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
North Carolina Utilities Commission				
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
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				
Valley Energy, Inc.	07/19	C&T Enterprises	Docket No. R-2019-3008209	Rate of Return
Wellsboro Electric Company	07/19	C&T Enterprises	Docket No. R-2019-3008208	Rate of Return
Citizens' Electric Company of Lewisburg	07/19	C&T Enterprises	Docket No. R-2019-3008212	Rate of Return
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

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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				
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
Virginia State Corporation Commission				
WGL Holdings, Inc.	7/18	Washington Gas Light Company	PUR-2018-00080	Rate of Return
Atmos Energy Corporation	5/18	Atmos Energy Corporation	PUR-2018-00014	Rate of Return
Aqua Virginia, Inc.	7/17	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

MR. BENNINK: Thank you. Next is the direct testimony of Joseph Pearce consisting of six pages. There were no direct exhibits. We would ask that be admitted.

COMMISSIONER BROWN-BLAND: All right. Without objection, that motion will be allowed.

(Whereupon, the prefiled direct testimony of Joseph Pearce was copied into the record as if given orally from the stand.)

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. W-218, SUB 526

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

IN THE MATTER OF
APPLICATION BY AQUA NORTH CAROLINA, INC.,
202 MACKENAN COURT, CARY, NORTH CAROLINA 27511,
FOR AUTHORITY TO ADJUST AND INCREASE RATES FOR WATER
AND SEWER UTILITY SERVICE IN ALL SERVICE AREAS IN
NORTH CAROLINA

PREFILED DIRECT TESTIMONY OF
JOSEPH R. PEARCE
ON BEHALF OF
AQUA NORTH CAROLINA, INC.

December 31, 2019

Q. PLEASE STATE FOR THE RECORD YOUR NAME, ADDRESS, AND PRESENT POSITION.

A. My name is Joseph Pearce and my business address is 202 MacKenan Court, Cary, North Carolina. I currently serve as the Director of Operations for Aqua North Carolina, Inc. ("Aqua" or "Company").

Q. BRIEFLY STATE YOUR QUALIFICATIONS AND EXPERIENCE RELATING TO WATER AND WASTEWATER OPERATIONS.

A. I am a North Carolina Registered Professional Engineer and have more than 25 years' experience in water and wastewater. I have a Bachelor of Science in Chemical Engineering from North Carolina State University and I hold a number of environmental and operator certifications, including but not limited to a NC Grade 4 Biological Wastewater Operator Certification and a NC Grade B Well Certification. My experience includes work with: the North Carolina Department of Environment and Natural Resources and the North Carolina Department of Health and Human Services and their predecessor agencies (in a wide-range of engineering and regulatory sections); Durham County, where I served as the Deputy Director of Engineering and Environmental Services; and Elizabeth City, North Carolina, where I was the Public Utilities Director for Elizabeth City. My experience includes work with both small decentralized facilities and larger centralized facilities (up to 12 million gallons per day).

Q. WHAT ISSUE DO YOU ADDRESS IN YOUR TESTIMONY?

A. In Aqua's last Rate Case Order, entered on December 18, 2018, in Docket No. W-218, Sub 497, at p. 20, Finding of Fact No. 77, the North Carolina Utilities Commission ("Commission" or "NCUC") found it appropriate to include an amount of recoverable water loss of 15% for the Company's purchased water systems. Aqua disagrees with this ratemaking adjustment, which was initially proposed by the Public Staff, and---for the reasons set forth in my testimony---has not included such an adjustment in this rate application request.

Q. WHY DO YOU DISAGREE WITH THE CURRENT PURCHASED WATER CALCULATION METHODOLOGY INCLUDED IN AQUA'S LAST RATE CASE?

A. The calculation for the negative ratemaking adjustment to the Company's purchased water expense uses a methodology that is contradictory to industry best practices. In the Company's last rate case, the Commission considered a level of recoverable water loss which was calculated using a simple ratio of total water sold to customers versus total water purchased. Aqua respectfully advocates and recommends following the American Water Works Association ("AWWA") best practices that have moved away from this type of simple ratio. As stated on page 10 in the 2016 fourth edition of the AWWA Manual M36, Water Audits and Loss Control, "*The AWWA WLCC* [Water Loss Control Committee] *recommends that water utilities should routinely compile water audit data on an annual basis as a standard* *business practice. This serves as the fundamental activity to promote efficient management of water in the drinking water sector*".

Q. WHAT DOES THE METHODOLOGY INCLUDED IN THE LAST RATE CASE FAIL TO ADEQUATELY CONSIDER OR INCLUDE?

A. Based on my review, the calculation in the last rate case does not adequately consider site-specific water system water loss and fails to include a wholistic approach to addressing and solving water loss issues. For a system water loss analysis, a number of factors should be analyzed, including flushing, fire department hydrant testing, unauthorized consumption, customer metering inaccuracies inherent in the meter, and distribution system breaks. Based on my review, these types of occurrences were not adequately addressed or included in the strict 15% methodology.

Q. PLEASE OPINE ON THE GENERAL PROPOSITION OF DISALLOWING THE RECOVERY OF EXPENSES FOR WATER LOSS ABOVE A SPECIFIC, ARBITRARY PERCENTAGE.

A. The water industry has recognized that the operational and capital costs of fixing a leak may be more expensive than the value of the water loss. Put another way, maintaining a water system to ensure that water loss does not exceed an arbitrary percentage (for example, 15%) may cost more than the value of the water loss.

Q. WHAT DOES AQUA PROPOSE IN THIS RATE CASE?

A. Aqua proposes that Current Annual Real Losses ("CARL"), as calculated using the AWWA Water Audit standard, be used to prioritize the Company's water systems for water leak reduction improvement plans and efforts that are needed. CARL is the calculated water loss which properly accounts for non-revenue usages such as flushing, fire department hydrant testing, customer-side water leaks which are too small to measure with the customer's water meter, and unauthorized consumption. In comparison, the calculation of the 15% water loss limit recommended by the Public Staff and ordered to be applied by the Commission in Docket No. W-218, Sub 497 utilized a basic, non-system specific comparison (ratio) of gross gallons sold (billed) versus gross gallons purchased, without adequate and specific consideration for explainable and necessary non-revenue water usage.

Aqua identified and completed water loss audit calculations for the purchased water systems that would have exceeded the NCUC criteria from the last rate case. These audits are currently being validated by a third-party water loss expert, George Kunkel.

In lieu of the current 15% water loss standard, Aqua asserts that CARL is a better long-term approach to take to ensure that the Company (as suggested by the NCUC in the Sub 497 Rate Case Order at page 116) will more aggressively seek to investigate water losses, strive to identify the causes, and make the necessary corrections, if applicable, more expeditiously.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

MR. BENNINK: And the remainder of the witnesses will be making appearances, so we will introduce their testimony at that time.

COMMISSIONER BROWN-BLAND: All right. I believe the case is with the Applicant.

MS. FORCE: Excuse me? Can you hear me? I'm sorry. I have a question. This is Peggy -- Margaret Force with the Attorney General's Office. When did the Company plan to put in the rebuttal testimony of Mr. D'Ascendis --

(WebEx Sound failure.)

COMMISSIONER BROWN-BLAND: I think Ms. Force needs to mute. There you go. All right.

MR. BENNINK: I'm sorry. We will -- we will put that in as we proceed with our rebuttal case. This is just the direct case at this point. So we will put the rebuttal testimony in at the appropriate time.

COMMISSIONER BROWN-BLAND: All right. That is satisfactory. Ms. -- the case is with the Applicant.

MS. SANFORD: Thank you, Commissioner Brown-Bland. I call Shannon Becker.

COMMISSIONER BROWN-BLAND: All right.

Mr. Becker -- there you go.

Whereupon,

SHANNON BECKER,

having first been duly affirmed, was examined

and testified as follows:

COMMISSIONER BROWN-BLAND: Thank you. Ms. Sanford?

MS. SANFORD: Thank you. I'm trying to master toggling back and forth on mute and unmute. I do have one question. Is it preferable if I mute after I ask a question and while he's answering? Technically speaking, what has worked the best for you?

COMMISSIONER BROWN-BLAND: You could try it without muting for a moment just to see if we have problem. If we do, then it will be necessary. If you hear feedback, or you see our court reporter waiving, you probably need to mute.

MS. SANFORD: Okay. All right. Sounds good. Thank you.

DIRECT EXAMINATION BY MS. SANFORD:

Q. Good morning, Mr. Becker. Would you please state your name, business address, and title for the record?

A. Yes. My name is Shannon Becker, I'm the president for Aqua North Carolina, Inc. My business address is 202 MacKenan Court. That's in Cary, North Carolina 27511.

Q. Have you caused to be prepared direct testimony filed on December 31, 2019, consisting of 35 pages and 3 exhibits, which consist of 4 pages?

A. The -- yes. The four pages is with the revised exhibit included, yes.

Q. Okay. Okay. We'll get to that in a minute. Thank you.

Did you file any amendments to your exhibits?

A. Yes, I did. May 21st, I caused to be filed the Becker Direct Exhibit 3 Revised consisting of one page.

Q. Do you have any changes to make to your testimony?

A. Yes, I do.

Q. Would you please describe those changes, please?

A. Yes. On page 14 of 35 on my direct testimony, the sentence that starts in line 16 that goes through the midpart of line 19 should be corrected to read:

"The WSIC/SSIC legislation reduces rate lag on eligible projects to an average of six months from the time an asset is placed in service versus an average of nearly 17 months that it would take to begin recovering the 21 months of non-WSIC/SSIC projects or project activity included in this filing using a historical test year."

Q. With those changes, would your testimony be the same today as the prefiled testimony you have submitted?

A. Yes, it would.

MS. SANFORD: Commissioner Brown-Bland, I ask that his testimony be admitted into evidence as if given orally from the stand and that his exhibits be identified. Can't hear you.

COMMISSIONER BROWN-BLAND: That motion is allowed and the testimony is received as if given orally from the witness stand. And the exhibits are identified as they were prefiled -- as they were marked when prefiled.

(Becker Direct Exhibits 1 through 3 and Becker Direct Revised Exhibit 3 were marked for identification.)

(Whereupon, the prefiled direct testimony of Shannon Becker was copied into the record as if given orally from the stand.)

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. W-218, SUB 526

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

IN THE MATTER OF
APPLICATION BY AQUA NORTH CAROLINA, INC.,
202 MACKENAN COURT, CARY, NORTH CAROLINA 27511,
FOR AUTHORITY TO ADJUST AND INCREASE RATES FOR WATER
AND SEWER UTILITY SERVICE IN ALL SERVICE AREAS IN
NORTH CAROLINA

PREFILED DIRECT TESTIMONY OF
SHANNON V. BECKER
ON BEHALF OF
AQUA NORTH CAROLINA, INC.

December 31, 2019

Q. PLEASE STATE YOUR NAME, YOUR POSITION WITH AQUA NORTH CAROLINA, INC., AND YOUR BUSINESS ADDRESS.

A. My name is Shannon V. Becker and I am President of Aqua North Carolina, Inc. ("Aqua" or "Company"). My business address is 202 Mackenan Court, Cary, North Carolina 27511, and my responsibilities include oversight of the operation and maintenance of Aqua's water and wastewater systems, which are located throughout the state. Additionally, I am responsible for the orderly growth of Aqua's interests in North Carolina.

Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR BACKGROUND AND EXPERIENCE.

A. I graduated from the State University of New York at Buffalo in 1993 with a Bachelor of Science degree in Accounting. I received a CPA certification subsequent to joining Deloitte & Touche, LLP, where I led audits for public and private organizations within various industries including: manufacturing, construction, service, and municipal governments. Since leaving public accounting, I have held management level positions at the Fortune 500 Companies of Corning Incorporated and Pulte Homes. In 2009, I joined Aqua as the State Controller and in April 2012, I was named President of Aqua Virginia, Inc. I was named to my current role as President of Aqua North Carolina, Inc. in August 2016.

Q. WHAT ROLE HAVE YOU PLAYED IN THE PREPARATION OF THIS FILING FOR AN INCREASE IN WATER AND WASTEWATER RATES?

A. The Application was assembled with my participation, in conjunction with Aqua's legal, accounting, compliance and engineering resources.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony has eight purposes: (A) to introduce the other witnesses providing testimony in this proceeding and their topics; (B) to describe the characteristics of Aqua's business; (C) to explain why Aqua is required to seek this rate relief; (D) to discuss water quality and customer service, including an update of the ongoing efforts by which Aqua currently reports on service and operational matters; (E) to discuss the water and sewer system improvement charges; (F) to discuss capital improvements made by Aqua; (G) to discuss the role of consumption as an element of determination of rates and the Company's approach to dealing with the uncertainties it represents, and (H) to discuss Aqua's position on Excess Capacity.

A. INTRODUCTION OF WITNESSES

Q. PLEASE INTRODUCE AND PROVIDE A GENERAL DESCRIPTION OF THE TOPICS COVERED BY WITNESSES PROVIDING PRE-FILED DIRECT TESTIMONY ON AQUA'S BEHALF.

A. The following witnesses provide pre-filed direct testimony on Aqua's behalf:

- Edward Thill, State Controller, discusses Aqua's request for deferred accounting and Rate Design details, including a proposal for the installation of a conservation rate pilot program.[1]

[1] Which Aqua proposed in its comments submitted to the NCUC in Docket No. W-100, Sub 59 (filed June 19, 2019).

- Dean R. Gearhart, Rates and Planning Manager, discusses pro forma adjustments.
- Amanda Berger, Director of Compliance, addresses water quality and compliance.
- Joseph Pearce, State Operations Director, addresses purchased water loss.
- Dylan W. D'Ascendis, Director at ScottMadden, Inc., supports Aqua's proposed rate of return and capital structure.

B. OPERATIONAL AND MANAGEMENT CHARACTERISTICS OF AQUA'S OPERATIONS IN NORTH CAROLINA

Q. PLEASE DESCRIBE THE AQUA NORTH CAROLINA SYSTEM.

A. Aqua owns and operates 741 water systems consisting of more than 1400 wells along with 59 wastewater systems and 203 collection systems across 51 counties in North Carolina. The mean customer count of Aqua's more than 740 water systems is 110, while the median customer count per system is only 48. The Company's five largest water systems encompass nearly 30% of Aqua's water customers; when the top five communities are excluded, the average size of communities served by Aqua is only 75 customers. The Company employs approximately 185 people and is geographically dispersed across the state. The headquarters of Aqua's North Carolina operations are in Cary. Field operations offices are in Cary, Denver, Kernersville, Gastonia, Fayetteville, and Hampstead.

The various operating centers are responsible for the operation and maintenance of defined systems in relatively close geographic proximity to their offices. Aqua's statewide resources are supplemented by centralized support from its service company and other state operations teams, particularly during emergency storm management. The service company includes customer service that is supplied via two separate call centers, one of which is in Cary. The Southern Call Center in Cary is staffed with approximately fifty Customer Service Representatives and management professionals, they are in addition to the 185 individuals employed in support of Aqua's North Carolina operations.

Q. WHAT IS AQUA NORTH CAROLINA'S RELATIONSHIP TO AQUA AMERICA, INC?

Aqua is a wholly-owned subsidiary of Aqua America, Inc. ("Aqua America"), a corporation which serves water and wastewater customers in eight states (in order of customer connections): Pennsylvania, Ohio, North Carolina, Texas, Illinois, New Jersey, Virginia, and Indiana. See Becker Direct Exhibit 1 for an overview of Aqua America's state structure.

Q. DESCRIBE BRIEFLY THE BUSINESS ORGANIZATION OF AQUA'S NORTH CAROLINA OPERATION.

A. Aqua is composed of five rate entities or rate divisions: Aqua Water, Aqua Wastewater, Brookwood Water, Fairways Water, and Fairways Wastewater. With certain exceptions, all customers within each rate division are subject to the same rates; however, the rates among rate divisions vary. Aqua's goal is to more nearly synchronize the rates among divisions, over time.

C. DRIVERS OF REQUEST FOR RATE INCREASE

Q. WHY HAS AQUA APPLIED FOR THIS INCREASE IN WATER AND WASTEWATER RATES?

A. Aqua is unable to achieve its authorized return on equity in North Carolina under current rates, given the increased level of investment required and the deleterious impact of regulatory lag.

Q. PLEASE EXPLAIN.

A. Aqua's goal is to provide safe and reliable service to all its water and wastewater customers. This is our core mission and its achievement requires infrastructure upgrades, which require capital investment that in turn requires adequate and timely cost recovery. The absence of such recovery drives rate case applications, as Aqua seeks a revenue stream which makes the Company's required capital investments sustainable. Assuming proper management, regulated public utilities are entitled to recover necessary costs and to have a reasonable opportunity to earn the return authorized by the North Carolina Utilities Commission ("Commission" or "NCUC"). This is essential for the financial stability of a utility such as Aqua and a necessary component of the Company's ability to invest properly and as required in North Carolina. However, Aqua has been unable to earn its authorized return on equity ("ROE")---under good management---thus, the Company is required to file for rate relief more frequently in order to support the capital investments demanded by its operations. This inability to attain the authorized ROE is primarily a function of the corrosive impact of regulatory lag on earnings, at Aqua's high level of investment in this state. It is an impact that threatens Aqua's ability to continue to invest capital in North Carolina as it deems necessary---and as it believes that customers and regulators expect. It also drives Aqua's need to file this rate case just 12 months after receiving the Company's last rate case order in Docket No. W-218, Sub 497 ("Sub 497").

Q. PLEASE DESCRIBE AQUA'S LEVEL OF EARNINGS IN NORTH CAROLINA DURING THE TEST YEAR FOR THIS APPLICATION.

A. During the test year for this Rate Case Application, the 12-month period ending September 30, 2019, Aqua achieved a consolidated per books return on equity (ROE) of 5.44%, or a ROE of 5.77% when adjusted to remove goodwill.

Q. HOW DO THESE EARNINGS COMPARE WITH THE COMMISSION'S LAST DETERMINATION OF A REASONABLE AUTHORIZED RETURN, IN DOCKET NO. W-218, SUB 497?

A. As summarized above, Aqua's achieved earnings fall significantly short of those authorized in the Sub 497 docket. This trend is consistent with Aqua's life-to-date historic earnings in North Carolina, which are summarized in Becker Direct Exhibit 2. Only a year ago, the NCUC authorized a rate of return on common equity for Aqua of 9.70% and granted a revenue increase of 5.22%. Yet a rate increase is again necessary in this case because the

Company, under current rates and prudent management, has been unable to earn either its authorized return, or a return that could be deemed reasonable and sustainable.

Q. DO YOU BELIEVE THAT AQUA HAS HAD THE STATUTORILY PRESCRIBED OPPORTUNITY TO EARN ITS REASONABLE, AUTHORIZED RETURN IN NORTH CAROLINA, UNDER THE CURRENT RATES AND GIVEN YOUR SERVICE, DEMONSTRATED GOOD MANAGEMENT, AND INVESTMENT OBLIGATIONS IN THIS STATE?

A. Regrettably, I do not. Aqua prizes its opportunity to serve its North Carolina customers and has operated in the state since 2003, investing steadily increasing amounts of capital in the Company's water and wastewater systems. However, as demonstrated by Becker Direct Exhibit 2, Aqua has not earned its authorized ROE in North Carolina in any single period over the last ten years. In fact, Aqua has not earned its authorized ROE in any year since it began operations in the state in 2003. The opportunity to achieve the NCUC-authorized ROE is essential to water and wastewater utility providers in North Carolina, such as Aqua, who are investing heavily to repair, replace, and improve their aging infrastructure at an ever-increasing pace.

In view of the anticipated levels of capital investment required by its North Carolina operations, Aqua anticipates the frequency of its rate cases will increase significantly, currently estimated to be <u>every 15 months</u> going forward. This will be required for the Company to maintain the level of investment needed to provide safe and reliable service and, at the same time, earn its authorized ROE, unless the opportunity to recover costs more fully and on a timelier basis becomes available, thus allowing Aqua the opportunity to earn an adequate return.

Q. DO YOU UNDERSTAND THE OBLIGATION OF A REGULATED PUBLIC UTILITY TO EXERCISE SOUND MANAGEMENT IN ORDER TO HAVE THE OPPORTUNITY TO ACHIEVE ITS AUTHORIZED RETURN, AND DO YOU REPRESENT THAT AQUA HAS EXERCISED THAT LEVEL OF MANAGEMENT?

A. Yes, I do, and I firmly assert that Aqua has exercised sound management coupled with a strong willingness to address infrastructure needs for which the Company is responsible. Aqua agrees with its regulators that there is a balance between achieving revenue sufficiency and stability and the ability to ensure quality, reliability, and long-term viability for properly operated and well-managed water and wastewater systems. A critical component of the Company's sound management has consisted of continuing prudent capital investments in North Carolina service and operations at a pace necessary to maintain compliance and address customer concerns.

Q. PLEASE ELEBORATE ON THE INFRASTRUCTURE INVESTMENTS MADE BY AQUA TO PROVIDE SAFE AND RELIABLE SERVICE TO ITS CUSTOMERS.

As demonstrated by Becker Direct Exhibit 3, Aqua North Carolina's investment spend has ranged from $14,000,000 in 2013 to a projected high of nearly $39,000,000 through the end of 2019. The Company has invested heavily in its infrastructure necessary to meet service and regulatory compliance standards within its nearly one thousand water and wastewater treatment, distribution, and collection systems across the state. Aqua has strengthened its focus on water quality improvement through its operation of the Company's *Water Quality Plan* as described by witness Berger, which has required notable investment in filtration and water treatment to address naturally occurring components of groundwater in efforts to improve service. Aqua responded at great length to an intense focus on water quality, adopted and implemented a *Water Quality Communications Plan*, kept the Commission and Public Staff scrupulously informed via an exceptional number of reports and filings, and insisted on performing testing of water adequate to meet its view of the needs---even in the face of under-recovery of those testing costs.

I believe that Aqua's management has robustly met the challenges imposed by the volume and scope of capital management necessary to properly maintain the Company's infrastructure in place to serve Aqua's customer base of nearly 300,000 North Carolinians living in more than 1200 subdivisions, with 100,000 water and wastewater service connections (customers) spanning across a mostly rural footprint of 51 counties in North Carolina. As described, Aqua is an entity made up of hundreds of small, stand-alone water and wastewater systems. Each system's operational characteristics and needs must be understood, and each system requires analysis, planning, and attention to ensure that the individual operations and infrastructure needs are properly managed. This operational oversight is necessary so that the Company can proactively address all primary health standards and provide safe and reliable water and wastewater service.

Q. DOES THE RESPONSIBILITY OF PRUDENT MANAGEMENT ALSO EXTEND TO THE BENEFIT OF YOUR SHAREHOLDERS, WHO REQUIRE THE OPPORTUNITY TO EARN A REASONABLE RETURN ON THEIR INVESTMENT IN AQUA IN NORTH CAROLINA?

A. Yes, it does. Our ability to recoup necessary and prudent costs of investment and to earn a reasonable return is an essential component of our responsibility to shareholders, as well as a part of the regulatory compact with our customers.

Q. DO RATEPAYERS AND TAXPAYERS BENEFIT FROM AQUA'S OPERATIONS AND SERVICE IN NORTH CAROLINA?

A. Yes, they do. Aqua provides an essential service not only to its customers, but also to the state of North Carolina. There is an urgent national need to improve our water and wastewater infrastructure and assist the ever-growing number of small systems which fail due to their inability to meet today's regulatory and compliance standards. We have demonstrated our ability to effectively apply sound management required to provide service to hundreds of small, scattered rural systems. Aqua's significant resources provide expertise to meet compliance standards and deliver safe and reliable service. Further, I believe it likely that Aqua---and other professionally managed water and wastewater companies in this state---are the reasons that some of these smaller systems have not become more of a burden to the state and its taxpayers. To that point, Aqua is in the process of assuming responsibility for another troubled system in the near future.[2]

Q. WHY HAS AQUA NOT BEEN ABLE TO ACHIEVE ITS AUTHORIZED RETURN IN NORTH CAROLINA?

A. Although the NCUC established a reasonable authorized return, the Commission-established rates have been insufficient to allow Aqua to come close to earning the Company's authorized return. Aqua's actual (depressed) achieved return fails to support the current level of needed capital investment in North Carolina, and triggers this rate increase request, filed approximately a year after the decision in the Company's last rate case in Sub 497. This is a costly proposition for all stakeholders---customers, regulators and the Company. The costs of a major rate case are measured in terms of diversion of Company internal resources from the work required to support operations and service obligations, the requirement and costs to retain lawyers and other expert consultants and witnesses, customer anxiety, and pressure on the time and other resources available to the regulatory communities---both Commission and Public Staff.

Q. DESCRIBE THE MOST SIGNIFICANT IMPEDIMENT TO YOUR ABILITY TO EARN YOUR AUTHORIZED RETURN.

[2] Dogwood Knolls Subdivision, Earth Environmental.

A. The primary impediment to Aqua's ability to earn its authorized return is the regulatory lag associated with our capital investment---expenditures we are required to make for compliance with health and environmental obligations, as well as to meet our responsibility to provide good service to our customers. Regulatory lag operates to prevent full recovery of costs associated with the Company's investment of capital between rate cases.

In the relatively short period since June 30, 2018, the cut-off date for assets considered by the Commission in the Company's last rate case, and including pro forma post-test-year additions, Aqua's net rate base proposed in this rate case will have grown by approximately $51 million. Depreciation and carrying costs recorded during this time are lost to the Company forever---unless these costs can be deferred and recovered in future rates. The rate lag between rate cases effectively results in the Company being required to donate a portion of the new assets. Aqua witness Thill proposes that deferred accounting treatment should be applied to non-routine post-test year asset additions which, if approved, will address this issue for those post-test year assets as it provides a mechanism for otherwise lost depreciation and carrying costs to be deferred, amortized and ultimately recovered in rates over an agreed upon period.

Q. ARE THERE OTHER IMPEDIMENTS TO YOUR ABILITY TO EARN YOUR AUTHORIZED RETURN?

A. Yes. Another impediment to Aqua's capacity to earn at or near its authorized ROE is the reliance on a historical test year. Historic data, whether to determine expected consumption or expense levels, can immediately begin to degrade ROE upon exiting a rate case---even with an increase in rates. Operating expenses typically increase year over year while consumption has been trending down at a pace of 1.54% annually as noted in witness Thill's direct testimony. The use of historical data to represent current consumption levels and provide for recovery of increasing levels of current expense is inadequate for a utility like Aqua to earn its authorized ROE. Consequently, although the historical test year approach has the advantage of using relatively objective data, it has the disadvantage of using stale data that poorly represents current conditions.

Q. WHY HASN'T THE WSIC/SSIC ADDRESSED THIS ISSUE OF REGULTORY LAG?

A. The WSIC/SSIC tool, while very helpful, is not enough to eliminate the significant lag associated with the required investment in infrastructure replacement that Aqua faces.

The WSIC/SSIC legislation reduces rate lag on eligible projects to an average of six months from the time an asset is placed in service versus an average of twenty-one months for non-WSIC/SSIC projects included in this filing, using a historical test year. Thus, the WSIC/SSIC does improve the timeliness of recovery for specific eligible project assets. However, most projects making up Aqua's capital investment required to maintain the Company's water and wastewater operations on an on-going basis are not eligible for WSIC/SSIC treatment under this program, as it exists today.

It should be noted that the Company utilizes the WSIC/SSIC program extensively and has refined the filing and review process in collaboration with the Public Staff. In fact, of the Company's $51 million incremental rate base included in this filing, approximately $19 million relates to projects that are eligible for recovery using the WSIC/SSIC program parameters. However, the restrictions on eligible projects allowed to be recovered within the current WSIC/SSIC program and its 5% revenue cap limit the mechanism's effectiveness.

Q. DOES REGULATORY LAG IMPOSE THE SAME IMPEDIMENT TO RECOVERY WITH RESPECT TO OTHER INDUSTRIES?

A. I cannot speak to the mechanics of other industries' cost recovery opportunities-----each industry's characteristics are unique in some ways. However, I do observe, from a review of the Commission's Quarterly Review (captioned <u>Overviews of Selected Electric Utility's Financial and Operational Data</u> and dated October 19, 2019) that lag would not seem to present the same impediment to cost recovery and achievement of (higher authorized) returns for the major investor-owned electric companies as it does for Aqua.

Q. CURRENTLY, WHAT ARE AQUA'S OPTIONS IN TRYING TO ADDRESS THE IMPACT OF REGULATORY LAG ON THE COMPANY'S FAIR OPPORTUNITY TO EARN ITS AUTHORIZED RETURN?

A. Aqua is prepared to prove the reasonableness of a range of costs which reflect appropriate management decisions about operational necessities.

These decisions are the prerogative and responsibility of professional management, and so long as reasonable and prudent, we submit they should be afforded full recovery. Additionally, Aqua is required to seek legislative relief with respect to its need to align rates with cost recovery in such a fashion that it is possible to achieve the Company's authorized return on equity. The discussion about legislation is not a component of this case, obviously, but I raise it in response to the question about regulatory lag and to be transparent with our regulators about Aqua's view of the Company's imperatives for operation in North Carolina. Further, in an attempt to exhaust potential opportunities that may exist to minimize regulatory lag and assist with otherwise lost cost recovery that normally exists within the context of the current regulatory construct, Aqua is requesting two additional measures: a Consumption Adjustment Mechanism ("CAM"), which is discussed later in my testimony, and a significantly expanded utilization of deferred accounting for certain costs, which is addressed in witness Thill's direct testimony.

We look forward to working in concert with all our regulators in discussions about legislative goals and about initiating and/or expanding all permissible regulatory cost recovery mechanisms in this case.

Q. DOES THE REPLACEMENT OF AGING CONTRIBUTED ASSETS HAVE AN IMPACT ON RATES?

A. Yes. The impact on rates resulting from incremental capital spend necessary to replace the Company's aged infrastructure is further amplified as originally installed contributed assets, carried on the Company's books with zero rate base, must be repaired or replaced with new, earning investment capital that incurs depreciation expense and carrying-costs---unlike the contributed assets being replaced. Aqua's pro forma contributed gross assets make up 38% ($205 million Contribution in Aid of Construction, or "CIAC" / $541 million Utility Plant in Service, or "UPIS") of the Company's total Utility Plant asset balance.

Q. WHY IS IT SO IMPORTANT THAT YOU EARN AT OR NEAR YOUR AUTHORIZED RETURN, AND WHAT ARE THE CONSEQUENCES OF PERSISTENT UNDER-RECOVERY?

A. Aqua must earn a fair and sustainable return to help attract capital from the financial markets. Additionally, Aqua NC competes for capital allocations annually amongst the other Aqua America states, with states that are able to earn their authorized returns receiving preference. From my perspective, it is imperative that we find a path for investor-owned water and wastewater utilities such as Aqua to continue to invest at the levels necessary to provide high quality utility service in North Carolina, while having an opportunity to earn a fair and sustainable return. We believe in our mission and want to focus on delivering safe and reliable service to our customers. We do not want to file a base rate case every 15 months.

D. WATER QUALITY, CUSTOMER SERVICE, AND COMMUNICATIONS

Q. PLEASE DISCUSS AQUA'S EFFORTS TO ADDRESS THE PRESENCE

OF NATURALLY OCCURRING IRON AND MANGANESE IN THE GROUNDWATER SUPPLY WHICH AFFECTS CUSTOMERS IN SEVERAL OF ITS WATER SYSTEMS.

A. Witness Berger's testimony focuses on this issue in greater detail, including an update to the *Secondary Water Quality Plan*. I believe that significant progress is being made as we continue with necessary improvements to minimize the impact of iron and manganese on water quality provided by Aqua to its customers in North Carolina.

In the eighteen months since the post-test-year ended in our last rate case filing (June 30, 2018), Aqua has installed twelve new iron and manganese ("Fe/Mn") filters along with thirteen cartridge filters at a cost of nearly $4.6 million to help address secondary water quality issues in various systems. Aqua anticipates installing an additional six Fe/Mn filters at an estimated cost of $2.1 million[3] to be placed in service by the end of Q1, 2020.

Q. PLEASE GIVE AN OVERVIEW OF THE REPORTING REQUIREMENTS IN PLACE FOR THE COMPANY.

A. Examples include:

- Bi-Monthly Report on Water Quality Issues - This bi-monthly report is one of several required by the Commission in its May 2, 2014 Order Granting Partial Rate Increase in Docket No. W-218, Sub 363, and reaffirmed in its

[3] Iron and manganese filters are eligible for recovery under the WSIC/SSIC program. These projects were, or will be, included in the semi-annual WSIC/SSIC filings made in April and October of each year.

December 18, 2018 Order Granting Partial Rate Increase in Docket No. W-218, Sub 497.

Aqua's Bi-Monthly Report for Water Quality Concerns - March, April 2016

Aqua's Bi-Monthly Report for Water Quality Concerns - May, June 2016

Aqua's Bi-Monthly Report for Water Quality Concerns - July, August 2016

Aqua's Bi-Monthly Report for Water Quality Concerns - Sept, Oct 2016

Aqua's Bi-Monthly Report for Water Quality Concerns - Nov, Dec 2016

Aqua's Bi-Monthly Report for Water Quality Concerns - Jan, Feb 2017

Aqua's Bi-Monthly Report for Water Quality Concerns - March, April 2017

Aqua's Bi-Monthly Report for Water Quality Concerns - May, June 2017

Aqua's Bi-Monthly Report for Water Quality Concerns - July, Aug 2017

Aqua's Bi-Monthly Report for Water Quality Concerns - Sept, Oct 2017

Aqua's Bi-Monthly Report for Water Quality Concerns - Nov, Dec 2017

Aqua's Bi-Monthly Report for Water Quality Concerns - Jan, Feb 2018

Aqua's Bi-Monthly Report for Water Quality Concerns - March, April 2018

Aqua's Bi-Monthly Report for Water Quality Concerns - May, June 2018

Aqua's Bi-Monthly Report for Water Quality Concerns - July, August 2018

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Aqua's Bi-Monthly Report for Water Quality Concerns - Jan, Feb 2019

Aqua's Bi-Monthly Report for Water Quality Concerns - March, April 2019

Aqua's Bi-Monthly Report for Water Quality Concerns - May, June 2019

Aqua's Bi-Monthly Report for Water Quality Concerns - July, August 2019

Aqua's Bi-Monthly Report for Water Quality Concerns - Sept, Oct 2019

- Semi-Annual Report Regarding Secondary Water Quality Concerns – This semi-annual report was developed by Aqua and the Public Staff, at the direction of the Commission in the Sub 363 Order, to identify and respond to secondary water quality concerns that occur in significant numbers in individual subdivisions. This reporting requirement was reaffirmed by the Commission in its December 18, 2018 Order Granting Partial Rate Increase in the Sub 497 case.

  Aqua's Fifth Semi-Annual Report for Six Month Period January through June 2016

  Aqua's Sixth Semi-Annual Report for Six Month Period July through December 2016

  Aqua's Seventh Semi-Annual Report for Six Month Period January through June 2017

  Supplement to Seventh and Eight Semi Annual Reports Calendar Year 2017

  Aqua's Eighth Semi-Annual Report for Six Month Period July through December 2017

  Aqua's Ninth Semi-Annual Report for Six Month Period January through June 2018

  Aqua's Tenth Semi-Annual Report for Six Month Period July through December 2018

  Aqua's Eleventh Semi-Annual Report for Six Month Period January through June 2019

- Notice of Deficiency ("NOD"), Quarterly Update – This quarterly written status report is filed with the Department of Environmental Quality ("DEQ") on well sites where the Public Water Supply ("PWS") division has issued a NOD based on iron and manganese monitoring data for a well or water system, and where treatment is required to reduce the concentrations to below specified levels for each mineral. A requirement to include a copy of this filing with the Chief Clerk's Office was added in the Commission's December 18, 2018 Order Granting Partial Rate Increase in Sub 497.

Aqua's 1st Qtr 2016 NOD Reports to NCDEQ

Aqua's 2nd Qtr 2016 NOD Reports to NCDEQ - Jun 29,2016

Aqua's 2nd Qtr 2016 NOD Reports to NCDEQ - Aug 10, 2016

Aqua's 3rd Qtr 2016 NOD Reports to NCDEQ

Aqua's 4th Qtr 2016 NOD Reports to NCDEQ

Aqua's 1st Qtr 2017 NOD Reports to NCDEQ

Aqua's 2nd Qtr 2017 NOD Reports to NCDEQ

Aqua's 3rd Qtr 2017 NOD Reports to NCDEQ

Aqua's 4th Qtr 2017 NOD Reports to NCDEQ

Aqua's 1st Qtr 2018 NOD Reports to NCDEQ

Aqua's 2nd Qtr 2018 NOD Reports to NCDEQ

Aqua's 3rd Qtr 2018 NOD Reports to NCDEQ

Aqua's 4th Qtr 2018 NOD Reports to NCDEQ

Aqua's 1st Qtr 2019 NOD Reports to NCDEQ

Aqua's 2nd Qtr 2019 NOD Reports to NCDEQ

Aqua's 3rd Qtr 2019 NOD Reports to NCDEQ

- Ongoing Three-Year WSIC/SSIC Plan – Aqua's Ongoing Three-Year

WSIC/SSIC Plan is filed with the Commission on an annual basis.

Aqua's Ongoing Three-Year WSIC/SSIC Plan 2018 - 2020 - Filed 4.2.18

Aqua's Ongoing Three-Year WSIC/SSIC Plan 2019-2021 - Filed 3.1.19

- Quarterly Earnings, WSIC/SSIC Revenue, and Construction Status Reports

  – This report is filed with the Commission on a quarterly basis.

  Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 1st Qtr 2016

  Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 2nd Qtr 2016

  Aqua's Qtrly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 3rd Qtr 2016

  Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 4th Qtr 2016

  Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 1st Qtr 2017

  Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 2nd Qtr 2017

  Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 3rd Qtr 2017

  Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 4th Qtr 2017

  Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 1st Qtr 2018

  Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 2nd Qtr 2018

  Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 3rd Qtr 2018

  Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construstion Status Repts for 4th Qtr 2018

Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 1st Qtr 2019

Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 2nd Qtr 2019

Aqua's Quarterly Earnings, WSIC/SSIC Revenue and Construction Status Repts for 3rd Qtr 2019

- Application for Approval of Water and Sewer System Improvement Charge Rate Adjustments - This is a semi-annual filing necessary to implement the WSIC/SSIC surcharges related to eligible projects.

  Aqua's Application for Wtr, Swr System Improvement Charge Rate Adjustments - Filed 5.2.16

  Aqua's Application for Wtr, Swr System Improvement Charge Rate Adjustments - Filed 11.1.16

  Aqua's Application for Wtr, Swr System Improvement Charge Rate Adjustments - Filed 4.28.17

  Aqua's Application for Wtr, Swr System Improvement Charge Rate Adjustments - Filed 10.30.17

  Aqua's Application for Wtr, Swr System Improvement Charge Rate Adjustments - Filed 5.1.18

  Aqua's Application for Wtr, Swr System Improvement Charge Rate Adjustments - Filed 5.1.19

  Aqua's Application for Wtr, Swr System Improvement Charge Rate Adjustments - Filed 11.1.19

- Annual Heater Acquisition Incentive Account Report - This is an annual filing detailing the amount of acquisition incentive activity.

  Heater AIA Report - June 2012

  Heater AIA Report - June 2013

  Heater AIA Report - June 2014

Heater AIA Report - June 2015
Heater AIA Report - June 2016
Heater AIA Report - June 2017
Heater AIA Report - June 2018
Aqua's Report on Status of Heater AIA - June 2019

- Secondary Water Quality Filtration Request Executive Summary – This is a report developed in collaboration with the Public Staff to streamline the request for pre-approval by the Public Staff for WSIC-eligible water filtration installations necessary to address secondary water quality issues. Aqua prepared and submitted thirty executive summaries for such projects in 2018 and 2019.

- New Reporting or Filing Requirements Ordered in the W-218, Sub 497 Case Included:

  1. Filing of an amendment to Aqua's tariffs detailing its connection and capacity fee practices and procedures on a subdivision-by-subdivision basis.

     Aqua's Response to Ordering Para 24 - Amendments to Tariffs Detailing Connection/Capacity Fees

  2. A follow-up compliance filing to show Aqua's present and future accounting treatment of the capacity and transmission expenses paid to Johnston County.

     Aqua's Response to Ordering Para 25 - Future Accounting Treatment of Johnston County Transmission and Capacity Fees

  3. A filing of the Company's *Water Quality Plan* and detailing of several specific items within its *Customer Communication Plan*.

Aqua's Response to Ordering Para 15 and 16 - Water Quality Plan and Customer Communication Plan

4. A filing of a status on the Commission's request to investigate and evaluate the possibility of entering into agreements with vendors of home filtration water systems and replacement filters for a discount.

   Aqua's Response to Ordering Para 17 - First 90-Day Report

   Aqua's Response to Ordering Para 17 - Second 90 Day Report

5. The development and filing of a proposed policy and procedure, in consultation with the Public Staff, for providing a bill credit when Aqua requests that a customer flush his/her individual line to address a water quality issue. The response was jointly filed by the Company and Public Staff:

   Aqua's Response to Ordering Para 20 - Flushing Bill Credit

6. The development and submission of a robust general flushing plan for certain systems affected by iron and/or manganese in coordination with the Public Staff.

   Aqua's Response to Ordering Para 18 - Development of a Flushing Plan

7. A reporting on the specific nature of the expected benefits to be achieved once deployment of AMR technology is completed in all Aqua America operating states.

   Aqua's Response to Ordering Para 27 - Description of Advanced Meter Reading (AMR) Benefits

8. Public Staff Quarterly Water Quality Complaint Reports – Aqua

works to provide customer call detail and system information necessary for the Public Staff to properly research and file the Quarterly Water Quality Complaint reports.

Public Staff's 1st Qtr 2019 Report on Aqua's Water Quality Complaints

Public Staff's 2nd Qtr 2019 Report on Aqua's Water Quality Complaints

Public Staff's 3rd Qtr 2019 Report on Aqua's Water Quality Complaints

Q. DO YOU BELIEVE THAT SOME OF THE REPORTING REQUIREMENTS SHOULD BE REVISED, REDUCED, OR RESTRUCTURED AND, IF SO, WHY AND HOW?

A. Yes, I do. Consider the following:

- Some of the reports are no longer relevant, because the underlying issues either have been resolved, or are well on the way to management and improvement.
- The costs of preparation of some of these reports are significant to the Company and require operator and central management employees' time in addition to the legal assistance associated with filing. In addition to the time spent researching and drafting the ongoing bi-monthly, quarterly, semi-annual, and annual reports that existed prior to the last rate case, Aqua informally tracked internal time spent on the new reporting requirements ("New Reports") ordered in the W-218, Sub 497 case identified as items 1 – 8 in the previous question, noting that 588

hours were spent meeting these requirements between January and October of this year.

- Additional costs are generated by the Public Staff's utilization of staff in the various disciplines---particularly in Legal and Engineering---to jointly work on and/or review the reports with great care and in detail.
- Aqua fully supports the generation of reports that are relevant and useful to the Commission's oversight, and would willingly participate in conversations designed to assess whether the current reporting requirements should be revised.

E. SYSTEM IMPROVEMENT CHARGES--- WATER ("WSIC") AND SEWER ("SSIC")

Q. PLEASE DISCUSS THE COMPANY'S USE OF THE WATER/SEWER SYSTEM IMPROVEMENT CHARGE MECHANISMS.

A. The Commission authorized implementation of the WSIC/SSIC mechanisms in its 2014 Rate Case Order in Docket No. W-218, Sub 363. These mechanisms allow the Company to cover the incremental depreciation expense and capital costs of eligible water and sewer system improvements completed and placed in service between rate cases. Prior Commission approval is required of WSIC-eligible projects installed to specifically address secondary water quality issues.

Q. WHY ARE THESE MECHANISMS IMPORTANT TO AQUA AND ITS WATER AND WASTEWATER CUSTOMERS?

A. Although the WSIC/SSIC is limited to certain eligible projects, the system improvement charge mechanisms encourage investment in water quality and wastewater infrastructure for customers by allowing for more timely cost coverage in rates. The WSIC mechanism specifically promotes investment in eligible water quality improvement projects, which helps address issues with naturally occurring iron and manganese (particularly prevalent in the groundwater in Wake, Durham, Chatham, and Johnson counties, which are in Aqua's Central Region of operation).

Q. PLEASE INDICATE HOW THE COMPANY WILL ADJUST THE WSIC/SSIC SURCHARGES AFTER NEW BASE RATES ARE ESTABLISHED IN THIS PROCEEDING.

A. Upon the effective date of new base rates in this proceeding, the WSIC and SSIC surcharges will be reset to zero. Thereafter, only the incremental depreciation expense and related costs of new eligible water and sewer system improvements will be covered through the WSIC/SSIC mechanisms on a going-forward basis.

Q. WHAT DOES AQUA PROPOSE TO ADDRESS THROUGH WSIC/SSIC FUNDING, GOING FORWARD?

A. Aqua filed its Ongoing Three-Year WSIC/SSIC Plan on March 1, 2019, which details the projects expected to be completed during the period 2019-2021 and is included in this filing as Appendix 2 to the Application for a General Increase in Rates.

Aqua has planned WSIC/SSIC eligible capital projects totaling $30,762,013 for the 2019–2021 period. The most significant use of the WSIC/SSIC mechanism through 2021 is estimated for primary and secondary water treatment ($10.4 million), main replacements ($7.7 million), and NCDOT line relocations ($5.7 million). Aqua has already made two WSIC/SSIC filings in 2019 amounting to $12.1 million. These filings included $5.7 million for costs related to the installation of primary and secondary water treatment systems, $2.9 million for main replacements, $1.7 million for mechanical sewer equipment, $1.5 million for multiple NCDOT mandated relocation projects, and $.3 million for main extensions.

F. CAPITAL IMPROVEMENTS

Q. WHAT DRIVES THE INCREASED NEED FOR CAPITAL INVESTMENT IN THE COMPANY'S WATER AND WASTEWATER RATE DIVISIONS?

A. A significant level of continued investment in water and wastewater system improvements must be made by Aqua in North Carolina to maintain, upgrade, or replace the Company's aging infrastructure, modernize Company systems, and ensure compliance. In 2015, the U.S. Environmental Protection Agency ("EPA") conducted its sixth "Drinking Water Infrastructure Needs Survey Assessment." The results indicate a 20-year capital investment need of $472.6 billion to ensure safe drinking water to the public.[4] The report to Congress, released in 2018, is based on data collected from utilities in 2015. Since the last assessment was completed in 2011, the level of needed investment in the U.S. has

[4] U.S. Environmental Protection Agency, Drinking Water Infrastructure Needs Assessment, 6th Report to Congress, at 9 (Mar. 2018) ("2015 EPA Survey").

increased by 23%, up from $384.2 billion.[5] The EPA report estimates that North Carolina's share of the water infrastructure investment needs totals approximately $16.7 billion.[6] According to the EPA, the nation as a whole is entering an era of rehabilitation and replacement as public infrastructure of all types approaches the end of useful life.

Aqua is actively engaged in repairing and rehabilitating aging infrastructure in its systems on an ongoing basis. The Company estimates that it will have invested more than $56 million in North Carolina since the Sub 497 case, which produces $51 million of incremental rate base in this case. The Company must undertake these improvements to ensure safe drinking water for customers and the safe provision of wastewater service. However, due to the nature of these improvements and the increased demand for capital investment, it is not possible to synchronize the in-service dates of all projects with the entry of rate orders that include the projects in the Company's rate base. Accordingly, Aqua is required to incur significant carrying costs necessary to finance improvements between the time that they are placed in service and the time that the costs are ultimately reflected in rates.

Q. WHAT IS THE NATURE OF THE CAPITAL PROJECTS INCURRED SINCE THE LAST RATE CASE?

[5] U.S. Environmental Protection Agency, Drinking Water Infrastructure Needs Assessment, 5th Report to Congress, at i (Apr. 2013).
[6] 2015 EPA Survey, at 36

A. Aqua's operational footprint covers hundreds of stand-alone water and wastewater systems across North Carolina. As such, very few projects are individually significant, but the volume of small projects necessary to replace or upgrade each system is significant – in volume and cost. The major planned project categories and the approximate spend included in this case are as follows:

Water

- $15,400,000 Mains and Services
- $6,900,000 Filters and Treatment Equipment
- $5,500,000 Well Structures and Improvements
- $2,400,000 Meters
- $2,300,000 Pumping Equipment
- $1,400,000 Transportation
- $1,200,000 Communications Equipment (SCADA)
- $1,200,000 Tanks

Sewer

- $4,000,000 Plant Structures and Improvements
- $4,200,000 Treatment Equipment
- $3,700,000 Pumping Equipment
- $2,500,000 Mains and Services

See Application Exhibits Aw and As, and W-1, Item 10 Rate Base Adjustments for Original Cost Rate Base and pro forma adjustments.

G. CONSUMPTION AND IMPACT ON COST RECOVERY

Q. WHAT IMPACT DOES THE DETERMINATION OF CONSUMPTION HAVE ON AQUA'S ABILITY TO MEET ITS AUTHORIZED ROE?

A. As described in witness Thill's testimony, a portion of the requested increase in this case is a result of reduced consumption per customer. Although the trend is clearly one of declining consumption, it should be noted that consumption can also increase significantly during extended periods of warm weather. Therefore, fluctuation is a factor that must be addressed in order for Aqua to meet the approved revenue requirement necessary to attain its authorized ROE.

Aqua depends on the integrity and accuracy of a Rate Design in order to have an opportunity to achieve its authorized return. Key to this opportunity is reasonable accuracy in the derivation of consumption figures. Consumer consumption levels that are above rate case projections could provide excess revenues, while consumption levels that are below rate case projections could result in a deficit. Aqua asserts that the persistent decline in consumption has regularly eroded the Company's opportunity to earn its authorized return. The utilization of a historic three-year consumption average to determine rates has proven to be insufficient to support the revenue requirement necessary for Aqua to have a reasonable opportunity to attain the Company's authorized ROE.

Q. HOW DOES AQUA PROPOSE TO MEET THE SHORTFALLS FROM THE USE OF HISTORIC CONSUMPTION LEVELS IN RATE DESIGN?

A. Aqua submits that recognition of a historical conservation experience and its application in the Company's Rate Design will better align the ratemaking consumption data with actual current customer usage and, thus, will more fairly support the Company's ability to realize its authorized ROE. Witness Thill describes Aqua's proposal to apply a conservation normalization factor to accomplish this objective in his direct testimony.

Q. ARE THERE ANY OTHER TOOLS AVAILABLE THAT WOULD HELP AQUA REALIZE ITS REVENUE REQUIREMENT?

A Yes----potentially. Aqua is proposing what is termed a "Consumption Adjustment Mechanism" ("CAM") for approval by the NCUC.

In an attempt to address the challenges of utilizing a persistently declining historic consumption pattern and address potential swings in average customer consumption, Aqua supported legislation that authorized the Commission to "adopt, implement, modify, or eliminate a rate adjustment mechanism for one or more of the Company's rate schedules to track and true-up variations in average per customer usage from levels approved in the general rate case proceeding" under House Bill 529 (Session Law 2019-88) which was signed into law on July 8, 2019, adding G.S. 62-133.12A to Article 7 of Chapter 62 of the General Statutes.

This mechanism, if approved for use, is intended to provide a true-up of the average per customer consumption levels used to calculate rates necessary to achieve an approved revenue requirement. It provides the Company and its customers rate protections during periods of fluctuating consumption---high or low---that could otherwise result in over or under collections of approved revenue levels.

Since the Commission's CAM rulemaking has just gotten underway, Aqua reserves the right to withdraw the Company's request to implement a CAM in this rate case docket, subject to the final terms and conditions that may be ordered.[7]

H. COST RECOVERY OF EXCESS CAPACITY

Q. HAS AQUA MADE AN ADJUSTMENT TO ELIMINATE COSTS RELATED TO EXCESS CAPACITY IN THIS RATE CASE?

A. No.

Q. WHAT IS AQUA'S POSITION IN THIS RATE CASE WITH RESPECT TO DISALLOWANCES FOR WHAT HAS BEEN DESCRIBED AS EXCESS CAPACITY FOR WASTEWATER TREATMENT PLANTS?

A. The Company believes that the Commission should not make excess capacity disallowances for systems Aqua or its predecessor has acquired or installed. The decisions to construct the three wastewater treatment plants ("WWTPs"), for which disallowances have been made in past cases, were reasonable and prudent. The plants were appropriately sized and Aqua was prudent when it acquired them. Aqua's investments in the plants

[7] The Public Staff filed a petition for rulemaking and proposed rules on October 31, 2019, which has been docketed under W-100, Sub 61. The Commission has opened a rulemaking proceeding and has requested comments on the Public Staff's proposed rules. Aqua has intervened in that proceeding and requested an extension of time for response, in order to allow the Company an opportunity to work with Carolina Water Service, Inc. of North Carolina and, hopefully, the Public Staff on a rulemaking approach that is acceptable both to the water and wastewater industry and the consumer advocate.

at issue on a per connection basis are reasonable. Requiring Aqua to take depreciation expense on its books without actual recovery through rates and foregoing return on a portion of this plant investment, already reduced by CIAC, is inconsistent with the Commission's policy encouraging acquisition of developer owned systems and the uniform rate structure. It is a factor preventing Aqua from earning its authorized return.

The three plants that have received excess capacity treatment in the past are included in the Aqua wastewater consolidated rate entity. Aqua's wastewater system ownership is made up of 59 WWTPs that were obtained through purchases or negotiated developer contracts. These acquisitions have resulted in assets with a reasonable range of average rate bases per customer by system. Aqua has acquired many sewer systems with a rate base per customer less than its approximate average consolidated sewer rate base per customer of $3,700. The amount of contributed plant negotiated for many of its systems, which receive large developer contributions, results in an average rate base per customer that contributes to a reasonable consolidated rate base and reasonable capital costs to be recovered through rates.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

Q. Mr. Becker, do you have a summary?
A. I do.
Q. Would you please read it?
A. Yes. My name is Shannon Becker. I'm the state president of Aqua North Carolina, and I provided direct testimony on various factors which are the reasons for this rate case, which describe the level and rate of spend in North Carolina and which generally challenge Aqua North Carolina's ability to attain its authorized return on equity on a persistent basis. I relate these factors to the reasons we expect an increase in frequency of future rate cases under current conditions of investment levels versus recovery.

Before I address the items contained in my testimony, I do wish to take a moment to express Aqua's concerns regarding the impact of the coronavirus pandemic on the country, and specifically on Aqua's customers. When we filed this case on December 31, 2019, no one could have imagined the circumstances in which we now find ourselves. Aqua has made many decisions in the conduct, compromise, and settlement of this case that were influenced by the impact of the pandemic, as well as by a host of other factors of this sort that are always involved in rate case settlements. Those decisions include our approach to ROE -- those decisions include our approach to ROE, but are not limited to that. We respect the additional challenges to all the regulators involved in this case, and we fully recognize and experience the increased complexity of the litigation process in which we are now engaged.

Aqua continues to make significant strides towards improving water quality, customer service and communications, compliance, and operations over the past several years. Improvement is our number one goal and focus. Achieving that goal is a complex job. Aqua North Carolina is comprised of a large number of dispersed systems, and each system's unique operational characteristics and needs must be addressed. Each system requires its own analysis, planning, and attention to ensure that the individual operations and infrastructure needs are properly managed. Further, the impact on rates resulting from the heightened level of investment necessary to replace the Company's aged infrastructure is amplified, because originally installed contributed assets, which make up about 38 percent of Aqua's total utility plant in service, are carried on the Company's books with zero rate base. However, they must be repaired or replaced with the new earning investment capital. Recovery of these actual infrastructure investment costs, necessary to support each of its 741 water systems consisting of more than 1,400 wells, along with 59 wastewater systems and 203 collection systems across 51 counties in North Carolina, is the primary driver for Aqua's request in this rate case.

I spent a considerable amount of time in my testimony discussing Aqua's persistent inability to attain a reasonable rate of return, as demonstrated in Direct Exhibit Number 2. This inability to recover investment in a timely manner can have a number of negative effects for customers and for the utility.

In an effort to help close the ROE gap and fully utilize the potential ratemaking tools currently available, Aqua has proposed several innovative ideas in this rate case that would help minimize lag, provide for recovery of actual costs incurred, and address the detrimental impact of declining consumption trends. These ideas include expanding the utilization of deferred accounting on assets and revenues; proposal for normalizing consumption; a request for a revenue reconciliation upon installation of the proposed conservation rate pilot; agreement to utilize the Public Staff's historically approved methodology to determine insurance claim expense recovery in coordination with a true-up mechanism, resulting in no winners or losers; and finally, a reassessment of the --

(WebEx sound failure.)

THE WITNESS: I am pleased to report that Aqua and the Public Staff --

COMMISSIONER BROWN-BLAND: Mr. Becker --

THE WITNESS: Yes, ma'am.

COMMISSIONER BROWN-BLAND: Something dropped for a minute when you said, "and finally." Could you repeat?

THE WITNESS: And finally, a reassessment of the excess capacity adjustments.

I am pleased to report that Aqua and the Public Staff, after intensive negotiations, were able to resolve by compromise a number of the differences between our positions, and that both those negotiations and other factors led Aqua to drop or revise many of its original positions in this case. I am also pleased to provide support on the record today for the stipulated partial settlement agreement that we and the Public Staff have reached and filed in this case.

Finally, I also address the level of reporting requirements imposed upon the Company in light of the demonstrated efforts and resultant improvements that have been made to water quality, customer service, and communications. Ms. Berger also addresses reporting. My request is for modification of some of these reporting requirements, given recent measurable progress, plus the cost/benefit ratio of their continuance at the current level.

Thank you, that concludes my summary.

MS. SANFORD: Thank you, Mr. Becker. And, Commissioner Brown-Bland, I have broken the mistake barrier here. That was my phone that went off, and I apologize. And as many times as I have admonished people for leaving their phones on, I think I kind of deserved to be the one that did it. I do apologize, and it is now turned off.

COMMISSIONER BROWN-BLAND: All right. Let everyone -- let everyone else be so advised as well.

MS. SANFORD: Got that out of the way anyway. Commissioner Brown-Bland, we -- when we distributed Mr. Becker's summary yesterday, at some point yesterday we also mentioned that we were going to request the Commission's leave -- and we discussed this with the Public Staff. Request the Commission's leave to do a little bit of additional direct of Mr. Becker for the purpose of having him speak to and support the settlement agreement that was signed between the Public Staff and Aqua last week. So if we might do that.

COMMISSIONER BROWN-BLAND: Please.

MS. SANFORD: We'll proceed. Thank you.

Q. Mr. Becker, did you electronically affix your signature to the settlement agreement filed in this case between Aqua North Carolina and the Public Staff on July 2nd?

A. Yes, I did.

Q. Did you participate in the negotiation of that agreement?

A. Yes, I did. Along with staff here in North Carolina and Pennsylvania, and the Aqua side, and legal counsel as well in coordination with the Public Staff, legal counsel, attorneys -- I'm sorry, legal staff, engineers, and accounting team on the Public Staff side as well.

Q. What can you tell us about those negotiations?

A. The negotiations were protracted. They were issue-intensive backed by tremendous amounts of discovery, exchanges of documents, formal discussions and meetings at all levels of Aqua and within the Public Staff itself. We -- the Attorney General was involved in several of those discussions as well. We kept the Attorney General's Office up to date with those discussions and the progress.

They ended up resulting in agreements that were true compromises on disputed positions, and which I believe that the statutory requirements of fairness in -- fairness to customers and to the Company.

Q. Did the settlement -- did the negotiations result in a settlement of all the issues?

A. They did not. We still have several issues to discuss before the Commission that are unsettled. And, of course, we're here to discuss any issue at all, settled or not, if the Commission has questions about them.

Q. Okay. Thank you, Mr. Becker.

MS. SANFORD: Commissioner Brown-Bland, the witness is available for cross by the Public Staff on the issues that are the subject of his direct and which are not resolved by our settlement agreement, of course. So he is, at this point, available to the parties and to the Commission.

COMMISSIONER BROWN-BLAND: All right. Thank you.

Is there any cross from the Attorney General's Office?

MS. TOWNSEND: No questions from the Attorney General's Office.

COMMISSIONER BROWN-BLAND: All right. Ms. Jost?

MR. GRANTMYRE: William Grantmyre will be doing the questioning of Mr. Becker.

COMMISSIONER BROWN-BLAND: All right. Welcome, Mr. Grantmyre. Proceed.

CROSS EXAMINATION BY MR. GRANTMYRE:

Q. Mr. Becker, good morning.

MR. GRANTMYRE: First I would like to identify -- request to be identified Public Staff Becker Direct Cross Examination Exhibit 1, which is pages 1 through 6 of our list that we gave out.

COMMISSIONER BROWN-BLAND: All right. Mr. Grantmyre, just for my benefit, would you repeat the identification?

MR. GRANTMYRE: Public Staff Becker Direct Cross Examination Exhibit Number 1.

COMMISSIONER BROWN-BLAND: All right. It will be so identified.

(Public Staff Becker Direct Cross Examination Exhibit 1 was marked for identification.)

Q. Mr. Becker, do you have the copy of this available?

A. Good morning, Mr. Grantmyre, I am opening up to it, I think, right now. Yes, I do.

Q. And do you recognize, on page 1 of this, this is the proxy statement for the 2020 shareholders' meeting?

A. On page 1 or page 3? I think page 3, correct?

Q. Page 1 is -- well, it's Schedule 14A of --

(Reporter interruption due to background noise.)

THE WITNESS: I'm sorry, Mr. Grantmyre, could you repeat the last statement?

Q. The page 1 is filing with the Securities and Exchange Commission, but it is your proxy statement; is that correct?
A. Oh, I'm sorry, yes, yes, correct.
Q. And if we could go to page 3. Do you have page 3 in front of you?
A. I do.
Q. Now, about a third of the way down the page on the right, there's a highlighted section. Starts out from January 1, 2017, to December 31, 2019. Can you read that piece into the record?
A. Yes.

"From January 1, 2017, to December 31, 2019, the total return to our shareholders, including share price appreciation and dividends paid, showed 67.75 percent growth. In 2019 alone, our total return to shareholders was 40.41 percent."

Q. And we can agree that that was a pretty robust growth in terms of total shareholder return?
A. It's positive. I'm not comparing it to anything else, but yes, I would say it would be good.
Q. And down at the bottom on the right-hand side, could you read in the dividends to shareholders

into the record that was this year for that year?

A. I believe you're referring to dividends to shareholders, 7 percent increase.

Q. Yes. And this is -- when we talk about shareholders, we're talking about Essential Utilities, Inc., which is the new and improved name for Aqua America, Inc.; is that correct?

A. That is correct.

Q. Now, if we could go to the next page, page 4, this is the annual report that you see of the shareholders; is that correct?

A. The 2019 annual report, yes.

Q. And if we could go to page 5, shows a number of graphs.

A. Yes.

Q. And at the bottom, it says, "dividends per share."

Can you see where the 2019 was 93.7 cents, and go back to 15, it was 71.2 cents. Do you see that?

A. I do.

Q. And would you recognize that the 22-and-a-half percent increased dividends equates to a 32 percent increase in the last four years?

A. I'm sorry, Mr. Grantmyre, I didn't -- can you repeat that? I didn't hear.

Q. Do you agree, then, subject to check, that the increase in dividends over those four years equates to a 32 percent increase?

A. Subject to check, yes.

Q. And if we could go to page 6, which is the next page. Do you recognize that this comes out of your report to shareholders, that at the bottom it has Essential Utilities, and it compares it to a group of other utility indexes, the S&P 500 Index, and the S&P MidCap 400 Utilities Index; is that correct?

A. That is correct.

Q. And in the last column, which shows the cumulative effect from 2014 to 2019, can you read into the record the total shareholder return increase, or total shareholder return for that period?

A. There are two. There's a graph and then there's a table at the bottom. Are you referring to the table?

Q. Yes, the table, please.

A. And you want me to read the -- just the line for Essential Utilities, Inc.?

Q. No, just the 2019 number.

A. For Essential Utilities Inc.?

Q. Yes.

A. It's 198.25.

Q. And you recognize that's about 25 points over the S&P 500 Index?

A. I'm sorry. You broke up for a moment there. Repeat that, please.

Q. Do you recognize that that is greater than the 173 for the S&P 500 Index?

A. I do.

Q. And it's also greater than the 157 for the S&P MidCap 400 Utilities Index; is that correct?

A. That is correct.

Q. Now, in your testimony, you talk about --

MR. GRANTMYRE: We would like the next exhibit identified as Public Staff Direct Becker Cross Examination Exhibit 2. And this is page 7 of the exhibits that were published in the filing.

COMMISSIONER BROWN-BLAND: All right. This one-page exhibit will be identified as Public Staff Becker Direct Cross Examination Exhibit 2. And it appears to have a table with some handwritten items at the bottom.

(Public Staff Becker Direct Cross Examination Exhibit 2 was marked for identification.)

Q. Now, in your testimony, you talk about the per book ROE for the test year; is that correct?

A. That is correct.

Q. And actually, you said it was 5.44. This is on page 7 of your testimony, line 13. You said it was 5.44 and 5.77 when adjusted to remove goodwill; is that correct?

A. Just a moment. I'm sorry, what page did you say?

Q. Page 7, line 13 of your direct testimony.

A. Per book ROE is 5.44, or it adjusted for goodwill ROE of 5.77.

Q. Now, as you could see on this exhibit, approximately about 10 lines down, there's a column where I put an -- well, maybe not on your copy. It has the rate base. It says, "Equity for ratemaking purposes, $11,168,000; do you see that?

A. $111,168,709, yes.

Q. And the difference between your other numbers, your goodwill is really the excess purchase price you pay when you bought the stock of -- how much stock for your utilities in 2004. And also I believe when you bought some of the stock of AquaSource; is

that correct?
A. We have about $15 million of goodwill on our books.
Q. And when the Commission approved the transfer to Aqua America of the heater stock, it says that you're not supposed to have rate recovery on the goodwill portion; is that correct?
A. That is correct. Goodwill is nonearning. It's not included in rate base.
Q. So as you could see at the bottom here where you have -- and I apologize, Bill Grantmyre can't type, so that's why it's all handwritten. Hopefully it's legible.
You see under number A, if we divide the net income here with -- by the $11 million that's for ratemaking purposes, actually the ROE comes out to 6.23; is that correct?
A. That is correct.
Q. And you had a rate increase at the bottom footnote 2 that talks about your rate increase on the December 18, 2018, in Sub -- W-218, Sub 497.
Do you agree that you got a rate increase then?
A. I'm sorry, can you repeat the question,

Mr. Grantmyre?

Q. I'll try.

A. Thanks.

Q. You see number 2 at the bottom, there's a footnote that talks about the rate increase you got in December 18, 2018, in Docket Number 218, Sub 497; do you see that?

A. Okay. So this is the handwritten footnote that you put at the bottom of the schedule on this exhibit?

Q. Yes, I'm sorry.

A. Okay. I do see that that footnote does indicate as you said.

Q. And will you agree that the -- subject to check, that the increase approved by the Commission was $2.896 million?

A. I would agree with that, subject to check.

Q. And divided by 12, that would come out to $241,333 per month?

A. Subject to check, yes.

Q. And also subject to check, for the period -- when you get per book, you didn't include any of the remaining increase for the months of -- up to December 18th; is that correct? It only included -- it only included 9.4 months; is that correct?

A. Yeah. The per book ROE is as of a point in time, and as of September, it would have only included nine and a half months of revenues, that is correct.

Q. So you see under B, where we've added $627,466; do you see that? And you agree that the resultant net revenues would be $7.558 million as shown on number D? Would you accept that subject to check?

A. I would agree that that is the revised revenue number if you add in the additional two and a half months to get to a total trailing 12 months, yes.

Q. And under C, if we divided that revenue, assuming it's all net income, by the rate base of $11 million, you would agree, subject to check, that the path shows 6.77 ROE?

A. Actually, I think I recalculated this. It would show 6.80. But I would also note that the additional revenues that you added, or whomever added, were not tax effected, so that is not a correct -- that is not a correct number.

Q. Okay. Okay. But you would agree that it's greater than it would have been at the 6.23 percent?

A. I do agree. I think -- is it okay to further respond here?

COMMISSIONER BROWN-BLAND: Go ahead.

THE WITNESS: This book ROEs and adjusted ROEs are very complicated. And whenever we try to present apples to apples, we do try to remove goodwill, which is why I believe in one of my exhibits -- I don't remember if it was 2 or 3 -- it is an adjusted ROE number that's in that chart which excludes goodwill.

What Mr. Grantmyre is showing here is there is a -- and this is appropriate. He did add -- since it was only nine and a half months with the increased revenue amount, he did add or try to add the additional two and a half months of revenues to get to a full trailing 12 months to show a more appropriate apples-to-apples picture. Unfortunately, that was not tax effected and that does have a pretty notable impact on the actual increase in net income.

There are also several other things that get involved when you are looking at the book ROE versus the adjusted ROE. So for ratemaking purposes, you exclude several items: EDIT, excess deferred income taxes; CWIP. There's other things that are excluded there.

So I think what I see out of this is Mr. Grantmyre's number -- revised number of 6.80 -- granted it doesn't have the tax effect in it, but that is still almost 3 percent or 300 basis points off of our authorized ROE of 9.75. So in one year's time, we had a rate effective mid-December of 2019, in one year's time, we are already now at an adjusted ROE of approximately 6.80. That's a significant decline in just one year.

Q. As a follow up, you said through goodwill at the bottom of your part of the exhibit, this was a response to a data request; is that correct?

A. I'm sorry, what was the question?

Q. Isn't this exhibit without the Grantmyre handwritten notes an Aqua response for a data request?

A. Subject to check, it looks like it's one of our schedules.

Q. But you used the 100 -- it's down on the right about four lines from the bottom of the printed stuff, you used the $120 million to do your calculation, which included some goodwill, didn't it?

A. No. The -- it actually excludes -- since our capital -- our cost of equity ratio is 50/50, you'll see that the goodwill on that top line -- and I don't have line numbers, so bear with me, please -- but it says goodwill balance at 9/30/2019 on the left, below the schedule, the goodwill balance is $14,669,349.52. Because we are --

(Reporter interruption for repeat of number.)

THE WITNESS: The goodwill balance at 9/30/2019, is $14,669,349.52. And I'll say my --

MS. SANFORD: Commissioner Brown-Bland, could I -- could I ask the witness to tell us where he is on that page? I don't seem to be able to catch up.

COMMISSIONER BROWN-BLAND: He's at the bottom. But go ahead, Mr. Becker, explain where you are on the exhibit.

THE WITNESS: Sure. So I think it's Cross Exhibit 2. Below the table, you'll see additional rows being completed. There's another calculation below the table where you will see rate base for customers, the first row below the table. Then the next row is goodwill balance at 9/30/2019. You see that on the left-hand side below the table?

MS. SANFORD: I got it.

THE WITNESS: And on the right-hand side, the NC total column, that's where you see the $14,669,349.52.

MS. SANFORD: I got it. Thank you.

THE WITNESS: So that's the total amount of goodwill. Because our debt-to-equity ratio is 50 percent, you take 50 percent of that goodwill, which is the next line, $7,334,674. And then you'll see the next line is the $120 million -- $120,043,689.57. And this comes -- this is the net of -- and I apologize, it's going to be -- In the table it says "equity per books" right about the middle of the table. And in the final column under NC total, it says $127,378,364. That's the equity per books. When you subtract the 50 percent of the goodwill of $7,334,674 from that number, you get $120,043,000.

So that is the adjusted equity without goodwill, and that's what we divided our trailing 12 months of net income, $6,930,772, by to get to our ROE -- our adjusted ROE, 5.77.

Q. But you do agree, for ratemaking purposes, the $111 million is your common equity for ratemaking purposes?

A. As of September 30th, before any post-test-year additions, yes.

MR. GRANTMYRE: Now, I would like the next exhibit identified as Public Staff Becker Direct Cross Examination Exhibit Number 3, and that would be on our list, pages 13 through 15.

COMMISSIONER BROWN-BLAND: All right. It will be so identified, and I note that this document is the one captioned is the "Commission Order, Order Approving Partial Settlement Agreement and Stipulation."

(Public Staff Becker Direct Cross Examination Exhibit Number 3 was marked for identification.)

Q. Now, would you turn to page 15, which has page number 10 at the bottom?

MR. BENNINK: Madam Chair, I think the exhibit that you referenced was not the one Mr. Grantmyre is talking about. He's talking about -- Mr. Grantmyre, are you talking about the affidavit of Bernard F. Thompson?

MR. GRANTMYRE: Yes. I'm sorry, yes.

COMMISSIONER BROWN-BLAND: All right. Let's correct that for the record. I have -- all right. The exhibit -- the exhibit Public Staff Becker Direct Cross Examination Exhibit 3 will be the affidavit of -- is it Bernard Thompson?

(Identification of Public Staff Becker Direct Cross Examination Exhibit Number 3 was corrected for the record.)

Q. Do you have that, Mr. Becker?

A. Just to confirm, page 13; is that correct, Mr. Grantmyre?

Q. Yes. It starts on page 13, but I refer you to page 15.

A. Okay.

Q. The beginning of the first -- second paragraph, first full paragraph, could you read that first sentence into the record.

A. Starting, "the usage data"?

Q. Yes.

A. "The usage data will ultimately be readily available for an Aqua America representative to share with customers upon their specific request by the first quarter of 2020."

Q. And can you read the last sentence in that paragraph -- the last two sentences that are highlighted beginning with, "at the appropriate time."

A. "At the appropriate time, Aqua NC will
communicate to its applicable customer base
that the usage data is available upon their
request in a manner yet to be determined.
Additionally" -- I'm sorry.
Q. All right.
A. Should I continue?
Q. Yes, please.
A. "Additionally, and as required under ordering
paragraph 26 of the 2018 rate case order,
Aqua NC will notify the Commission when such
information is being shared."
Q. Now, you will agree that, in our last rate case, the 497 rate case, where the hearings were held, I believe, in September 2018, the evidentiary hearings, that it was quite heavily litigated that Aqua should be sharing this information with the customers; do you remember that?
A. I do recall, yes.
Q. And you would agree that the customers are the ones paying for these AMR meters through rates; is that correct?
A. I would agree.
Q. And would you also agree -- and you may not

be able to answer this -- that Aqua America or Philadelphia Suburban had been using AMR technologies since approximately 2005?

A. At some level there's various technologies of AMR. Some are readable and were able to maintain the 40-day read status. The -- I think it's called the 90 Ws, which is what we use, are the more advanced version. Because we waited a little while, we were able to take advantage of that. Much of the AMR meter reading -- sorry, meters that have been installed for a lot of the other states are not capable of storing all of that data.

Q. But you will agree that 15 years have passed and Aqua has not come up with a process to provide the information to customers, have it readily available to customers; you agree to that?

A. I would not say it that way. As I mentioned, the 90 Ws are fairly newer technology that has not been utilized by other states, so there hasn't been a real -- a unified platform, I think is what you're referring to. That is actually now under development as we move into everybody using this newer technology, and that information is available.

Once other states and Aqua North Carolina --

we're kind of now at the forefront of this a little bit because we are able to -- we waited a while before we started using AMR versus all the other states. We were fortunate enough, then, to wait to be able to take advantage of the newer technology that's available.

So as we replace those other meters, the platforms will be developed uniformly for all Aqua customers to be able to eventually obtain, on a more readily available basis, that usage data.

Q. Well, you will agree that, when we had that hearing in September 2018, that one of the major points provided by Aqua North Carolina was that customers will have -- eventually have access to this meter-reading information; is that correct?

A. That was one of many major points, on the forefront of which the operational benefits from operating efficiencies, read rates, fewer estimated bills, fewer truck rolls were the primary benefit of that. The customer usage sharing was an additional benefit, yes.

Q. Now, can you explain -- it's now the third quarter of 2020, and you have not filed with the Commission that this information is available to customers when it was previously told to the Commission it would be available to the customers in the first quarter.

What is the current status? I'm assuming that it has not been provided to customers?

A. So there is a required follow-up report that was filed in June of -- I think it was June of 2019, status of the sharing of information, provision of information. This is a multi-phased approach. Our initial effort was -- it's always been available for internal folks to be able to pull that data and share it for customer billing resolution, but it was not very easily obtainable.

Several people inside, if we had an escalated issue, could obtain that data, but it wasn't readily available. We have since now put it on a platform where it is now accessible by a meter manager here in North Carolina, as well as our customer service reps. There is a small item that still has to be refined that our meter -- meter department in corporate is working on for the platform, and we actually -- it's available. We plan to roll out the training for the CSRs in the next couple of months, so they could share that data when a customer calls in about a billing issue or a billing -- a usage issue.

Q. What you're saying is it's available internally to some of your people but not to the customers, and the customers have not been notified on your website that they can get this information; is that correct?

A. That is correct. It's available internally to be -- to share with customers if there's a billing dispute. We can access it and we do, it's just not as easily available yet. We'll notify the Commission when that is finalized.

Q. So that's a decision that an Aqua employee would make whether or not they choose to share the information with the customer?

A. Typically, when there's a billing dispute, it will get escalated to our escalation department, and they have access to it, and they would -- if there isn't a challenge or dispute with usage, we can pull that data, and we would share it with the customer. But it is situational.

Q. So can you give us a projection now when that information will be available to the customers, that they could somehow get it without going through your customer service personnel? Because, at this time, the customers don't even know it's available.

A. Right. I do not have an exact estimate. As I mentioned, CSRs will be trained with the information that's available internally. The platform has to be built for all of the states to be able to utilize the usage information and share it externally, whether that's on a bill or whether that's access to a website, that has not been determined.

There's an IT project initiative, that's in 2020, to review how we plan to share that information. But again, you know, the benefits of this project moving from manual read and having an individual walk around and take physical readings of this, the financial and operational improvements were the primary reason for moving forward. And the usage data is definitely a benefit to the customers and interesting, and we will be providing it as soon as we can.

Q. Now, moving on to a different subject, in this case, you mailed the customer notices scheduling hearings through a different -- you did not mail it presorted first class or first class mail; is that correct?

A. I do not -- I do not believe the first communication was sent first class, but I'm not positive. I would have to check on that.

Q. Will you accept, subject to check, that the invoice that you received from the group that mailed -- put together your notices and mailed them to the customers, showed that the note -- the cost to mail each customer notice was $0.26?

A. Subject to check, yes.

Q. And you would agree, then, that -- subject to check, that first class mail is $0.55 for the first ounce, and presorted first class is $0.50 for the first ounce; is that correct?

A. Subject to check, yes.

Q. Now -- and it's my understanding you are going to mail the notice to customers of the temporary rates under bond and the rescheduled customer hearing, virtual meet -- hearing; that will be mailed first class?

A. Yes. Actually, you're right. There is -- the deference was the amount of time that we were trying to get the notices into the hands of the customers. First class, I don't know what the other version is called, but the less expensive version, but the first class version, there's more of a guaranteed time frame, and we needed to meet that. So we wanted to make sure that the customers all did receive those.

Whereas the first customer notice was sent out and the hearings weren't scheduled for a period of time, so the urgency of a couple extra days wasn't there, so the lesser expensive method was chosen.

Q. Well, I have one of your mailings in front of me, and I'll read you what the postage says, the first line. It says PRSRT, and a space, STD, as in dog. Now, presumably that is presorted standard or something.

Anyway, do you know if this type mailing provides returns if for some reason it's not delivered?

A. I do -- well, I don't know if the mailing does, itself, but what we did in the last case when we sent this out -- or sent out the customer notices -- we had received a lot of returns for inactive accounts and vacant lots. What we did this time -- because customer names change, what we did is put "or current customer," or -- I can't -- "or current order," something like that. So it would represent the actual customer who's at that billing location, so they could all receive it.

Q. Now, the difference in mailing presorted first class and this is from $0.50 to $0.26, that's only $0.24 per mailing; would you agree to that, subject to check?

A. That's a pretty -- I would. That's, what, a 40 percent lesser expense.

Q. Okay. But you would agree the customers pay the rate case expense?

A. That's correct.

Q. And customers -- you know, at Aqua's current rates of $72 flat rate for wastewater, an average bill, approximately -- I don't have it in front of me correct, but $50 for water, you would agree that a combined water and wastewater customer pays in total bills to Aqua in a year more than $1,400; is that correct?

A. Subject to check, and assuming that both water and wastewater, but I would say that the -- as we do in every decision, our prudency is managed. And if I can send something at half the cost it otherwise would, whether it's $0.25 or $25, I'm going to do that if there's not a significant difference in delivery of service.

Q. Well, when you mailed it in the last case, you mailed it under some type of bulk marketing mail. Do you know exactly what this mail is?

A. I do not.

Q. And do you know what the delivery time is?

And do you have anything from the post office as to the delivery percentage of actual deliveries?

A. I know that when we choose the methodology to send out the customer notices, we work extensively with our legal team, our assistants here, and the Commission and the Public Staff to make sure that the methodology that we use to send out those customer notices is appropriate.

Q. Now, when you mail your monthly bills to customers, you don't mail it by this same mailing process, do you?

A. I do not know that answer.

Q. Wouldn't you be mailing it either first class or presorted first class so you would get the quickest delivery?

A. I honestly do not know the difference between the different methods of delivery, the timing of which. I just cannot answer that question.

Q. Well, hasn't the Public Staff conveyed to you and your attorneys that we really want all these mailings to customers in rate cases be first class or presorted first class?

A. I believe it's been suggested to our legal team that the Public Staff might prefer that.

Everything we've done, we've done in accordance with the rules. And again, I do not know the differences between the different types of which things are sent in which method.

Q. Well, if, in fact --

MS. SANFORD: Commissioner Brown-Bland, excuse me. I'm going to object. I've let this go on. It's not in Mr. Becker's direct testimony. As far as we've known, it's not an issue at all, much less in this case, and so I will object on those grounds.

COMMISSIONER BROWN-BLAND: Mr. Grantmyre?

MR. GRANTMYRE: I'm about to ask my last question. And also the Public Staff is very concerned about whether or not customers got notices. The Commission orders the customers to be provided notices. And when they send out a type mailing that is paid for by the customers, we don't even know to the extent customers did not receive it. I think we have a right to explore this.

COMMISSIONER BROWN-BLAND: I will allow it.

Q. So you don't believe that the customers who were paying $1,400 a year would like to pay an additional $0.24 in order to ensure they get their notices?

A. I can't speak on behalf of the customers, other than it's a significant savings in that methodology. And from what I understand, the difference in delivery, and service, and validation of that is very similar from the US Postal Service, which is how we deliver those. And I think you said that the latest delivery was done by sorted first class mail. I think you said that, but I'm not positive.

Q. The one you just are mailing out now is temporary rates --

COMMISSIONER BROWN-BLAND:

Mr. Grantmyre, I believe that your microphone is actually raised somewhat. So when your head is down, it gets difficult to hear you. Just get closer and try to look up as much as you can, please. Thank you.

Q. Okay. We will move on to -- if we could go to your testimony on page 14. Let's back up to page number 10, if you would. And I'm directing you to lines 13 and 14.

A. Okay.

Q. And in there, you say that you did not recover, or under-recovery of testing costs; is that correct?

A. No. The intent of this statement, I believe, is we're going to continue to perform sampling on behalf of our customers to ensure its water quality, even though we may not get full recovery of these costs.

Q. Now, you're referring to the Sub 497 case; is that correct?

A. Well, it's alluding, I guess, to the fact that, in the Sub 497 case, we did not get recovery from all of our actual sampling costs.

Q. Well, wasn't -- didn't the Commission rule against you because you didn't have it documented?

A. Well, all of the actual costs and invoices were available and reviewed by the Public Staff, so they were documented.

Q. But you did not have it broken out as to what you call extra testing, and they couldn't be separated, so the Commission ruled against you; isn't that correct?

A. I think the reason it was -- well, the issue in that case with the sampling costs was that the

Public Staff's position was to allow recovery of only the minimum level of sampling costs, where we decide, in the field and through our compliance department, that there may be needs for us to monitor other things that are above the minimum. And in the 497 case, we were not authorized to collect the additional amounts, and it may have been the way that we recorded them and track them.

So to your point, because we could not separate the difference between the minimum and the additional costs that we were doing for sampling to address water quality issues or identify water quality issues, they were excluded from recovery.

Q. Turn your attention to page 14 of your direct testimony. Would you go there, please?

A. Yes.

Q. Now, on lines 3 to 5, you talk about an increase year to year of 1.54 annually in expenses. I'm sorry. You talk about expenses increase, and also have a somewhat of a decline, as you claim, in customer consumption; is that correct?

A. Bear with me for just a moment.

(Witness peruses document.)

That is correct, I do say that.

Q. Now, you also will admit that Aqua North Carolina has organic customer growth that is on existing systems of about 2 percent a year?

A. Yes, that's correct.

Q. And organic growth helps to offset some of the additional operating expenses; would that be correct?

A. It would. There's a lot more information in witness Thill's direct testimony regarding the variable components of growth and expenses on those -- that new growth. He would be better to answer that specific question.

MR. GRANTMYRE: I would ask that the next exhibit be identified as Public Staff Direct Cross Examination Exhibit Number 4, and this would be pages 16 through 32 of the prefiled cross examination exhibit.

COMMISSIONER BROWN-BLAND: All right. Mr. Grantmyre, is this the one that starts with the letterhead from the Sanford Law Office?

MR. GRANTMYRE: Yes, ma'am.

COMMISSIONER BROWN-BLAND: All right. It will be so identified as Public Staff Becker Direct Cross Examination Exhibit 4.

(Public Staff Becker Direct Cross
Examination Exhibit 4 was marked for
identification.)

Q. Now, I turn you to the second page, which is page 17. Do you have that in front of you?

A. I do.

Q. Now, you would agree that this was an exhibit from a recent filing you made about April 30, 2020 for WSIC/SSIC, filed it with the Commission?

A. It appears so. So, subject to check, yes.

Q. And it says to the left of the period ending March 31, 2020?

A. I'm not sure if I have the right -- this is page 17, Mr. Grantmyre?

Q. Yes.

A. The period ending March 31, 2020. Yes.

Q. Okay. Now, with respect to -- you have in your testimony, timing that it takes to get additions to rate base into your actual revenue requirements; is that correct?

A. Can you repeat the question?

Q. You have in your testimony about the regulatory lag that (sound failure) get plan additions into rate base and into your rate; is that correct?

A. That is correct.
Q. And you see this is part of your WSIC filing, and you see the highlighted column, which is the third from the right, you agree it's identified as 3/1/2020 closed utility plant in service?
A. That's correct, yes.
Q. And would you agree, subject to check, on the math that -- or at least at the bottom it's $3.166 million, all of which was closed in March?
A. The $3,166,235.77 was closed in March.
Q. And the column to the far right is the total for the six-month period; is that correct?
A. Yes, that is correct.
Q. And you would agree that that number is $3.437 million?
A. Yes, that is correct.
Q. And will you agree, subject to the check, that if you divide the March number by the cumulative, the six months, 92 percent of this plan was all in March; is that correct?
A. Of all of the WSIC/SSIC eligible projects that were included in the filing, that is correct.
Q. So for the other -- the other five months, only 8 percent of the total closed out; is that

correct?
A. That appears correct.
Q. And you understand that there will be significant testimony later on as to the utility plant in service between Mr. Thill, and Mr. Junis, and Mr. Henry; you understand that?
A. I do.
Q. And as you can see, in the middle of the page, it has quarter 4, 2019 closed utility plant in service. And that's a zero. Absolutely nothing was done in the fourth quarter, or at least closed plant.
A. With relation to the specific WSIC eligible projects, that is correct. Not nothing, though. There's lots of other projects that are closed that are not included here.
Q. Now, I go to the next page, which would be page 18.
You see the third column from the end, March 1, 2020; do you see that, it's highlighted?
A. I do.
Q. And at the bottom, it's $505,000?
A. That is correct.
Q. And again, the cumulative number is $620,000?
A. Yes.

Q. And you would agree that the math would show that dividing the $505,000 by the $620,000, that 81 percent of this six-month total was in the month of March?

A. I would agree.

Q. Now, if we could go to the next page, page 19, hopefully we'll start moving quicker.

You'll see the one column, March 2020, and the number at the bottom is $1.54 million closed March?

A. I do.

Q. And would you accept, subject to check, that that is 47 percent of the six-month total?

A. I would agree.

Q. And February, you also go back one to the left, you closed at $1.238 million; is that correct?

A. That is correct.

Q. And if you combine March and February, the total would be, subject to check, 85 percent combined?

A. Subject to check, I would agree with that.

Q. And you would agree, without getting into any details now, that part of the dispute between the Public Staff and the Company is the correct in-service date; is that correct?

A. I don't know if the -- the service date --

the in-service date is one of the items that is -- has been discussed and disputed between the Public Staff and the accounting -- the accounting department and processes that Aqua utilizes to capitalize assets.

Q. But you would agree, then, that if an asset goes into service in 2019 -- or 2000- -- 2019, and it's not book -- you don't book it as in service until 2020, that depreciation for 2019 is not recorded on your books?

A. We use a half-year convention to address a lot of these types of issues, and I think you're focusing on the amount that was closed in the first quarter that might have been placed in service in the -- in December. This is an accounting process. This is a very intricate and voluminous process with the -- we do tens of thousands -- or about 10,000 line items get capitalized each year. We're focused on very small exceptional amounts where we have to wait for all the costs to come in before we can actually unitize an asset.

And under the guidance of historic discussions with the Public Staff about closing assets twice, we have to wait for the complete costs to come in and for the work to be done on every job. So we do, in these larger projects such as being displayed here, we have to handhold these and make sure that they are recorded as close to the date that is possible with all the information.

What I would say again is Ed Thill, as you had mentioned, is the expert witness who would be discussing this later on in his testimony.

Q. When you say --

COMMISSIONER BROWN-BLAND: Just a moment, Mr. Grantmyre. Two things. Number one, did I miss you, Commissioner Gray? Did you need to say something? All right. You're good? And the second thing is, we need to take a break. And we will break and come back on the record at 10:45. And while we take the break, please mute yourself and turn your video off, please.

(At this time, a recess was taken from 10:31 a.m. to 10:46 a.m.)

COMMISSIONER BROWN-BLAND: Mr. Grantmyre, you may continue where you left off.

Q. Now, with respect to depreciation, if a project goes in service and closes out in 2019, you record one-half-year convention in 2019; is that correct?

A. That is correct.

Q. Now, if you put it in service in 2020, you record one-half-year convention in 2020; is that correct?

A. That is correct.

Q. So under a hypothetical, if, in fact, a project closed, went into service in 2019, but it was not recorded as being in service until 2020, then the one-half-year convention for 2019 does not take place; is that correct?

A. I'm sorry, would you please repeat that, Mr. Grantmyre.

Q. If, in fact, a project goes into service in 2019 but it is not closed out on your books until 2020, then that one-half-year convention depreciation for 2019 does not take place on your books; is that correct?

A. The half-year convention is recorded on the date that the asset is unitized and closed. That's when it starts the depreciation. It's six months of depreciation whether it's closed in January or December.

Q. And also, when a plant goes in service, don't you also stop accumulating AFUDC, if there is AFUDC on a project?

A. I'm not exactly sure of that answer. That would be a question for witness Thill.

Q. Okay. Let's get back to these schedules. This is cross-examination Exhibit Number 4. Are you on page -- could you go to page 21?

A. Okay.

Q. And are you on 21?

A. I am.

Q. And as you see, this is a little different format. You've really got more quarters on here.

But for the fourth quarter, right in the middle of the page, again, the Company did not close anything in the fourth quarter?

A. For these specific projects, that is correct.

Q. And the column third from the right, March of 2019, closed out $3.594 million?

A. For quarter 1, March 31, 2019, $3.594 is the amount that was closed in that month, yes.

Q. Okay. I'm sorry, that was March. The quarter would be 4.539.

A. Oh, I'm sorry. Yes, that is correct.

Q. And if we could go to page 22.

And you would agree that this is for the period ending March 31, 2019, as you can see on the left?

A. I do, yes.

Q. And again, for the fourth quarter of 2018, you closed out zero -- these are all SSIC projects?

A. That is correct. These projects specifically, yes.

Q. And in March you closed $402,000?

A. That is correct.

Q. And you would accept, subject to check, that the total for six months, that was 71 percent?

A. Again, clarifying that this is for this limited set of specific projects, that is probably correct, subject to check.

Q. And when we add February in, you have 149,000 for February; is that correct?

A. That is correct.

Q. And when you add February and March together, it comes out to 97 percent of -- will you accept that, subject to check, of the six-month worth of WSIC/SSIC additions on this chart, 97 percent were closed out in February and March?

A. Yes, subject to check.

Q. Now, we move on to the next page, page 23, for the period ending March 31, 2019. Will you agree that, for the fourth quarter, there was zero closed out in those three months?

A. For the fourth quarter, yes. Subject to check, yes. Not subject to check. I can see that, yes.

Q. And --

A. You're talking about the three projects, right? These are the three projects?

Q. Yes.

A. Yes.

Q. Brookwood LaGrange?

A. Yes.

Q. And you would agree, then, that 100 percent were in the first quarter of 2019?

A. I would agree.

Q. Now, if we could move to page 25. And this is ANC water for the period March 31, 2018; would you agree with that?

A. Yes.

Q. And would you also agree that, again, in the fourth quarter of 2017, nothing was closed out as far as these WSIC projects?

A. For these three WSIC projects, I would agree.

Q. And 100 percent was in the first quarter of 2018?

A. I would agree with that, yes.

Q. And if we could go to page 26. And again, this is ANC wastewater period ending March 31, 2018; would you agree with that?

A. Yes.

Q. And you agree that all of these that we're going through were pages from Company's own WSIC/SSIC filings; would you agree with that?

A. I believe so. ANCWW1, that appears to be our schedule, correct.

Q. Now, on this schedule, you would agree that for the fourth quarter of 2017, only $27,000 was recorded or closed out?

A. I do, yes.

Q. And you would agree on the far right is the cumulative for the six months, the total was $985,000?

A. I would agree.

Q. So you would agree that the math would show that only 3 percent of the total $985,000 was closed out in the fourth quarter of 2017?

A. Yes.

Q. Now, going back to the next page, page 28, and for the period ending September 30, 2015, ANC water, are you on that page?

A. I am.

Q. And again, you would show in the middle of the page, closed out for the second quarter, $24,000?

A. Yes, I agree.

Q. And in the column third from the right where it shows 9/1/2015 closed EDIS, at the bottom it shows $3.447 million; is that correct?

A. That is correct.

Q. And, now, September is the last month of the six-month cycle in the WSIC/SSIC period; is that correct?

A. Correct. Goes from April -- April 1 to September 30th. All eligible projects that are completed are submitted for that period.

Q. And the other six-month period would be October 1 through March 31; is that correct?

A. It is correct.

Q. And will you agree, subject to check, that the math would show that, for the September month year, 97 percent of the six-month total was in that one month?

A. Subject to check, I would agree.

Q. So in looking through these -- and we'll go through a few more -- now, let's go to page 29.

Now, you see that for the second quarter of 2015, only $51,000 was closed out?

A. $50,790, correct.

Q. Okay. And the column to the far right, which includes the second three months, that the total -- the cumulative total for the six months was $1.332 million?

A. I would agree.

Q. Going to page 30, Brookwood LaGrange, in the middle of the page, close to the second quarter was $95,000?

A. Rounded, correct. That is correct, rounded.

Q. And the total cumulative closed is $460,000?

A. Yes, that is correct.

Q. Now, going to page 32. And you would agree this is ANC water March 31, 2015, period?

A. Yes.

Q. And in the middle of the page, fourth quarter 2014, do you see $57,000 that was closed out?

A. $57,300, that is correct.

Q. And the total for the six-month period was $792,000 rounded?

A. Yes, that is correct.

Q. And you would agree that, in March again, the number is $707,000?

A. That is correct, yes.

Q. And you would also agree, subject to check on the math, that that $707,000 would be 89 percent of the cumulative six-month amount of $791,000?

A. Subject to check, yes.

(Pause.)

Q. If we could go to page 33.

Now, you would agree this is ANC wastewater for the period ending March 31, 2016?

A. I would.

Q. And you would agree that, for the fourth quarter, $99,000 was closed out, rounded?

A. The fourth quarter of 2014, yes.

Q. And for the first quarter of 2015, which is the third from the right, a total of $713,000 rounded was closed out?

A. I would agree, yes.

Q. You also would agree that that would be 83 percent -- that is $713,000 would be 83 percent of the six-month total?

A. Subject to check, yes.

Q. Well, the good news is that's the last of that exhibit, so.

A. Thank you.

MR. GRANTMYRE: We would request that the next exhibit be identified as Public Staff Becker Cross Examination Exhibit Number 5, and this is page 34 of the book we handed out.

COMMISSIONER BROWN-BLAND: Just a minute. I think I put it away with the other exhibit. Hold on. All right. Just a second. This will be identified as Public Staff Becker Direct Cross Examination Exhibit Number 5. It is a single page with a table and a bar graph?

MR. GRANTMYRE: Yes, that's correct.

COMMISSIONER BROWN-BLAND: All right.

(Public Staff Becker Direct Cross Examination Exhibit Number 5 was marked for identification.)

Q. Let's back-up just one second now.

All those months we went through where there was a huge amount of -- or significant amount of closing out in the month of March, and those WSIC/SSIC rates would go into effect normally by July 1st; isn't that correct?

A. That is -- for the March filing, that is correct.

Q. And you testified earlier the average, when there was WSIC/SSIC, was a six-month delay; isn't that what you said in your corrected testimony this morning?

A. I did. Using approximates, using the period of coverage from October 1 through March 31, the average of that would technically be December. And then there's another three months after the filing before the rates go into effect, so December to July 1st would be about six months. That was an estimate.

Q. Okay. But as we saw from the exhibits, doesn't it appear that a very large amount is closed out in March, and therefore, the lag is only three months -- a little over three months?

A. I would. And, you know, a lot of that is based on the project timing. You know, the planning and the project timing that's influenced by the -- by our capital management to make sure that we try to reduce the -- or minimize the deleterious effects of rate lag. So we try to make sure that we're starting projects in time to minimize that lag period before we have to file.

Q. And if we could go to Cross Examination

Exhibit Number 5, which is page 34.

Do you have that in front of you, it's the one page?

A. I do.

Q. Now, this is broken down into two groups.

The first group, you would admit, goes from 2015 down through March of 2020? That's on the left-hand side?

A. Yes.

Q. And then the second group as you go down towards the middle of the page, that omits 2018 in its entirety; do you agree with that?

A. Yes, it does, and 2020.

Q. Yeah. The first three months of 2020.

Now, with respect to 2018, that was a rate-case year; is that correct?

A. It was.

Q. And in that, on the far right it lists the spending. And it showed that 2018 had a much -- was an unusual year with much greater spending.

It comes out to, I believe, $38.9 million, correct?

A. Bear with me for just one moment.

(Witness peruses document.)

So the question you had asked me was is this an unusual year for spending. And based on the capital that's included in this schedule, it would appear so. The schedule excludes all developer activity, it appears. I'm not positive. And actually at the top it says it excludes the developer activity and blanket routine replacements, which amounts to about $10 million a year, so that's about 25 percent of our annual spend. So this is an incomplete schedule.

If you look at my Revised Becker Direct Exhibit 3, that will show you the amount of capital spend by years. It's 2013 through 2019. That is a better picture of our comprehensive spend versus this one here.

Q. Okay. Well, let's go to your Becker Direct Revised Exhibit 3.

Do you have that in front of you?

A. I do.

Q. And would you agree, at least on this schedule, that for 2017 it appears to be approximately $38 million?

A. I would agree, yes.

Q. 2018 was $36 million approximately?

A. Yes, I would agree.

Q. And 2019 appears to be 38 to $39 million?

A. 2019 estimated is about $39 million, yes.

Q. And what did the actual come out to be for 2019; do you know?

A. I'm not exactly sure. I want to say it was about 36 to $38 million, in that range.

Q. And what is your budgeted total capital expenditures for 2020?

A. It's approximately $41 million. Between 40 and $42 million.

Q. So as you can see, Aqua North Carolina has been spending heavily on capital projects for the last -- at least since 2017; do you agree to that?

A. Yeah. And actually, even in '16 it's almost twice our depreciation rates. So that's a pretty strong lift. But comparatively, we've spent significantly more in the last three years between, '17 and '19.

Q. And you would agree it's shown in your testimony that in none of these years that you achieved your Commission-approved ROE; isn't that correct?

A. That is correct, and that's shown on my Direct Exhibit 2.

Q. And so Aqua -- and your capital, your equity all comes from Aqua America; isn't that correct, equity infusions?

A. Yeah. We're -- so we're a subsidiary of Essential, but was Aqua America, yes.

Q. And all your debt, with the exception of some debt you inherited from heater utilities, and some state-revolving fund money that you got on two projects, all your other debt comes from passed-down debt from Aqua America; is that correct?

A. Yes. I believe the debt that we inherited has expired, and we replaced it with additional debt. So we do have SRF monies locally, and the rest does come from corporate Aqua America or Essential.

Q. Now, I'm going to go back to your testimony. There's only one other cross exhibit.

(Pause.)

Q. Now, on page -- on page 16 of your testimony, lines 3 to 6, you talk about needing to get additional legislative relief. I'm assuming you're talking about on the WSIC/SSIC?

A. Yes. We're looking at expanding the WSIC/SSIC to additional eligible items as well as expanding cap.

Q. You would admit that it was Aqua

North Carolina that drafted, or had its lobbyists draft the original WSIC/SSIC existing statute which was then introduced by legislature? This was your draft statute, correct?

A. The initial WSIC/SSIC legislation was initiated by Aqua. I was not here at that time, but I understand there was a collaborative effort with many parties to refine the list of eligible items as well as the other terms of the original legislation.

Q. Now, in your testimony, you talk about -- on page 17, line 13 and 14, you talk about -- or 12 through 14, you talk about Aqua competes for capital allocations among other Aqua America states; is that correct?

A. I do, yes.

Q. Now, you admit that for 2017, '18, '19 and '20, where the average capital spending is probably close to $41,000 or between -- I'm sorry, $39,000, that you're getting very adequate capital dollars for your capital spending; is that correct?

A. It's actually about $39 million to $40 million at the current time.

Q. And you also -- it was Aqua North Carolina and Carolina Water that had their lobbyists run out the fair values statute; isn't that correct, and then give it to a legislature -- legislator for introduction?

A. Yeah. We initiate a fair value legislation to help buy failing municipalities at a fair value instead of book cost.

Q. So was -- the fact that you wanted to get that North Carolina, doesn't that indicate that Aqua America thinks it's a good state to invest in?

A. We want to have the tools available to us, but I do need to address the challenge that Aqua's had, as demonstrated in my Exhibit 2, that we have been unable to earn our ROE or authorized ROE. So we are making significant efforts in this -- well, over the past couple of years to utilize whatever tool is available to us to help reduce this rate lag which is the primary driver here.

So it is currently a state that we prize. We're the third largest state of the Aqua -- or the Essential presence for the water and wastewater utilities. And we want to be able to continue to provide the capital that's necessary to replace the aged infrastructure, replace the CIAC that's depreciating or amortizing. So it's a state that we want to continue to invest in, but we need to make sure that we're fully earning or reasonably earning our authorized ROE, which we have not been able to do.

Q. We're going to move on to the reporting that you talk about extensively in your testimony.

Now, on page 19, you list all the bimonthly reports that you filed, correct?

A. Yes.

Q. And these reports were ordered by the Commission due to customer complaints on water quality in either the 363 or 497 general rate case; is that correct?

A. We were required, as part of each of those cases, to provide a water quality follow-up report for any system -- for any system that was represented by a customer who testified. That is -- that is what that report is for.

Q. Now, you would agree, then, that Public Staff, in Mike Franklin's testimony, states that Public Staff recommends that only Bay Leaf system be subject to continuing bimonthly reports?

A. I saw that that was part of several recommendations by the Public Staff.

Q. Now, turning to page 20, in this we're talking about the semiannual reports regarding secondary water quality concerns, correct?

A. That is correct.

Q. And this was not -- subject to check, in the 363 -- Sub 363 case, this was not in the Public Staff's proposed order, this requirement? Would you accept that subject to check?

A. I would say subject to check.

Q. And if it wasn't in our proposed order, then would you assume, then, that the Commission inserted it because the Commission wanted it?

A. I suppose subject to check, yes.

Q. And in 497, would you agree that the issue came up of Aqua underreporting the customer complaints because it had failed to report the after-hours, before-hours calls, the weekend and holiday calls?

A. At that time, we did not have a mechanism to effectively track the customer complaints that were coming in in evening or in after hours and on weekends. But we started tracking those and set up a process when it became a concern. And we set that up, I believe, in September of 2018, where we are -- we have been tracking those since September of 2018.

Q. But the Commission also ordered you to go back and correct two prior reports that you failed to include those calls; isn't that correct?

A. I believe we did, and we went back and revised those reports with no changes. I think it was the seventh and eighth semiannuals that were refiled, if memory serves me correct.

Q. And you also talked about new requirements. Is that part of the new requirements that you had to go back and check those two years that had your 588 hours of employee time that you list in your testimony?

A. When you say "new requirements," I'm not sure what you're referring to.

Q. In your testimony, you talk about the new requirements in the 497 order took 588 hours of employee time to comply with those filing requirements.

A. I can definitively answer that. The 588 was tracked by providing a -- it's called an M number, or expense tracking code, so we could identify what people's time is spent on. I don't think it's comprehensive, but it is a minimum. Whether or not the specific time needed to go back and revise and refile the semiannual reports is included in that 588 hours, I'm not definitively -- I can't definitively say. But it's either in there or it's incremental to that amount.

Q. Now, on page 21 of your testimony, you talk about the reports you filed with DENR or DEQ or Public Water Supply quarterly; is that correct?

A. That is correct.

Q. And that is just the Raleigh office; isn't that correct?

A. That, I do not know. Witness Berger is -- handles a lot of those compliance reports. She'll be on as a follow-up witness later on in the hearings. She would probably be the better person to ask that specific question.

Q. Okay. I will not go very deep on this, but in either her or your testimony -- I think it's in yours, or someone's testimony -- you talk about it's difficult to refile this with the Commission quarterly.

Why is it so difficult just to file it with the Commission?

A. I don't know that answer. I'm not sure if I mentioned that in my direct. That might be a question you have to ask for witness Berger.

Q. Filing it with the Commission, doesn't that give the customers access to information that may be pertinent to their water system?

A. I believe these reports are all on file with

NCDEQ and available for viewing. I don't think they're confidentially filed. So whether we file with the Commission, they're already available, from my understanding, with the North Carolina Department of Environmental Quality. So refiling these with the Commission is, I think, duplicative.

Q. But if the customer wants to go on the Commission's website, isn't it easier -- how does the customer know what is and what is not on the DEQ website?

A. Well, I guess if I'm a customer looking for compliance information, I'm probably going to go with DEQ versus looking for compliance information on the Commission's website, but that's just me. They facilitate and manage, they monitor water quality and environmental compliance. That's where I would go.

Q. Well, once you file it with Public Water Supply each quarter, don't you just create a file that you just send a copy to the Utilities Commission and it doesn't cost you anything to do it?

A. It seems like that would be simple. I just do not know what that process is. I think you have to ask that of Ms. Berger.

Q. And isn't it also simple correspondence back and forth between you and Public Water Supply that you just create a file and easily send it to the Public Staff? Those other filings are not filed with the Commission.

A. I think the official reports that we submit to NCDEQ are readily available, so again, I think that's duplicative. Part of the requirements, and maybe the -- I'm not sure if it's an expansion of the requirement in 497 case, in that order, regarding the DEQ communication was that we were supposed to summarize all discussions, verbal discussions, email discussions, which is very time-consuming to pull together, compile from everybody who works at DEQ in the various regional offices across the state. So I would not agree that that is a simple task.

I would also indicate that that communication, it stymies communication, trying to document what we just said on a verbal phone call or collaborating, and that's extremely time-consuming.

Q. Well, in all the filings that you've given to the Public Staff, isn't it true that you have not had one verbal communication summary in all those filings, all you filed back and forth was emails between you and Public Water Supply?

A. I am not -- I do not know that answer. I will say that, again, the communication has become very formalized through email because of that. So it's -- again, it's stymieing good communication that otherwise would be had verbally with DEQ staff on compliance issues and other concerns.

Q. Well, isn't it easy every time an Aqua person receives the DEQ email or communication, or he sends -- he or she sends a communication, an email or letter to DEQ, that they just merely put it in some type of file, and then all of a sudden when it comes down to send it to the report, you just forward that file, and it's not difficult at all?

A. Well, it may not be for one person, but when you're coordinating all the supervisors, and the area managers, and our compliance department personnel from the five offices across the state, it may seem like a simple individual process as that's received, but as you're compiling that -- we take it very seriously to be able to adhere to these requirements. We don't want to miss anything. So getting every individual person to realize when I just had a conversation with the DEQ member out in the field, to go back and document it, save it to a folder, send it over to one unified person, which is typically Robin Lambeth here, it can become cumbersome.

Q. Well, as I said earlier, I don't believe -- and you correct me if I'm wrong -- that actually none of the verbal communications with Public Water Supply have been given to the Public Staff. You or anyone at Aqua, do you know if any such conversations have been given to Public Staff?

A. I do not know if they have -- if they have been given. Again, I do know that verbal communications have dropped off significantly because of that, trying to document -- properly document what was said by DEQ versus what was said by the Aqua personnel, or the engineer, or whoever was there. Those discussions are not happening as much. They're -- all communications or most communications, I should say, seem to be going through email. But again, witness Berger would be better to answer that question.

Q. And if each of your persons that talk to or communicate with Public Water Supply kept a file on all email communications and they merely forwarded them to Ms. Lambeth who works with you, that would be a simple process to then forward to the Public Staff.

How does it become difficult if everyone keeps a file and then forwards it?

A. Yeah. I think when you said the word "simple" and then you said "difficult"; I don't think it's difficult, but I think it's cumbersome. As I mentioned, the tracking of it, coordinating it, compiling it, and making sure that we're getting everything is cumbersome, and would be more cumbersome if we had more verbal communications, which again, have dropped off mainly because of this requirement. Which is unfortunate, because there's a lot of collaboration and relationship development that we've had with DEQ to help understand what water quality issues and compliance issues need to be addressed out there. It's not just two parties sending things back and forth. We try to work with our regulators to understand their positions, requirements, and needs before it's an issue.

Q. But the fact that you've sent none of the verbal communications to the Public Staff, you would agree, then, if there had been some, that you have not complied with that requirement?

A. I have already -- I have already indicated that the verbal communications have dropped off. I don't know if there has been one, two, or five, or if any of those have been sent over. That's just something you'll need to ask witness Berger.

Q. Now, moving on to page 22 of your testimony, this has to do with the WSIC/SSIC plan.

And you will agree, will you not, that Aqua was very much involved in drafting the rulemaking for WSIC/SSIC Rule R7-70 and Rule R10-26?

A. Yes, I would agree with that. We initiated that process.

Q. And you agree to the final Commission rules?

A. Yes.

Q. And were you at the Supreme Court oral arguments when the Attorney General appealed the WSIC/SSIC portion of that rate case order?

A. I was not. I was the president of Aqua Virginia at that time.

Q. Would you accept, subject to check, that the Public Staff filed a brief in the Supreme Court supporting the WSIC/SSIC decision by the Commission and emphasized all the customer protections in the WSIC/SSIC rules and the statute?

A. I understand that that is correct, yes.

Q. And you list all these reports you filed.

You're not suggesting in any way that you don't have to file these reports, are you, the ones on this page on WSIC/SSIC?

A. No. No. These are reports that we are voluntarily filing to be able to take advantage of the WSIC/SSIC tool, which is a very beneficial tool. This is meant to just show the amount of reporting that we do with the Commission and the Public Staff, and this is one report of the many that I show here.

Q. And the report is required by the rules -- Commission past rules, correct?

A. I would say subject to check, I believe so.

Q. And on page 23 of your testimony, these are the -- really, this is your applications you list for the WSIC/SSIC, to get that into rates; isn't that correct, where it talks about water and sewer system improvement charges on line 10?

A. Yes. And let me correct myself from your last question. I confused what -- this section of reports on line 10 -- I'm sorry, page 23, starting on line 10, in which you previously asked me about the reports on page 22 starting on line 5, I swapped those. And I had mentioned that these are the reports that we submit requesting for WSIC/SSIC, whereas the ones on page 22 starting on line 5 are the required Aqua quarterly earnings reports that are submitted as required.

Q. But on page 23, this is where you get the increase in rates. So again, it's voluntary that you file this.

If you don't want to have to file it, you just don't have to file it; isn't that correct?

A. That is correct.

Q. And down at the bottom, you talk about the heater acquisition incentive account reports; isn't that correct?

A. Yes.

Q. Now, going back in the history a little bit, in the order when Aqua America purchased Heater, the order approving it in 2004, are you familiar with that order?

A. I wouldn't say familiar. Aware.

Q. Well, let me give you the high points is the acquisition incentive account. Essentially -- essentially, Aqua America paid $18 million above Heater's common equity. Do you agree with that? That's part of the goodwill, and it was adjusted a little bit, but, in general, that's correct?

A. Correct.

Q. And in that order, it was set up so that $12 million of that goodwill would be subject to being reduced and going to rate base upon Aqua acquiring what the Commission considered troubled system; is that correct?

A. That is correct.

Q. And you get credit reducing the acquisition incentive and the goodwill goes into rate base for capital expenditures you make for improvements, plus a reasonable and prudent purchase price; do you agree with that?

A. I would agree with that, yes.

Q. And the Commission ordered you to file these annual reports just updating the status; isn't that what this is, these are annual reports?

A. That is correct, yes.

Q. And you file these reports, but if you want to give up the remainder of the acquisition incentive account that you haven't taken down yet and converted to rate base, couldn't you eliminate these reports by giving it up?

A. I suppose if we requested that, yes.

Q. And to date, will you accept, subject to check, roughly you've taken down about 4 million or a little bit less than that amount?

A. I would say subject to check, yes, it sounds about right.

Q. Now, moving on to the bottom of -- bottom part of page 24 of your testimony, you talk about new reporting requirements from the last rate case.

A. Right. The bullet on line 12, correct.

Q. And the first one on lines 14 through 16, that was just updating your tariffs to get the correct capacity fees, connection fees, and that was a one-time event that you had to do that, correct?

A. One-time event that took much research to do, complete. I mention the bullet on 12 isn't reporting or filing requirements. So yes, many of these are one-time follow-up requirements.

Q. Wasn't it important that you have correct tariffs?

A. Well, I think it's always important that our tariffs are correct.

Q. Now, on the next one down --

A. If I may say, Mr. Grantmyre?

Q. Yeah.

A. This wasn't about the correct -- this was -- we wanted to include the connection fees and the prices and procedures related to those. Not that the tariffs were incorrect prior or previously. They just didn't include that information. This was a requirement to add that to the tariff.

Q. Okay. And the next one on Johnston County, that was one-time filing. Might have made a supplemental filing on it, but that was just a one- or two-time filing, and you're done with that, correct?

A. Number 2, I believe so.

Q. Okay.

A. Subject to check, but I believe so.

Q. And the water quality plan, number 3, that was a one-time filing. And, basically, all you did was file the plan you already had; isn't that correct?

A. That is correct.

Q. And going to page 25 at the top, the home filtration system reports, you filed two of those. The first in -- you're basically done with those now, aren't you?

A. Yes. After extensive research and discussion with several vendors to try to identify to fulfil this request. So yes, the report is completed after a much research and discussion.

Q. And the next one has to do with the flushing credits, and you developed a process to issue the flushing credits in consultation with the Public Staff, which was approved by the Commission. You're done with that -- developing that process now; isn't that correct?

A. We developed it, received approval for it, rolled it out, and communicated it, yes.

Q. And the next one, number 6, the flush -- well, that's it, the flushing fill credit, that's the one we're talking about.

A. 6 is the flushing plan.

Q. Oh, the -- okay. 6 is the flushing plan. Okay.

And that was developed in consultation with the Public Staff, filed with the Commission, and that's a one-time -- Company could, of course, modify it as it deems appropriate, but that was a one-time report, correct?

A. It was a one-time project that was finalized via report.

Q. And the AMR technology, as we talked to earlier, you filed, I believe, two affidavits, one or two in there. But that's pretty well done for now unless the Commission orders you to file something further.

A. This is ongoing. One of the requirements, as you had mentioned in previous cross, was that we are required to notify the Commission once we start sharing that information with our customers. The project behind it is ongoing, though.

MR. GRANTMYRE: Excuse me. If I can just have a minute, I may be at the end. I just want to check.

(Pause.)

MR. GRANTMYRE: Commissioner Brown-Bland, that's all the cross examination I have. Thank you.

COMMISSIONER BROWN-BLAND: Thank you, Mr. Grantmyre.

Redirect?

MS. SANFORD: Yes. And let me inquire. We break for lunch at noon; is that correct?

COMMISSIONER BROWN-BLAND: Correct.

MS. SANFORD: Okay. Let me get started here.

REDIRECT EXAMINATION BY MS. SANFORD:

Q. Mr. Becker, I will tell you, I am not going to be addressing these matters in the order that

Mr. Grantmyre did, so I'll make that announcement to everybody. And thank you for your patience in skipping around with me. Let's start with the last one. Let's start with the reporting requirements.

In your testimony, you listed the various types of reporting requirements to which Aqua has appeared; is that correct?

A. Yes, that is correct.

Q. And -- and you understand some were required by -- some were of the Commission's own derivation, some were suggested by others; you understand the difference in that, right?

A. I do.

Q. And do you have objections or complaints about filing any reports that are currently useful?

A. Not at all. If they're useful and assist in any way, we are happy to provide them.

Q. And if they -- do you assume that reports will be forever useful as the reporting requirements were originally conceived, or would you imagine that they might change over time?

A. I would think, as we provide them, different -- either the situation no longer exists that we're reporting on, or it's not as -- it's not a situation or issue any longer, in which case those reports should probably be modified or eliminated. And I think that's one thing over the time is it's not that some information isn't necessary, but the same information may not be necessary. So we should be looking at those, and modifying those, and just getting them down to the content that is useful.

Q. And so this should be -- your position is this should be a dynamic process; is that right?

A. I would agree, yes.

Q. And you're bringing it to the Commission's attention in this case to request that kind of updated review?

A. Right. And I mention it in my direct in support of the more detailed testimony by witness Berger, where she does offer some alternatives, rather than going through all the motions of the bimonthly, every two months, semiannual. Not that that's not the time periods that could be agreed upon, but it would be great to be able to collaborate and understand what information would be useful and then report on that information in a timely period.

Q. And with respect to the conversation about the WSIC/SSIC reporting requirements, is the Company objecting to WSIC/SSIC reporting requirements?

A. No, not at all.

Q. But you just presented them as an example of the kinds of reporting requirements to which you must comply, right?

A. Right. And that's what this whole section is in my direct testimony, are all of the reporting requirements that we do currently today. It wasn't intended to say that these are all a bad -- but it's meant to show the volume of reporting and information that we provide to the Commission, and Public Staff, and as well as the consuming public.

Q. And production of these reports, whether deemed useful or whether not very productive, they consume human resources, right? They consume time and money?

A. Absolutely, yes. We could be using that time to focus on our operations and improving water quality and service.

Q. Are a number of these reports done or some of these reports done in consultation with the Public Staff?

A. Many of them are where we submit our draft to the Public Staff. They review it, add their comments, and then we file it.

Q. And do you believe that's a good process? I mean, that that's the way it should work, and that's a beneficial process to collaborate on these reports?

A. Absolutely. The more we can collaborate and we're not just posing one side, one position without understanding the needs from the other side, I think we can clear up a lot through that communication before we actually file the final report versus having one position out, another position out. So I think there's a lot of benefits to be able to collaborate outside of the filing, or I guess within the filing process before we actually file the final report.

Q. And that good work imposes a cost on the Public Staff as well, correct?

A. It does.

Q. And on the Commission to review the reports?

A. I would assume that they do spend significant time reviewing the reports, yes.

Q. And so your testimony here, you have said, is not to reject the notion that there are reports that should be filed, but it's simply to say that there should be a continuing focus on the ones that are useful; is that what you're saying?

A. That's exactly what I'm saying.

Q. Okay. Let's move from that. Figuring out where we go. Let me go back to the early part of Mr. Grantmyre's examination in which he took you to the proxy statement, which was page 3 of Public Staff Becker Cross Examination Exhibit Number 1.

A. (Witness peruses document.)

Q. Are you there?

A. I am, yes.

Q. I want to talk for just a few minutes about the questions concerning goodwill. And Mr. Grantmyre had a number of questions, and this -- the goodwill issue and legend has been around for a long time, so I want to understand Aqua's position.

When you -- when you say, as you have said frequently in a number of different contexts, that Aqua is unable to meet its authorized returns, to make its authorized returns in North Carolina, does that include or exclude some consideration of goodwill? In other words, does goodwill impact your ability to make those statements or undermine your ability to make that claim of the inability to earn? And if so, please explain how?

A. The goodwill has always been a nonearning equity component, and there is a standard book ROE that is utilized across the industry by analysts and whomever else. But, internally, we talk and have been conveying our need to earn our authorized ROE. We consider the adjusted goodwill. We typically will present -- whatever form it might be, we present an adjusted goodwill. The adjusted goodwill raises the book ROE to a new number.

And I understand it's a known -- it's a known item that needs to be removed. We do not recover. We do not earn it on it. And we remove that from all of our computations to make sure that we're showing that this has been removed. And when you remove it, I think goodwill in this case has about a 30-basis-point impact. If you take goodwill out, it takes out about 30 basis points out of our ROE, or actually adds it back to our ROE. Because goodwill is diluted.

So even with goodwill taken out -- and that's what the schedules were that Mr. Grantmyre was showing earlier on cross -- with that recalculation we're still 300 basis points away from our earning -- our authorized ROE since our last rate case where we got final rates in December of 2019. So we're only nine and a half months in, and then we add back the two and a half months that Mr. Grantmyre did in his cross, and we're still 300 basis points down from our ROE already. It's diluted but it is not the reason that we are here today.

Q. Okay. Thank you. Let's talk -- let's stay on that proxy exhibit that -- at which -- or around which you discussed Essential's earnings and Essential's financial statement. I have trouble saying Essential because it's so easy to continue to talk about Aqua America. But how many -- in how many states does Essential operate with water and sewer companies as they do in North Carolina?

A. We are now in 10 states, Essential is, with the acquisition of the gas companies.

Q. And with respect to the proxy statement -- and I'll try to move us along here -- also with respect to conversations that you had about -- with Mr. Grantmyre about the internal allocations that companies do with respect to where they spend money as related to returns. So Essential is in 10 states, and we looked at the financial information that Mr. Grantmyre took us to this morning.

So is North Carolina's financial condition -- are their attributes comparable to what we saw with the parent company, Essential?

A. No. The water companies that -- there's eight water states that we operate -- water and wastewater utility states that we operate in, and North Carolina is by far the lowest earning ROE state over the footprint. And I believe -- I would have to check on this. I believe we've had the most recent rate case with new rates effective December of 2019.

Q. So the lowest?

A. Still the lowest.

Q. The lowest in terms of achieved ROE, and the most recent rate case. And then in this case, with respect to financial matters, you have resolved your issues with the Public Staff in a fashion that increases rates, correct?

A. That is correct.

Q. By how much?

A. Yeah. There's still a couple open items, but it's between 3.2 and $3.5 million, is what the settlement -- the financial settled agreement recovered there.

Q. And so the contribution of the various Essential states to Essential's overall financial situation is going to vary?

A. That is correct. We make up about 10 percent of the customers of the water utilities.

Q. And let's talk about the level of spend in North Carolina, because I think all of these things relate, and you discussed them with Mr. Grantmyre.

What -- would you tell us again, what has been the level of -- I call it the level of spend, I'm certain there's more technically appropriate words -- but your level of spend in North Carolina for '18, '19, and projected for '20?

A. So in 2018 we spent about $36 million, about $35 million in '19, because I gave a range, 35 to 37. And then in 2020 we're expecting to spend between 40 and $42 million, I believe.

Q. How does this compare, if you know, to your investment in North Carolina, let's say -- I'll say five years ago?

A. I started in 2016, and we were in the low 20s -- 20 to $22 million in there, in that range. And then prior to that we were below $20 million. And I was also the controller in 2009 here in Aqua North Carolina for several years. But we had always been spending somewhere below about $15 million in those years. So we're at -- our depreciation right now is about $10 million, and we're spending three to four times depreciation right now.

And the reason the depreciation is even relevant, and I think I mentioned it earlier, I referred to the amount of spend versus depreciation, typically it's -- a generalization is, if you spend in capital the amount of your annual depreciation, you will hold rates consistent. So if my depreciation is $10 million and I replace that $10 million of depreciation with $10 million of new capital, all else being equal, my rates will stay reasonably the same.

As I start to inflate or actually increase my spending above that number, now you have upward rate pressure. So I use that reference for depreciation, because we are now at three to four times depreciation, which shows the capital demand of the period that we're in to replace aging infrastructure and contributing capital that was contributed many, many years ago by developers. That was on earning capital, and now we're replacing with earning.

Q. Well, you've anticipated -- I'm sorry, I didn't mean to cut you off.

A. That's okay.

Q. You've anticipated my next question. Your spending has gone up, my word, significantly, it's gone up in a fashion that we can observe as being more than discernible if not appreciable in the past few years. Why is that? Why are you spending that much money here in North Carolina?

A. There are several reasons. One, as I just mentioned, the amount of contributed capital. So when we acquire a development, the developer is required -- or the way the process works is they I'll say donate, but they contribute the asset infrastructure. Their -- that asset infrastructure has no rate base. It's all -- from an accounting perspective, it's offset, so we don't earn on the money that was given to us. Rightfully so, we didn't pay for it.

And a significant amount of our plants in service -- I believe we have gross plant service of almost $500 million -- 38 percent of that -- it's in my direct testimony. I don't know exactly where, but it's in my direct testimony. That 38 percent of that is contributed. Well, those contributed assets were contributed many, many years ago. We entered North Carolina in 2003 through an acquisition, and we've been building it since then. But those acquisitions have been in place and service for many years. That contributed capital is now coming due, it's aging, which goes to the second item.

Most infrastructure is now aging. Again, there's more references in my direct testimony about reporting of need in North Carolina for infrastructure in water and utilities. It's a known problem with replacing aged water and wastewater infrastructure. That's no different from those contributed assets.

So not only are we replacing contributed assets that were not earning before with earning capital, but we're now replacing all of our aged infrastructure whether we paid for it or not. So that is really the primary driver is replacing and repairing. And then updating a lot of our technology and other things is another need, whether it's AMR or other information technology platforms that we need to do to stay current.

Q. Do changes in environmental requirements impact your level of spend?

A. Absolutely. Yeah, absolutely. So we have 59 wastewater treatment plants, 200-plus collection systems, and we have to make sure that we're managing the maintenance of those just to avoid normal issues like sanitary service overflows. But then as there are refinements in the environmental compliance rules to adhere to, more environmental considerations, nitrogen limits, and phosphorous limits, and lead and copper, all of those things contribute to updating our current infrastructure to make sure that it's compliant with the new rules.

Q. Are -- is the increased attention to -- just generically to PFAS, and PFOA, and those categories of emerging contaminants, is that having a financial impact on Aqua?

A. It is not, but it will. We've been -- we're on the front end of that process. We've been monitoring it. Our compliance director, Chris Crockett, who has testified in previous cases before us, is focusing on PFAS and PFOA, and we're actually on the forefront of announcing that we are going to address all sites that have a -- that exceed a 13-part-per-trillion limit. We're beginning that. We've begun the testing. We have to do confirmation testing, but we'll be moving forward with addressing all of those issues.

Q. Apologies if you said this, but that's a corporate-led effort?

A. That is a corporate-led effort for all states.

Q. That's Mr. Crockett's outfit?

A. That is correct, yes.

Q. Dr. Crockett's, I should say.

Can you tell us what, if you know, what your current annual revenues and your rate base investment are in North Carolina?

A. Let's see if I have the quote.

(Witness peruses document.)

I don't have the exact current annual revenues. It's approximately $55 million. The rate base is about $220 million before including -- excuse me -- before including any post-test-year additions.

Q. How many employees do you have in North Carolina?

A. Working for Aqua North Carolina, it's approximately 185 full, part-time, and seasonal employees. We also have approximately 40 -- let's see, 40 to 50 employees that work for our call center that's based here in Cary, North Carolina, as well that does not report through Aqua North Carolina. They're part of our Aqua customer operations.

Q. Okay. All right. Thank you. I'm going to switch back to something that I mentioned earlier.

COMMISSIONER BROWN-BLAND: Ms. Sanford?

MS. SANFORD: I'm sorry?

COMMISSIONER BROWN-BLAND: If it's a good time? Is it a good time?

MS. SANFORD: It is good, because I do have a little more. Thank you.

COMMISSIONER BROWN-BLAND: We can stop, and we will recess for lunch and come back on the record at 1:00. As you leave, please make sure you're on mute and you turn your cameras off. Thank you.

(The hearing was adjourned at 11:58 a.m. and set to reconvene at 1:00 p.m. on Wednesday, July 8, 2020.)

CERTIFICATE OF REPORTER

STATE OF NORTH CAROLINA)
COUNTY OF WAKE)

I, Joann Bunze, RPR, the officer before whom the foregoing hearing was taken, do hereby certify that the witnesses whose testimony appear in the foregoing hearing were duly affirmed; that the testimony of said witnesses were taken by me to the best of my ability and thereafter reduced to typewriting under my direction; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this hearing was taken, and further that I am not a relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.

This the 12th day of July, 2020.

JOANN BUNZE, RPR
Notary Public #200707300112