PLACE: Via WebEx Videoconference

DATE: Thursday, July 9, 2020

TIME: 9:02 a.m. - 12:19 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: 4

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P R O C E E D I N G S

COMMISSIONER BROWN-BLAND: Let's come to order, go on the record. Good morning, everyone. We will pick up where we left off, and the case is still with the Company.

Mr. Bennink? Mr. Bennink, you are on mute.

MR. BENNINK: The Company calls witness Edward Thill to the witness stand, please.

COMMISSIONER BROWN-BLAND: All right. There's Mr. Thill.

Whereupon,

EDWARD THILL,

having first been duly affirmed, was examined and testified as follows:

COMMISSIONER BROWN-BLAND: All right. Mr. Bennink?

DIRECT EXAMINATION BY MR. BENNINK:

Q. Mr. Thill, will you state your name and business address for the record, please.

A. My name is Edward Thill, and I'm currently a contract employee helping out with Aqua, which is at 202 MacKenan Court in Cary, North Carolina.

Q. And you were previously the controller for

Aqua, correct?

A. That is correct.

Q. Did you prefile direct testimony consisting of 41 pages and Thill Direct Exhibits 1 through 6 in this docket?

A. I did.

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

A. I do. On page 25 of my direct, on line 13, I had indicated that we were going to do -- that we had suggested for the revenue reconciliation any additional assessment or refund would be accomplished over a nine-month period. That would create some highs and lows as the assessments went on and off. So it made sense to go for the 12-month. I presented this to the Public Staff in answer to their data request number 102. So, at this point, we'd just like to get that on the record. That also leads into further on page 26, on line 3, also references nine months. That should now read 12.

Q. And I believe you also had a revised Exhibit 4, correct?

A. That's correct. So that same concept goes into Exhibit 4, which was an illustration of how this

revenue reconciliation would work.

MR. BENNINK: Commissioner Brown-Bland, I did not distribute that Revised Exhibit 4 to the parties and to the Commission staff until this morning, but hopefully everyone has that. We would ask that that exhibit be identified as Revised Thill Exhibit 4. And we can -- if you want, we can file that in the docket as soon as possible.

COMMISSIONER BROWN-BLAND: Yes, Mr. Bennink, I will file it in the docket. Is there any objection? Everyone received it? Hearing no objection, the motion will be allowed.

(Revised Thill Exhibit 4 was marked for identification.)

Q. Mr. Thill, if you were asked the same questions today as they appear in your prefiled direct testimony as amended this morning, would your answers be the same?

A. They would.

MR. BENNINK: Commissioner Brown-Bland, we would now ask that Mr. Thill's prefiled testimony, as amended, and his -- be moved into the record as if given orally from the witness stand, and that his prefiled exhibits with Exhibit 4 as

amended be identified as marked.

COMMISSIONER BROWN-BLAND: All right. Hearing no objection, that will be allowed, and the prefiled testimony of witness Thill will be received into the record and treated as if given orally from the witness stand. And the prefiled exhibits will be identified as they were when marked when they were prefiled -- as they were marked when prefiled.

(Thill Direct Exhibits 1 through 6 were identified as they were marked when prefiled.)

(Whereupon, the prefiled direct testimony of Edward Thill 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
EDWARD THILL
ON BEHALF OF
AQUA NORTH CAROLINA, INC.

December 31, 2019

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Edward Thill. I am the Controller of Aqua North Carolina, Inc. ("Aqua" or "Company"). My business address is 202 MacKenan Court, Cary, North Carolina 27511. My responsibilities include supervising the financial operations at Aqua. These duties include overseeing the budget, forecasting, rates, and day to day financial operations of the Company.

Q. PLEASE BRIEFLY DESCRIBE YOUR BUSINESS EXPERIENCE.

A. I joined the Company in January 2019 in my present position as Controller. Prior to joining Aqua, I was employed for 17 years as Controller and Vice President of Finance and Operations for Performance Trust Capital Partners, LLC, a fixed-income institutional broker-dealer located in Chicago, Illinois. During my 30+ year career, I also held accounting and auditing positions with General Instrument, Hyatt Hotels, and Crowe Horwath.

Q. PLEASE DISCUSS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I am a graduate of Illinois Wesleyan University with a Bachelor of Science degree in Accountancy. I am a member of the American Institute of Certified Public Accountants and I am licensed in North Carolina as a Certified Public Accountant.

Q. HAVE YOU EVER TESTIFIED BEFORE A REGULATORY COMMISSION BEFORE?

A. I have not.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address certain financial aspects of the rate case. These are, specifically:

1) capital structure,

2) rate design,

3) conservation pilot program,

4) deferred accounting for capital projects, and

5) request for regulatory asset – Johnston County transmission fee.

Q. WHAT TEST YEAR PERIOD DOES YOUR TESTIMONY ADDRESS?

A. My testimony addresses the test year beginning October 1, 2018 through September 30, 2019, as well as certain adjustments that extend into the post-test year period and are pro forma in nature.

1. CAPITAL STRUCTURE

Q. WHAT IS THE COMPANY'S PROPOSED CAPITAL STRUCTURE IN THIS RATE CASE?

A. The Company proposes a ratio of 50% equity and 50% debt in the financing of its operations. This ratio is consistent with the capital structure approved by the Commission in prior rate cases. The proposed cost of debt is 4.25%. This rate is derived from the long-term borrowings to which the Company has committed as of the end of the test year, reduced for the impact of refinanced debt approved in the Commission's October 30, 2019 Order in Docket No. W-218,

Sub 524. When including the proposed cost of equity rate of 10.10% per Company expert witness Dylan D'Ascendis, the resulting proposed overall rate of return is 7.18%. Please see Mr. D'Ascendis' direct testimony for additional analysis related to capital structure.

2. RATE DESIGN

Q. WHAT DO YOU PROPOSE IN YOUR RATE DESIGN WITH RESPECT TO THE DISTRIBUTION BETWEEN BASE FACILITY CHARGES AND VOLUMETRIC RATES?

A. The Company proposes to utilize the same fixed/variable ratio that was proposed by the Public Staff and approved by the Commission in the Company's most recent rate case (Docket No. W-218, Sub 497). That structure included allocations of base facility charges ("BFC") and volumetric charges for the average water customers as follows:

	BFC	Volumetric
ANC[1]	40%	60%
Brookwood	41%	59%
Fairways	44%	56%

Similarly, the Company proposes no modification to the previously approved fixed/variable structure for its wastewater customers, the vast majority of which are unmetered and subject to a monthly flat rate charge. In response to the Commission's Rate Case Order in Docket No. W-218, Sub 363, the Environmental Finance Center at the UNC School of

[1] Aqua North Carolina

Government ("EFC") produced a report dated March 31, 2016, titled "Studies of Volumetric Wastewater Rate Structures and a Consumption Adjustment Mechanism for Water Rates of Aqua North Carolina, Inc." ("EFC Report"). The EFC Report noted that short-term fixed expenses accounted for 83% (or higher) of Aqua's expenses for wastewater and 89% (or higher) for water services (pp. 6 and 11, respectively).

Although high fixed expenses are best matched by high allocations of fixed revenues, the Company recognizes that there are critical considerations in ratemaking beyond the contemporaneous matching of the utility's revenue and expenses. These considerations include customer affordability and conservation, to name two. These specific public policy goals in particular are better supported by ratemaking structures that recover a greater portion of costs from volumetric rates. Indeed, it would be disingenuous for the Company to request an increase in its base facility charges in order to rebalance its ratio of fixed costs, while also proposing to institute a conservation pilot intended to specifically drive average consumption lower (the pilot will be introduced later in this testimony).

A balance must be struck that promotes consumption conservation while also providing the Company with a reasonable opportunity to earn its authorized return on equity. For this reason, the Company's rate proposal in this case seeks only to maintain the same ratios approved in its most recent Rate Case Order.

Q. DO YOU SPONSOR ANY EXHIBITS IN THIS CASE RELATED TO RATE DESIGN?

A. Yes. The billing determinants, revenues, and proposed rates are contained in the Company's Exhibits F, H, and J to the Application. The direct testimony that follows will discuss the development of the data contained therein.

Q. WERE THOSE EXHIBITS PREPARED BY YOU OR UNDER YOUR DIRECTION AND SUPERVISION?

A. Yes.

Q. PLEASE DESCRIBE THE BILLING DETERMINANTS INCLUDED IN THE PROPOSED RATE DESIGN.

A. Billing determinants consist of the number of bills and gallons used by customers by class by month over the test year and the two prior years.

Q. PLEASE DESCRIBE THE METHOD USED TO DEVELOP BILLING DETERMINANTS.

A. Billing information was obtained covering three 12-month periods ending September 2017, 2018, and 2019. From those reports, the number of bills and consumption in each month of those three (3) years was compiled by tariff division, class of service, and meter size.

Q. HOW DID YOU VALIDATE THE ACCURACY OF THE TEST PERIOD BILLING DETERMINANTS?

A. To calculate "expected test year revenue" using the billing determinants, the

number of bills and consumption volumes were multiplied by the base and usage rates in effect during the test year for the various meter sizes and rate groups. This "expected test year revenue" was compared to the "booked revenue" for the same period. The difference between calculated and booked revenue was less than one percent, thereby validating the accuracy of the developed billing determinants. This validation is shown in Exhibit H to the Application in the column 'Test Year Revenue'.

Q. HOW WAS TEST PERIOD DATA ADJUSTED TO ACCOUNT FOR END-OF-PERIOD CUSTOMERS?

A. The number of bills in the last month of the test period (September 2019) was normalized to an annual number of bills. The usage volumes for the actual end of test year customer count were then annualized in proportion to the average usages in the test period.

Q. PLEASE DISCUSS FLUCTUATING CONSUMPTION IN NORTH CAROLINA.

A. Over the last several years, the average consumption per customer has varied widely due to environmental factors, conservation, and pricing. The fact is that Aqua's customer habits are changing and, overall, consumption is declining due to a number of persistent factors, including more efficient plumbing fixtures and household appliances, governmental programs encouraging greater efficiency in water use, changes in landscaping patterns, and consumer response to conservation price signals.

The aforementioned EFC Study concluded, in pertinent part, that:

> "The analysis demonstrates that average water use has declined significantly among Aqua water customers, relative to test year average water use, although has recently stabilized close to 5,000 gallons/month average for ANC customers. The drop in average consumption reduced the water revenues generated below the rate case revenue requirements for most years (despite a growth in customers)." EFC Report at p. 58.

Although the EFC Report assessed that consumption appeared to be stabilizing in 2015, Aqua's experience has been a continued overall decline in customer consumption (Thill Direct Exhibit 1).

Q. IS AN ADJUSTMENT FOR CONSUMPTION INCLUDED IN THE DEVELOPMENT OF PRO FORMA USAGE BILLING DETERMINANTS?

A. Yes, a conservation normalization factor has been applied to the three-year average consumption figures for each water rate entity as follows:

	Actual 3-Yr Avg. Conservation Experience (A)	Rollforward Period (in Years) (B)	Conservation Normalization Factor (A) * (B)
ANC Water	-1.38%	1.5	-2.07%
Brookwood	-2.24%	1.5	-3.36%
Fairways Water	-1.60%	1.5	-2.40%

Q. WHAT IS A CONSERVATION NORMALIZATION FACTOR AND HOW DOES IT WORK WITH THE THREE-YEAR AVERAGE TRADITIONALLY USED IN DETERMINING PRO FORMA USAGE?

A. The conservation normalization factor attempts to correct the three-year

consumption average by rolling the experience to levels better reflecting those at the end of the test year.

The three-year average advocated by the Public Staff in Aqua's North Carolina water and wastewater ratemaking accomplishes a smoothing of year-to-year consumption patterns impacted by weather. This policy seeks to protect both the customer and the utility from rates that might be skewed by use of consumption levels driven by short-term weather events (droughts, floods, etc.). However, a simple three-year historical average ignores the impact of continued declining consumption experiences across the state and across the country, driven by consumer conservation. As illustrated in Table 1 of Thill Direct Exhibit 2, if we isolate for consumption as the single variable in a time series experiencing decreasing consumption (I have used a conservation rate of 1% annually solely for purposes of this illustration), average customer usage would decline from a beginning point of 5,100 gallons per month ("gpm") to 4,960 gpm within three years (the end of our test year in this simulation). However, the actual three-year average consumption for this period would measure at 5,030 gallons per month, which approximates the consumption levels achieved 18 months prior to the end of our test year.

Q. HOW DOES THE LACK OF A CONSERVATION NORMALIZATION FACTOR AFFECT COMPANY REVENUE?

A. The current approach overstates consumption (by understating the reality

of the declining trend in consumption), thereby undermining the integrity of the ratemaking formula. That formula operates by application of a certain price to the gallons sold by the utility; however, if the gallons actually sold are consistently fewer than the gallons utilized to set rates, the Company is hobbled in its efforts to recover its revenue requirement, and thus to earn its authorized return.

Table 2 of Thill Direct Exhibit 2 uses the data of Table 1 to quantify the theoretical impact of using a three-year average consumption figure in determining rates. Table 2 assumes the volumetric portion of our water revenue requirement is set at $24.6 million, which approximates the amount approved in the Company's last rate case. We have assumed conservation of 1% annually experienced evenly over a three-year period and applied to a beginning consumption figure of 5,100 gpm, which approximates the average consumption three years ago. At the end of the three years, consumption would have declined to 4,960 gpm.

The historical ratemaking process would ignore this conservation experience and instead use a three-year average consumption figure of 5,030 gpm. Applying the three-year consumption figure across an estimated 81,000 customers would produce a volumetric rate of $5.03/kilogallon to meet our $24.60 million revenue requirement. If consumption in the year following rates was only at the 4,960 gpm level, as simulated at the end of the test year (ignoring any further decline that might

occur during this expense recovery period), revenues would total just $24.26 million. That is a $340,000 per year shortfall for each 1% of conservation. If we apply the Company's actual annual conservation experience of -1.54% (see Thill Direct Exhibit 1, with further discussion to follow in this testimony), the revenue shortfall rises to over $520,000 per year and would continue to grow, as history has shown, the longer the Company stays out of a rate case.

The Company recognizes that there are a number of assumptions used in this illustration and does not propose that the number is a specific measure of actual lost revenue. The Company has instead presented this calculation to show the design deficiency inherent in the traditional calculation and a general indication of the magnitude of the impact on utilities when using steadily declining historic averages to calculate consumption necessary to recover an established revenue requirement in a rate case. The illustration supports the Company's contention that the three-year average should be paired with a conservation normalization factor to better represent real consumption levels as of the end of the test year – not one that effectively utilizes an average consumption level that existed eighteen months ago (three-year average). This updated concept is consistent with similar traditional efforts to utilize the full customer population at that same date.

Q. HOW WAS THE COMPANY'S CONSERVATION NORMALIZATION FACTOR COMPUTED?

A. Recognizing that the Public Staff has historically found three-year averages to be representative of consumption levels normalized for weather variations affecting the water and wastewater sector, the Company worked backwards from the end of our test year in calculating three-year averages as of the end of each year. Our analysis produced nine data points beginning with 10/1/08-09/30/11 and ending with the three-year average used in our current case covering 10/1/16-9/30/19. Results of our analysis are provided as Thill Direct Exhibit 1.

The net change, even using three-year averages, is rather volatile period-to-period but the trend is definitive: consumption has declined from an average of 5,740 gallons per month to 5,070 gallons per month, an 11.7% decrease over this time period. When we calculate the compounded annual growth rates, we see an annual change over the sample period for the consolidated Company of -1.54%, and individual entity rates of -1.38%, -2.24% and -1.60% for ANC, Brookwood and Fairways, respectively. As discussed earlier and as demonstrated in Thill Direct Exhibit 2, the use of a three-year average effectively rolls back the conservation experience 18 months or 1.5 years, so our conservation normalization factor rolls forward the annual conservation experience by that same 1.5 years to return to a normalized consumption level as of the end of the test year.

Q. HOW IS THE CONSERVATION NORMALIZATION FACTOR

APPLIED?

A. The factor is applied in a manner consistent with the current three-year average consumption factor – only the two factors are now combined for a single net adjustment to consumption volumes. Also consistent with prior practice, the combined factor is used to adjust the revenue requirement associated with certain variable expenses (i.e. a reduction in the volumes assumed for revenue purposes would have a matching reduction in the expense recovery required for items such as chemicals and power).

Q. IS THE CONSUMPTION NORMALIZATION FACTOR PROJECTIVE IN NATURE?

A. No, the factor uses only known and measurable historical data as of the end of the test year (to be updated at the end of the post-test year period). The factor does not project a furtherance of any consumption trend.

Q. WOULD IMPLEMENTATION OF A CONSUMPTION ADJUSTMENT MECHANISM ("CAM") ACCOMPLISH THE SAME PURPOSE AS THE CONSERVATION NORMALIZATION FACTOR?

A. No. While both measures seek to address a deficiency in the revenue sufficiency produced by the historical calculation, the CAM does not address revenue stability. The conservation normalization factor intends to more fully collect the revenue authorization in the period of consumption, which helps best match the revenues with associated expenses. The CAM provides a mechanism to correct any realized deficiency or surplus in the

following year. Further, in collecting a more appropriate level of revenues in the year of consumption, there is greater stability in customer bills due to the absence of prior year adjustments.

Q. DO YOU BELIEVE THAT THE LEVEL OF PRO FORMA REVENUES AT PRESENT RATES AS SHOWN ON EXHIBIT H TO THE APPLICATION IS APPROPRIATE FOR SETTING RATES IN THIS CASE?

A. Yes, present rates were applied to the pro forma billing determinants to calculate pro forma revenue. I submit this methodology correctly provides a more accurate representation of current consumption levels that are relied upon by the Company to attain its approved revenue requirement.

Q. IS A GROWTH ADJUSTMENT INCLUDED IN DEVELOPMENT OF PRO FORMA BILLED-MONTHS BILLING DETERMINANTS?

A. Yes, the Company is projecting organic growth of 1,165 customers in the six months following September 2019. Bills and proportional additional usage were added to pro forma calculations in anticipation of that growth.

Q. HOW WERE THE PROPOSED RATES DEVELOPED?

A. Proposed base charges and volumetric rates were developed so that, when applied to the pro forma billing determinants, the rates would result in an expected revenue amount that matched the applied-for revenue requirement within an acceptable margin of less than one quarter of one percent. This “proof of revenue” is shown in Exhibit H to the Application in

the column 'PF Rev at Proposed'.

3. CONSERVATION PILOT PROGRAM

Q. HAS THE COMPANY INCORPORATED IN THIS PROCEEDING ANY CONSIDERATIONS RELATED TO THE PENDING DOCKET NO. W-100, SUB 59?

A. Yes. Sub 59 initiated "a discussion of rate design proposals that may better achieve revenue sufficiency and stability while also sending appropriate efficiency and conservation signals to consumers." In response to that request, Aqua (filing jointly with Carolina Water Service, Inc. of North Carolina on June 19, 2019) offered to conduct a pilot program in its next rate case to evaluate the effectiveness of an inclining block volumetric rate design. The purpose of the proposed pilot is to examine a new rate structure that could send conservation-inducing price signals to residential customers, while preserving the utility's ability for appropriate ("sufficient" and "stable") cost recovery.

Q. WHY DOES AQUA PROPOSE A PILOT PROGRAM RATHER THAN APPLYING THE INCLINING BLOCK DESIGN TO ALL CUSTOMERS?

A. There are many variabilities in an inclining block structure, from the number and size of the blocks, to the various step points, and even the absolute levels of rates necessary to accomplish its intended objective. Each of the seven largest cities in North Carolina uses an inclining block structure, and each is vastly different from the others. For example, 5,000 gallons of water

in Fayetteville would cost a consumer $28.87, while Charlotte would only charge $16.89 for the same consumption. However, at 20,000 gallons, Charlotte would charge $157.02 compared to Fayetteville's $99.62. Clearly the conservation signal is much stronger in Charlotte for the high-end user, but Fayetteville's design offers far less volatility for both the customer and the municipality.

As described below in our discussion on price elasticity, there are critical assumptions made in the design that may or may not prove valid. This adds increased risk to the stability of the Company's revenues, even if sufficiency is ultimately secured by other mechanisms. The use of a pilot---actually two pilots, one for the four water system customers included in the ANC Water rate design pilot and one for the Fairways Water system customers rate design pilot---will better allow us to analyze the results each pilot will have on a smaller scale before designing and applying any one or more final rate designs to the larger population of Aqua customers. The Company believes it would be imprudent to subject the entire customer base to such a dramatic structural change without first determining the effects of that change on a smaller representative sample of customers.

Q. HOW DID YOU SELECT THE SYSTEMS SUBJECT TO THE PILOT PROGRAM?

A. I focused our program on systems that had the greatest opportunity for both conservation and operational relief, while also ensuring the pilot group was

sufficient in size and diversity to provide meaningful results that we might extrapolate across the Company's full customer base in future rate design considerations. The Company additionally chose systems within two separate rate entities and developed separate rate structures that will allow us to further assess the actual impact of the differing designs for future implementation. Each of these systems is experiencing stress to meet peak demand and could require (potentially near-term) capital investment if conservation is not realized.

The systems selected were:

- The Cape (Fairways)
- Arbor Bay (ANC)
- Bayleaf Master System (ANC)
- Merion (ANC)
- Pebble Bay (ANC)

With nearly 11,000 premises included in this pilot, the program covers approximately 13% of the Company's water customers and includes representation in each of our geographical areas. The five systems vary significantly in size, consumption volatility, and absolute level of consumption. Please see attached Thill Direct Exhibit 3 for key statistics for customers within these pilot groups.

Q. HOW WERE THE BLOCKS DERIVED FOR THIS PILOT PROGRAM?

A. Significant research has been conducted in the area of water rate design,

but no consensus exists as to an optimal structure. As noted previously, each of the seven largest cities in North Carolina uses an inclining block structure, and each is vastly different from the others. We chose the following break points in measuring customer gallons of consumption per month:

	ANC		Fairways	
	From	To	From	To
Block 1	-	4,000	-	5,000
Block 2	4,001	8,000	5,001	10,000
Block 3	8,001	15,000	10,001	20,000
Block 4	15,001	Above	20,001	Above

Because this is a zero-sum exercise, there are necessarily winners and losers in any change to the pricing structure. In this case, the lesser users will experience an overall reduction in their average monthly bills at the expense of the heaviest users. This is consistent with the concept that although most of the utility's expenses are fixed, it is the peak demand requirement of a system's heaviest users that fosters the greatest incremental cost. Our focus was on providing rate relief for customers whose usage falls within the lower blocks and inducing conservation in those whose usage extends to the higher block levels. Our challenges included:

1) creating sufficient rate impact to induce conservation by those taxing the system the most, while not unduly penalizing this subset of the utility's customer base;
2) recognizing (financially) the level of increased strain that high-

volume users place on operating the system, not to mention the added water quality challenges that result from stressing existing source capacity, while still acknowledging that much of the utility's costs are in providing everyday access to water, regardless of volume consumed, and should therefore be borne by all customers;

3) retaining some level of conservation incentive even for the lower volume users (58% of test year bills for pilot customers were less than 5,000 gallons);
4) creating conservation incentive for high-volume users in Fairways where the cost of water is already comparatively low, but without giving it away to lower volume users in order to achieve the revenue requirement; and
5) providing for revenue sufficiency and ensuring revenue stability for the Company.

The cost per kilogallon for each block in the ANC structure increases by factors of 1.5X, 2.25X and 3.0X, with X representing Block 1 rates. Due to the low level of rates already in place for the Fairways rate entity, we opted for a much higher ratio for that entity's Block 4. Our blocks for Fairways water are set to increase by factors of 2.0X, 3.5X and 5.0X, with X representing Block 1 rates. Please see Exhibit J to the Application for a full schedule of proposed rates for the pilot program.

The success of this design will not be known for some time, which adds to

our justification for a measured approach in using a pilot group for our first attempt at conservation rates.

Q. DOES YOUR PILOT PROGRAM CONSIDER IRRIGATION RATES?

A. Yes, to the extent we are able. As discussed in greater detail in Aqua's June 28, 2019 response to Docket No. W-100, Sub 59, "Order Requiring Verified Information", separate irrigation meters are only required:

1) in large community water systems, as defined in G.S. 130A-313(10), that regularly serve 1,000 or more service connections or 3,000 or more individuals;

2) that were platted before July 1, 2009; and

3) do not otherwise have a lockable cutoff valve for backflow prevention.

In that same response, the Company noted that it had only 1,449 irrigation meters among its 80,000+ water connections. Although we are confident that other customers irrigate through their primary household connection, the Company is not able to impose specific irrigation rates on households that validly irrigate without a separate meter.

Our proposed rates would assess Block 3 and 4 rates for all separate irrigation meters, that is, ANC customers with irrigation meters would pay the Block 3 charge for their first 15,000 gallons per month and the Block 4 rate for consumption above that threshold. Similarly, Fairways irrigation customers would pay the Block 3 rate for their first 20,000 gallons per month

and the Block 4 rate above that threshold. Though we are unable to separately assess irrigation for homes irrigating through their standard household meters, we expect that most irrigation would be captured in those same Blocks 3 and 4. The Company therefore assesses that this structure provides equitable treatment and similar conservation signals to its irrigation customers regardless of the presence or absence of separate meters.

Q. WHAT MEASURES, IF ANY, HAVE YOU INCORPORATED IN YOUR REQUEST TO ADDRESS REVENUE SUFFICIENCY AND STABILITY IN LIGHT OF THIS CONSERVATION INCENTIVE?

A. The intent of installing an inclining block rate structure is to promote water conservation. It is, therefore, critical that the reduced customer consumption specifically intended by this pilot program is fully considered in the establishment of rates. Failure to consider the reduced consumption would assure that the Company's revenue will fall short of authorized levels.

We have, therefore, attempted to address revenue sufficiency and stability in two ways.

First, the consumption estimates we use to determine pricing bands in the pilot areas have been reduced to reflect demonstrated trends in price elasticity. Price elasticity measures the responsiveness of consumption to price changes. There are of course many factors that influence water demand (price, weather, and income, among others) but research---particularly on price elasticity---has been fairly extensive. We have

incorporated an elasticity of -0.3 in our consumption projections. That is, a 10% increase in consumer cost is assumed to drive a 3% decline in consumption. As noted, there has been extensive research on the subject of price elasticity in the water industry and we have established our rate based in part on the work of Sheila Olmstead and Robert Stavins, as published by the National Bureau of Economic Research in 2008, "Comparing Price and Non-Price Approaches to Urban Water Conservation". The authors conclude, based on their own work as well as a review of other large studies, that:

> "The price elasticity of residential demand varies substantially across place and time, but on average, in the United States, a 10% increase in the marginal price of water in the urban residential sector can be expected to diminish demand by about three to four percent in the short run." [Pg. 8][2]

Further in support of that figure, the UNC School of Government Environmental Finance Center in its 2009 report required by NCUC Docket No. W-218, Sub 274 and Docket No. W-224, Sub 15, stated:

> "… we assumed a price elasticity of -0.3, meaning that for every 10% increase in the total bill that the customer receives, the customer responds by decreasing their water consumption by 3%. This elasticity is based on the most

[2] https://www.nber.org/papers/w14147

> recent and focused analysis on water price elasticity in North Carolina."

If a consumption decline is not factored into the rate design process, any success of the program as proven by reduced consumption will necessarily be absorbed by the utility in the form of insufficient revenue and reduced return on equity. Even if a revenue reconciliation process is approved, as we propose later in this testimony, the burden of the initial revenue shortfall will be financed by the Company. Incorporating a consumption decline, or repression, in the calculation ensures that the utility is not working against its own interest in further funding the public policy initiative of conservation. Our second measure to ensure revenue adequacy and stability is the implementation of a revenue reconciliation process specific to the pilot areas. Note that this revenue reconciliation is specific to, and integral to, the pilot program. The reconciliation should be evaluated on its own merits and not in the context of any separate discussion on a proposed Consumption Adjustment Mechanism that might be applied to customers outside of the pilot program. Considering the many variables that influence water demand and that this pilot program intentionally means to increase the variability of that demand, as a general matter of fairness there must be a settlement process to ensure that neither the pilot customer group (as a whole) nor the utility is unduly harmed or enriched by this program.

Q. WHAT IS THE PURPOSE OF THE REVENUE RECONCILIATION?

A. The ratemaking equation, put simply, is that X number of customers should pay an average of Y dollars each to produce Z dollars of revenue. Just as expenses (the driver of Z) are fixed, customer count (X) is also fixed as of a point in time. Customer count and expenses are considered only to the extent they are known and measurable as of the end of the post-test year period. The deficiency in the calculation is that the average revenue per customer (Y) requires the use of an unknowable amount of consumption. The revenue reconciliation corrects for that unknowable element of the equation. Although parties may reasonably disagree with the consumption assumptions, the intent is that the Company should receive its full authorized revenue requirement, no more and no less. If past customer behavior fully foretold future behavior, there would be no need for a revenue reconciliation process. That of course is not our reality, but the customer behavior does not significantly change the utility's revenue requirement. The revenue reconciliation seeks to simply correct the deficiency in the original rate setting that was created using historic irregular consumption patterns.

Q. HOW WOULD THE REVENUE RECONCILIATION BE COMPUTED WITHIN THE PILOT PROGRAM?

A. For illustration purposes, Thill Direct Exhibit 4 provides sample revenue reconciliation calculations under three different scenarios, but the concept is consistent within each of those illustrations. Dividing the volumetric

revenue requirement by the number of bills used in determining rates provides us with the Revenue per Bill - as Authorized. We would perform a similar calculation using actual data in the 12 full months following implementation of rates to determine our Revenue per Bill - Actual. The difference between those actual and authorized averages would define our Average per Customer Usage Excess/Deficit. Dividing that Excess/Deficit by the Revenue per Bill as Authorized provides our Excess/Deficit Rate. The Rate is then multiplied by the originally authorized volumetric revenue to determine the value of the excess or deficit.

Q. HOW WOULD ANY EXCESS/DEFICIT BE SETTLED WITH THE CUSTOMERS?

A. After allowing three months to collect and analyze the data, surcredits/surcharges would be assessed over a nine-month period in order to settle balances within one year. If the average customer bill is less than authorized, that would typically reflect that consumption was less than modeled in the original ratemaking (customers over-conserved). In this scenario, had we known the future volumes at the time rates were set, volumetric rate levels would have been set higher. We therefore propose to assess a volumetric surcharge on future consumption during the recovery period to recover any deficit.

If, however, the average customer bill is greater than authorized, that would typically reflect that consumption was more than modeled in the original

ratemaking (customers under-conserved). In that case, we propose to refund the excess as equal credits (surcredits) to the BFC of all customers over a similar nine-month period. Any surcredit that may result is proposed to be applied to the BFC, versus volumetrically, in order to avoid diminishing the conservation signal intended to be sent to the highest volume consumers. If applied volumetrically, a surcredit would allocate a marginally larger credit to the highest users and lessen the intended conservation signal. Any over or under recovery as a result of fluctuations between the actual components of the calculation and the assumed components in determining the surcredits/surcharges would roll into the subsequent period's calculation of the excess/deficit.

Q. IS CUSTOMER GROWTH INCLUDED IN THE REVENUE RECONCILIATION COMPUTATION?

A. No. Consistent with the explicit language of House Bill 529 (Session Law 2019-88) which was signed into law on July 8, 2019, the proposed revenue reconciliation calculation is computed based on "average per customer usage". To compute the reconciliation adjustment at a gross level of revenue, rather than at a per customer average level, would ignore that a portion of future revenue may be attributed to customers added after the test year and would therefore incorporate a projective component to the ratemaking equation. While the Company is supportive of a fully projected test year, it is not supportive of a selectively projected test year. The

Company believes that using a prospective customer count without also incorporating future cost increases should not be permitted.

Q. WHY DO YOU PROPOSE A REVENUE RECONCILIATION ONLY FOR THE PILOT GROUP?

A. Consumption volatility creates a deficit or excess compared to the utility's authorized revenue and, therefore, a variation from its authorized return. Generally, the drivers of consumption volatility are shared across the Company's customer base. However, the pilot has added separate and distinct variables to purposefully drive greater consumption volatility within this subset of customers. To the extent pilot customers pay too much or too little as a result of the unknowable impact of the change in rate structures affecting only them, the benefit or detriment is confined to the pilot group and any settlement activity should similarly be borne by or inure to the benefit of only that subset of customers.

Q. IS THE IMPLEMENTATION OF A REVENUE RECONCILIATION ADJUSTMENT FOR THE PILOT GROUP IN THE PUBLIC INTEREST?

A. Yes. As stated previously, the purpose of the revenue reconciliation is to correct for an unknowable component of the initial ratemaking calculation. The Commission will have already ruled on a revenue amount that is reasonable and appropriately within the public interest. If the consumption levels were knowable, there would be no need for a reconciliation process

as the rates would have been set at the appropriate level to allow for full revenue recovery by the utility. The revenue reconciliation process simply allows the utility to achieve the authorized amount already deemed in the public interest.

Q. IS A REVENUE RECONCILIATION INTEGRAL TO THE PILOT PROGRAM?

A Yes. If the utility's revenue sufficiency cannot be guaranteed within this conservation program, the Company feels it would be imprudent to accept, on behalf of its shareholders, the additional financial exposure that this or any other conservation program might create. If Aqua is not afforded an ability to true-up its revenue periodically throughout the pilot program, the Company reserves the right to withdraw its request to implement the proposed pilot rates and, instead, requests that the consolidated rate design be applied to all customers within their applicable rate entities.

4. DEFERRED ACCOUNTING FOR CAPITAL PROJECTS

Q. IS THE COMPANY REQUESTING ANY DEFERRAL OF CAPITAL PROJECT COSTS?

A. Yes, Aqua requests authorization to defer costs related to capital projects expected to be placed in service during the post-test year period. The Company proposes to defer carrying costs and depreciation on these projects from the in-service dates until the projects are included for recovery in base rates in this case.

Q. ARE THE PROJECTS FOR WHICH THE COMPANY IS REQUESTING DEFERRAL ACCOUNTING MATERIAL TO ITS RETURN ON EQUITY ("ROE")?

A. Yes. The impact of the costs, if not deferred, on the Company's authorized ROE of 9.70% approved in the Sub 497 Rate Case will be significant and material. The Company concludes that implementing these projects will create a drag of 68 basis points on its ROE compared to that which was authorized in the last rate case (Table 4 of Thill Direct Exhibit 5). The Company has also included in the current filing a calculation of the proposed deferral balance and proposed amortization of the deferral (Table 3 of Thill Direct Exhibit 5).

Q. HAS THE COMMISSION PREVIOUSLY CONSIDERED THE FINANCIAL IMPACT OF VARIOUS DIFFERENT PROJECTS?

A. Yes. Notably, this Commission has considered the collective financial impact of various types of projects when determining whether to grant deferred accounting authorization. For example, in a 2009 Duke Energy Carolinas case, the Commission authorized the utility to use deferred accounting for both environmental compliance costs and the purchase of a portion of the Catawba Nuclear Station, finding that

> "if the requested deferral is not allowed, it would appear to be very likely that the Company's 2008 ROE, of 9.79%, would be further eroded in 2009, due to the fact that the ROE impact of

the costs for which deferral is requested is estimated to be 114 basis points (67 basis points for the Allen scrubbers and 47 basis points for the Catawba Nuclear Station acquisition)." *See In the Matter of Petition of Duke Energy Carolinas*, Docket No. E-7, Sub 874 (NCUC; Mar. 31, 2009).

In another deferred accounting case, this Commission granted deferred accounting treatment for plant additions that were projected to produce ROE reductions in the absence of deferred accounting treatment. *See In the Matter of Duke Energy Carolinas*, Docket No. E-7, Sub 999 (NCUC; June 20, 2012) (deferred accounting approved for Buck and Bridgewater generation additions, estimated to reduce ROE in the absence of such approval).

Q. THE COMMISSION HAS HISTORICALLY CONSIDERED MOST PLANT ADDITIONS FOR DEFERRED ACCOUNTING ON A CASE-BY-CASE BASIS. WHY IS IT APPROPRIATE IN THIS CASE TO CONSIDER AQUA'S SPENDING ON A COMPOSITE BASIS?

A. Although not embodied in a rule, the Commission required in Duke Energy Carolinas, LLC, 99 N.C.U.C. 204, 226, Docket No. E-7, Sub 874 (2009) "… a clear and convincing showing that the costs in question were of an unusual and/or extraordinary nature and that, absent deferral, [the costs] would have a material impact on the Company's financial condition."

Aqua's footprint consists of more than 740 developer built, stand-alone

systems that require the operation of over 1,400 wells and 59 wastewater plants across the state. As described in Company witness Becker's testimony, the average size of communities served by Aqua with the exception of the top five is only 75 (mostly rural) customers.

The dispersed nature of the Company's operations is very different than many peers in the electric and gas utility industries in North Carolina, as the majority of water and wastewater systems operated by the Company are autonomous and self-reliant units that typically provide water production and treatment to serve the customers within the confines of that system. The sheer magnitude of the independent facilities that make up the Company's operational footprint necessitates that the Company's capital spending be divided into hundreds of smaller projects rather than a few large ones.

The Company has 246 projects identified for completion during the six months comprising the presumed post-test year period at a cost of $13.8 million, which is an average per project cost of approximately $56,000. The total financial impact of this spending on the utility is indifferent to the number of projects that comprise that total spending. Furthermore, from the customer's perspective, there is a better argument to recognize the benefit of a multitude of projects impacting a larger share of the customer base rather than individually large projects with a more limited customer impact.

To insist that the negative impact on a utility's ROE must come from a single endeavor is an arbitrary distinction that ignores the primary rationale for allowing deferred accounting at all – to correct the inequity that is otherwise created when a utility's capital spending between rate cases produces a free benefit for customers to the significant and measurable detriment of the utility. Neither the benefit to the customers nor the harm to the utility is affected by the number of projects involved.

In contrast, Aqua argues for use of deferral accounting by the Commission as a legitimate tool, accompanied by safeguards, to help avoid degradation of the Company's ability to earn its authorized ROE and reduce the resultant increasing frequency of filings for rate relief. To be an effective regulatory tool for the water and wastewater industries---supporting the legitimate goals of full and timely recovery of prudent, necessary expenditures made for the purpose of providing quality service to customers---the application of deferral accounting must include the ability to aggregate expenditures, as the Commission considers a determination of materiality. This is particularly true if it is to apply as effectively to the water and wastewater industry as it does to the electric and natural gas industries, due to the different characteristics of the two. Aqua argues that its support for aggregation is buttressed by the fact that 99% of its systems have 75 or fewer customers.

Q. WHAT SAFEGUARDS TO PROTECT CUSTOMERS ARE INCLUDED IN AQUA'S PROPOSAL FOR DEFERRED ACCOUNTING?

A. First, the projects proposed for deferral accounting in this case will be placed in-service and will be providing service and benefits to customers during the pendency of the rate case, well in advance of the Commission's rate order, and will be fully available for review and validation by the Public Staff prior to inclusion in rates.

Secondly, there is no "single-issue ratemaking" concern here, as the request is being made in the rate case itself, making clear a finite runway for the determination and inclusion in rates of the costs, while the Commission is fully engaged in a general rate case examination.

Third, it cannot be fairly said that ratepayers are disadvantaged in any way by full and timely recovery by Aqua of its legitimate, audited, reasonable and prudently-incurred deferred costs in the context of this rate case. Arguably, ratepayers have benefitted by paying lower rates due to the fact that certain regulatory conventions impede the utilities' opportunity to timely and fully recover legitimate costs of service. These conventions include regulatory lag and persistent use of overstated levels of consumption in the ratemaking formula.

Alternatively, it can also be argued that ratepayers do not benefit from practices that clearly impede the utility's ability to timely and fully recover its reasonable and prudent costs incurred to provide service to customers, because the result---during an era of sharply increased spending in the jurisdiction (whether on a few large projects or a combination of many

smaller ones)---is to trigger more quickly and certainly a series of sequential general rate cases. Rate cases are expensive and exhausting of customer, regulatory, and corporate resources.

Finally, with respect to customer safeguards and to the condition that costs should be extraordinary or unusual in nature, Aqua has excluded from this deferral request approximately $7.0 million in anticipated post-test year capital expenditures that the Company has deemed to be routine replacements.

Q. DO THE WSIC AND SSIC MECHANISMS SUFFICIENTLY PROVIDE AQUA THE ABILITY TO RECOVER COSTS ASSOCIATED WITH SPENDING BETWEEN RATE CASES?

A. No. While the WSIC and SSIC mechanisms do provide a meaningful level of rate lag relief between rate cases, the limitations of the cap and on eligible items, combined with the lag that exists even within those mechanisms, still leave a material hole in the Company's ability to earn its authorized rate of return. Of the Company's $20.8 million of projected post-test year additions, only $6.8 million represent WSIC/SSIC eligible projects. Even after deducting anticipated WSIC/SSIC revenues, the Company's net expense for which it seeks deferral accounting is in excess of $1 million (see Thill Direct Exhibit 5, Tables 3 and 4). The return deficit caused by rate lag on capital spending is a primary contributor to the increasing frequency of rate case filings.

Q. HAS AQUA THOROUGHLY ANALYZED THE IMPACT THAT THE REQUESTED DEFERRAL ACCOUNTING MAY HAVE ON ITS CUSTOMERS AS WELL AS THE COMPANY?

A. Yes. An accounting order granting the relief that Aqua seeks will allow the Company to recover the actual cost of its investments necessary to adequately meet all compliance requirements and, most importantly, provide a safe product to its customers. The result is equitable and will not materially increase rates (see Thill Direct Exhibit 5, Table 3). The Company's request reflects the financial imperative, fully experienced by water and wastewater companies in the face of sharply increased investment requirements, to address and combat the corrosive impact of regulatory lag on earnings.

Q. WHAT IS THE METHOD AND CALCULATION TO QUANTIFY THE DEFERRAL OF CAPITAL PROJECTS?

A. The Company is proposing to defer depreciation and accrue carrying costs for qualifying capital expenditures for the time beginning with the individual in-service dates through implementation of new base rates. The deferred balance would be recorded as a regulatory asset, included in rate base and amortized over five (5) years in this rate case. In calculating the deferral amount, depreciation is calculated using Aqua's depreciation rates for each asset class as computed in its most recent depreciation study and as approved in its prior rate case. The calculation of carrying costs uses the

blended debt/equity rate of 7.165% authorized in the Company's most recent rate case.

Q. IS THE TOTAL IMPACT NUMBER AND THE AMOUNT THAT WOULD BE MITIGATED BY THE RELIEF SOUGHT IN THIS CASE AS DESCRIBED ABOVE AN EXACT NUMBER?

A. No, not at this time. The Company will provide the actual dollar totals for eligible projects completed and placed in service by the to-be-established post-test year cutoff date. An amount based on the final post-test year additions allowed for deferral accounting will be calculated through the date rates are expected to go into service.

Q. DO YOU PROPOSE ANY OTHER DEFERRAL ACCOUNTING?

A. Yes. As noted by witness Becker in his testimony, the Company expects to continue to invest capital at significantly heightened levels and, as such, anticipates needing to file rate cases at a higher frequency – every 12-15 months - in order to attain its authorized ROE. For the same reasons that Aqua has requested authorization for deferral accounting for the post-test year additions, the Company requests prospective authorization to defer depreciation and carrying costs on post rate case capital expenditures, other than routine replacements, until included in rates in the Company's next rate case.

This request, if approved, would significantly improve the Company's ability to attain its authorized ROE and resultantly extend the current anticipated

time needed between rate case filings. If this deferred accounting was paired with a periodic Public Staff review of eligible projects between rate cases, the review process could be better managed and streamlined outside of a rate case and provide heightened Public Staff visibility into the capital projects being performed. Ultimately, this could provide stronger consumer protections and a notable reduction in rate case expenses included in revenue requirements – while ensuring a healthy utility.

Deferral accounting is a tool with potential to lessen the inequity of rate lag caused by capital spending between rate cases. The Company continues to invest heavily in the North Carolina infrastructure necessary to serve its customers of today and the future. The funds required to provide that investment are "borrowed," either from lenders or shareholders, and those parties require the return of and a return on that investment. When assets begin depreciating before inclusion in rate base, a portion of those assets are never recovered.

Of course, the lenders require full payment of the borrowing to support those assets, so the shareholders absorb both the debt and equity cost of new capital investment as well as lost depreciation until included in rates. This can place the utility, in this case Aqua, in a position of choosing between two equally imprudent options---harming its investors by spending funds for which it will not be fully compensated, or harming customers by postponing necessary capital repairs.

The Company's ongoing failure in achieving its authorized ROE as detailed in witness Becker's testimony in support of this Application, is a direct and measurable indication of management's continuing dedication to its customers in spending the capital needed to ensure safe and reliable service, even to the detriment of its shareholders. Deferral accounting, if allowed, has the potential to restore a necessary balance between the cost of capital spending and the benefit provided to customers by assuring the utility (and its financial supporters) will be made whole for the use of their capital, while also allowing the utility's management to make prudent financial decisions without regard to the timing of rate cases.

Similar to the Company's request for deferred accounting on its post-test year additions, all projects proposed for deferral would be providing service and benefits to customers and would be fully available for review and validation by the Public Staff prior to inclusion in rates. Capital expenditures that are deemed routine replacements would not be included in the Company's deferred accounting request.

Q. THIS REQUEST FOR DEFERRED ACCOUNTING IS A MATERIAL EXTENSION OF PREVIOUS APPLICATIONS IN THE INDUSTRY. IS THIS DEFERRAL IN THE PUBLIC INTEREST?

A. Yes. The public is best served by a utility that is strong and viable, with ready access to capital. Aqua North Carolina, as an extension of its parent, Aqua America, Inc., competes with other companies, public and private, for

capital in both the debt and equity markets. Further, the North Carolina subsidiary must compete even amongst the pool of Aqua America subsidiaries for capital funding. In all cases, the primary factor in that competition for capital is confidence in the Company's ability to return the full capital invested plus an appropriate return. Policies that negatively impact that confidence ultimately restrict access to capital, thereby raising the cost of securing future capital investments.

If "public interest" is defined only in terms of the lowest possible rates to consumers, then even policies that simply attempt to recover (fully and on a timely basis) reasonable and prudent expenditures---which are made of necessity and on behalf of customers---may fail the test. But if, as the Company believes, continued access to capital, bolstered by policies that support achievable authorized returns, is a necessary precursor to the investment required to support and replace an aging water and wastewater infrastructure, then the Company's request for deferral accounting authorization is absolutely in the public interest.

5. REQUEST FOR REGULATORY ASSET---JOHNSTON COUNTY TRANSMISSION FEE

Q. FOR WHAT EXPENDITURE IS THE COMPANY REQUESTING REGULATORY ASSET TREATMENT?

A. The $785,000 transmission fee paid to Johnston County in 2018.

Q. THIS ITEM WAS A PART OF THE PREVIOUS SUB 497 RATE CASE

ORDER. WHY SHOULD THE COMMISSION RECONSIDER THIS MATTER?

A. The prior Order stated, "While the Commission determines to treat the $785,000 transmission fee as an expense, it further concludes, in its discretion, that this expense should not be recognized entirely in one cost of service year, but instead should be amortized and recovered over six years with no unamortized balance in rate base." (p. 85) That treatment was argued by neither the Company nor the Public Staff, so the Company did not have an opportunity within the case to respond.

Q. WHAT IS THE COMPANY'S OBJECTION?

A. In the Sub 497 Order, the Commission quotes the Supreme Court's Decisions in the Bluefield and Hope cases: "To fix rates that do not allow a utility to recover its costs, including the cost of equity capital, would be an unconstitutional taking." (p. 138) The Order permits recovery of the direct cost of the expenditure, but not the financing that funded the purchase. The decision that the Company should recover the transmission and distribution fee over six years while not including the cost in rate base, denies Aqua the ability to recover either its direct financing costs or its cost of equity capital related to this asset, which was installed to service its existing customer base. The Sub 497 Order requires that the Company should, in effect, provide a six-year interest-free loan from its shareholders to its customers, a result that would seem to contradict the precedent established by the

Court.

Q. WHAT IS THE COMPANY'S PROPOSED TREATMENT?

A. The Company requests that the transmission fee be afforded regulatory asset treatment retroactive to the Sub 497 Order. Specifically, the Company requests:

1) the unamortized balance of the transmission fee be included in rate base; and

2) the return not authorized in the prior rate case be added to the unamortized balance and be recovered in future rates over the remaining amortization period (see Thill Direct Exhibit 6).

Q. IS THIS TESTIMONY TRUE AND ACCURATE TO THE BEST OF YOUR KNOWLEDGE, INFORMATION, AND BELIEF?

A. Yes.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

Q. Thank you. Mr. Thill, do you have a summary of your direct testimony that you can present?

A. I do. I'm sorry, I did not have that up and ready, and I apologize for that. We had some technical difficulties getting going this morning.

(Pause.)

THE WITNESS: All right. I'm just pulling it up now.

So the purpose of my direct testimony is to present the following topics for consideration by the Commission in this general rate case. I recommend a capital structure composed of 50 percent equity and 50 percent debt, consistent with the structure approved in the Company's Sub 497 case. The proposed cost of debt is 4.21 percent as updated through the post-test year period, which is derived from the long-term borrowings to which the Company has committed. These issues were settled in this matter in the partial stipulated settlement with the Public Staff.

A rate design that, with the exception of those customers included in the conservation pilot program, makes no change to the distribution

of revenues between base facility charges and volumetric rates as approved in the Sub 497 case. Those rates are generally 40 percent fixed and 60 percent volumetric for all water services, flat rate for residential sewer customers, and 35 percent fixed, and 65 percent volumetric for commercial sewer customers.

In recognition of continuing decline in water consumption patterns, as well as the Commission's expressed desire to further encourage consumption reduction, the implementation of a conservation normalization factor to supplement the use of the historical three-year consumption average in the ratemaking equation. The conservation normalization factor attempts to correct the three-year consumption average by rolling the experience to levels better reflecting those at the end of the test year. This proposal was withdrawn by the Company as part of this stipulated partial settlement reached with the Public Staff.

In response to Docket Number W-100, Sub 59, introduction of a conservation pilot program that would employ an inclining block rate

design for five systems accounting for 10 percent of residential Aqua Uniform Water customers and 100 percent of Fairways Water residential customers. Incorporated within, and explicit conditions of, this proposal are assumptions for consumption elasticity and a revenue reconciliation process to ensure neither the customer base measured as a whole within a whole pilot group nor the Company are harmed by this pilot program.

Deferred accounting treatment for all assets, other than routine replacements, unitized in the post-test-year period. The Company acknowledges that none of these assets is individually either unique or material, but argues that these assets should be considered in the aggregate based on their combined deleterious effect on the Company's financial position.

Further, in recognition of the ongoing negative impact that the Company's increased capital spending has had on realized return on equity, Aqua requested prospective authorization to defer depreciation and carrying costs on post rate case capital expenditures, other than routine replacements, until included in rates in the

Company's next rate case. These proposals were withdrawn by the Company as part of the stipulated partial settlement reached with the Public Staff.

Reconsideration of the Commission's ruling in the Sub 497 case regarding the exclusion from the rate base of the unamortized portion of the $785,000 transmission fee paid to Johnston County in 2018. This proposal was withdrawn by the Company as part of the stipulated partial settlement reached with the Public Staff.

This concludes the summary of my direct testimony.

Q. Mr. Thill, part of your summary had a footnote concerning the specific rate design that is currently in effect with the Company for water -- free water rate divisions. Could you read that footnote into the record too?

A. Certainly.

The specific ratios of current base facility charges to volumetric charges for each of the Aqua's three water rate divisions are 40/60 for Aqua Water, 41/59 for Brookwood Water, and 44/56 for Fairways Water.

Q. Thank you. That's all.

MR. BENNINK: Commissioner Brown-Bland, Mr. Thill is now available for cross examination.

COMMISSIONER BROWN-BLAND: All right. Thank you, Mr. Bennink. Are there cross -- is there cross for this witness? I'll ask the Attorney General's Office.

MS. TOWNSEND: No cross by the Attorney General's Office.

COMMISSIONER BROWN-BLAND: All right. Public Staff?

MR. GRANTMYRE: Public Staff has cross, Commissioner Brown-Bland.

COMMISSIONER BROWN-BLAND: All right. Go right ahead, Mr. Grantmyre.

CROSS EXAMINATION BY MR. GRANTMYRE:

Q. Mr. Thill, I'm going to go through your testimony -- your direct testimony, and we'll start on page 3. The two issues that we're going to discuss today are rate design --

COMMISSIONER BROWN-BLAND: Mr. Grantmyre, be sure you stay close to your mic.

Q. The two issues we're going to discuss on direct are rate design and pilot program, which is listed on page 3.

Now, first of all, on rate design, if we could turn to page 4, and you say on line 17 that the majority of your wastewater customers are (WebEx sound failure); is that correct?

A. I'm sorry, could you please repeat that?

Q. You state on page 4, line 17 that the majority of Aqua wastewater customers are not metered by Aqua; is that correct?

A. That is correct.

Q. Will you accept, subject to check, that 57 percent are metered by Aqua and only 43 percent are not metered by Aqua?

A. Subject to check.

Q. Will you accept, subject to check, that the metered customers are approximately 9,002, and the unmetered customers are approximately 6,673?

A. Subject to check. I guess maybe I should clarify that the reference is a fact that they're not being billed on a metered basis.

Q. Well, they have -- what I'm asking is, do they have Aqua water meters that they're billed water using the Aqua water meter?

A. From a billing -- from a water perspective, that's correct, that there are certainly some customers

that are.

Q. And if you would turn to page 5, lines 4 through 6, can you please read that sentence into the record, the last one in the first paragraph that begins with "the EFC report" that's on line 14?

A. On line 4?

Q. Yes, please.

A. Yes.

"The EFC report noted that short-term fixed expenses accounted for 83 percent or higher of Aqua's expenses for wastewater, and 89 percent or higher for water services."

Q. You will admit that those are fixed costs, so new customers -- if you added new customer on an existing system, almost all of the new revenues are going to Aqua's bottom line, aren't they?

A. Assuming they don't create that -- a tipping point for capital expenditure, that's correct.

Q. If it's an existing system without capital expenditures, that would be correct; is that what you're saying?

A. That's what I'm saying.

Q. And can you read into the record, on page 5, the -- beginning on line 10 through the end of line 17,

into the --

(WebEx sound failure.)

COMMISSIONER BROWN-BLAND:

Mr. Grantmyre, you need to repeat that. I don't know what happened, but your volume goes down. I think it's when your head is down, but it seems to be worse than yesterday. Started out better, but.

Q. Okay. Can you read into the record, page 5, line 10, beginning with the words "these considerations," all the way to the bottom of that paragraph, which is line 17?

A. "These considerations include customer affordability and conservation to name two. These specific public policy goals, in particular, are better supported by ratemaking structures that recover a greater portion of costs from volumetric rates. Indeed, it would be disingenuous for the Company to request an increase in its base facility charges in order to rebalance its ratio of fixed costs while also proposing to institute a conservation pilot intended to specifically drive average consumption lower. The pilot will be introduced later in this

1 testimony."
2 Q. And can you also read into the record,
3 page -- page 5, line 18, that first sentence beginning
4 with "a balance must"?
5 A. "A balance must be struck that promotes
6 consumption conservation while also providing
7 the Company the reasonable opportunity to
8 earn its authorized return on equity."
9 Q. Now, could you explain how a flat sewer rate
10 promotes conservation?
11 A. I would not say that it does.
12 Q. If we could turn to page 7. And beginning on
13 line 16, could you read that first sentence into the
14 record?
15 A. "Over the last couple of years, the average
16 consumption per customer has varied widely
17 due to environmental factors, conservation,
18 and pricing."
19 Q. Now, the key words, would you agree, that say
20 on line 17, the first few words were "varied widely";
21 is that correct?
22 A. I'm sorry, can you repeat that?
23 Q. The first two words on line 17 are "varied
24 widely."

Do you believe they're varied widely, the consumption?

A. I do believe that it has been widely, yes.

Q. Could we please turn to your Thill Direct Exhibit 1 attached to your direct testimony?

A. I'm there.

Q. Now, the fourth column over is average gallons per month, correct?

A. Yes.

Q. And then you have a listing for consolidated, and you have Aqua North Carolina, Brookwood, and Fairways, correct?

A. That's correct.

Q. Now, on the -- you understand that the Public Staff's testimony is that, for Aqua North Carolina, which you call ANC, Aqua's uniform rate, that those rates have basically stabilized the last five years? Are you aware of that testimony?

A. I'm aware of the testimony, yes.

Q. And when you look at that column there, you know, that has the 12-month period ending there. So do you accept, subject to check, that if we took the seven-year average, that is 2013 through 2019, that the average would be 4,890 gallons (sound failure) --

(Reporter interruption due to WebEx sound failure.)

COMMISSIONER BROWN-BLAND: Mr. Grantmyre, let's everybody -- let's take -- let's take about a 10-minute break here, and let's see if someone can help Mr. Grantmyre with his sound. It is going in and out, up and down. And some of it is when his head goes down, but I'm not convinced that that's all of it, since we fared better with it yesterday.

Everybody, we'll just come back on the record 9:30. We're going to take a quick pause here, and somebody try to help Mr. Grantmyre. And will the host mute everybody else, and everybody turn their cameras off, please.

(At this time, a recess was taken from 9:19 a.m. to 9:31 a.m.)

COMMISSIONER BROWN-BLAND: Let's come back and go on the record. We left off with Mr. Grantmyre asking a question.

Q. Mr. Thill, on your Thill Direct Exhibit 1 -- we're going back there. Do you have that in front of you?

A. I do.

Q. Now, will you agree, subject to check, that for the ANC from 2013 years through 2019, that if you averaged all those years up, the average would be 4,890 gallons average?

A. Subject to check, it looks about right.

Q. And will you accept if we just did the five -- last five years, that the average of those five years would be 4,923, subject to check?

A. Sure.

Q. And would you also agree that the last three years, the average would be 4,894, subject to check?

A. Subject to check.

Q. Now, also, in the second column, you list the total bills that were send in each year. And for the year ending September 30, 2019, you see where it lists 745,135?

A. I do.

Q. Now, if we were to divide that by 12 months, which is -- would you agree just the simple division would show 62,094 customers?

A. I'll take your word for it.

Q. And would you also agree that, with all the customers between Aqua NC, Brookwood, and Fairways, that this 62,094 customers equals 77 percent of the

total water customers on this chart?

A. Sure.

Q. And in looking at this, how exactly is that not stabilized? You agree that EFC, the Environmental Finance Center, commented in their report around 2015 that it -- the Aqua North Carolina uniform rate customers, ANC customers, had fairly well stabilized around 5,000 gallons. How is this not stabilized?

A. Well, I guess I would say it kind of depends on what your yard stick is. First of all, you're concentrated here on Aqua NC, which, of course, is the largest part of the group. If we were to concentrate on Brookwood, they decline year after year after year. Our rates are set based on the three-year average.

You know, if we look at the sixth column, second from the right, you see the change in the three-year average, and that has consistently shown in negative trend. In fact, if you take a look at the consolidated basis, only one out of each is a positive number, every other number is less, is a declining number. And if you take a -- looking at each of the Aqua NC, Brookwood, and Fairways, you're going to see that the number's somewhere in the yards of, I think, 17 of the 21 have a negative trend at the three-year

average, which, of course, is how our rates are set.

Q. But you will admit that Brookwood is declining for the last five years, but Brookwood is a much, much smaller percentage of customers than Aqua uniform rates, isn't it?

A. They are, of course, the customers, and they still contribute to the total revenue that the Company is or is not receiving. And --

Q. Will you accept, subject to check -- I'm sorry. Go ahead.

A. Yeah. I think an important part of this is that when, you know, the EFC report was done -- of course that was four or five years ago now -- the -- we would probably disagree on what -- what constitutes, you know, stable. And so within a plus or minus level --

(Reporter interruption due to audio feed breaking up.)

THE WITNESS: For the Company, when we talk about, you know, say a 1 percent change, when you're talking about an average of 5,000 gallons per month, 1 percent change is 50 gallons. And from the perspective of, you know, most people looking at these numbers, a number of 5,050 versus

5,000 -- or 4,950 versus 5,000, that's -- that's stable. I would agree with that sort of a context. But a 1 percent decline in the variable revenues of the Company has real dollar impact in the hundreds of thousands of dollars.

Q. And the Company had proposed a CAM, consumption adjustment mechanism, that the Company voluntarily withdrew; is that correct?

A. That's correct.

Q. And presumably in -- although you may not be there, presumably in the next rate case, the Company will have the option to propose a CAM again; would you agree with that?

A. I agree they'll have that option, yes.

Q. Now, we discussed that Brookwood was -- would you stipulate Brookwood was 17 percent of the total customer here?

A. Subject to check.

Q. And would you also stipulate that Fairways with approximately 4,713 customers, is only 6 percent of the total customers?

A. Subject to check.

Q. And you also would agree, based on the rate schedule, that Fairway's rates are much, much lower

than Aqua North Carolina and Brookwood?

A. That is correct.

Q. Excuse me, I'm changing pages. If we could go to page 15. Now, here you're talking at the bottom, the seven largest cities in North Carolina have increased declining block rates. You wrote this?

A. That's correct. That's correct.

Q. And have you done research on the base facility charges for these seven largest cities?

A. It was part of my review just in general speaking, yes.

Q. And you got it out of the Environmental Finance Center report award rate schedules; is that correct?

A. That's not correct. I went into each of the individual municipalities' website to grab this information.

Q. And the seven cities -- I'll read them out what I think you had -- are Cary, Charlotte Water, Durham, Fayetteville PWC, Greensboro, Raleigh, and Winston-Salem; does that sound about right to you?

A. I don't have it in front of me, but I'm sure that that's, if not all the way correct, mostly correct.

Q. And did you do an analysis of the base facility charges versus the 5,000-gallon level? You discuss that somewhat on the bottom of page 15, the last line on the first three lines of page 16.

A. Yeah. I wouldn't say I did an analysis of base facility charges, I did analysis to determine what sort of conservation incentive. I was really looking for design. And what we found is that the conservation incentive is very different across those seven communities.

Q. Will you accept, subject to check, that the base facility charge for the seven compared to the 5,000-gallon price is approximately 27 percent -- base facility charge is 27 percent of the revenues that would be achieved with 5,000 gallons?

A. I don't know that. I don't have it in front of me.

COMMISSIONER BROWN-BLAND: Mr. Thill, we're getting some feedback whenever Mr. Grantmyre asks a lengthy question. If you could have your hand on your mute button and go mute when he's speaking, it would be helpful.

THE WITNESS: Yes, ma'am.

COMMISSIONER BROWN-BLAND: Thank you.

Q. Now, at the bottom of page 16, line 22, you talk about operational relief for the systems in your pilot. We're switching over to the pilot now.

Is that correct, you discussed operational relief?

A. That's correct.

Q. And one of the reasons you chose Bayleaf was you have a water supply problem out there, don't you?

A. That's my understanding.

Q. And although this is something you may not know, I'm sure you don't, there are approximately 125 wells in Bayleaf. Would you accept that, subject to check?

A. Subject to check.

Q. And although you might not have the answer, it will be asked of Ms. Berger on Monday, how many of those wells are offline and not producing water as of June of 2020? I'm just saying, Ms. Berger, we'll give you advanced notice we're going to ask that.

If we could go page 18, could you read -- could you read lines 13 through 15 with that sentence beginning with "our focus?"

A. "Our focus was on providing rate relief for customers whose usage falls within the lower

blocks introducing conservation and those whose usage extends to the higher block levels."

Q. But your rate design did not really provide that much relief on your pilot for the lower customers, did they?

A. Well, if somebody's not paying very much money, it's hard to make a very big deference in how much they pay.

Q. Well, by reducing the base facility charge, that helps low income persons or persons using low amounts of water, doesn't it?

A. It would, if that was the only consideration.

Q. Well, if the first block was lower, that would also help them -- help the person using 1- or 2,000 gallons, wouldn't it?

A. It would, but of course it's a balancing act. So to provide more relief at the lowest block, you've got to charge the highest block considerably more. And our analysis was showing that some of those people in the higher blocks were already having an increase of doubling their rates.

Q. But isn't the people in the higher those that are voluntarily using discretionary irrigation that

drives up their consumption?

A. Absolutely, which is why we're trying to increase their costs and make them think about their bills.

Q. Now, in your testimony, you say that the pilot systems are representative; don't you say that?

A. They're representative of the type of systems that we're trying to induce conservations of.

Q. Now, Arbor Run, in your testimony or one of your exhibits, it shows there were 2,600 -- 2,656 bills within that year period?

A. I'll accept that.

Q. Let me move on. If you take Arbor Run, Merion, Bayleaf, and Pebble Bay, all that are Aqua North Carolina uniform rates, the total customer bills was 76,152. Would you accept that, subject to check?

A. I'm sorry, which entries were you looking at there, which systems?

Q. Arbor Run, Merion, Bayleaf, and Pebble Bay.

A. That sounds about right, then, yes.

Q. And also if you look at the gallons, if you multiply that by the average gallon for each -- you list separate average gallons, but would you accept, subject to check, that those four systems totaled

564.748 million gallons a year?

A. Subject to check.

Q. And if we were to divide total gallons by total bills, the average consumption on those systems -- this is a weighted average for, you know, systems that the customers get more weight -- the average would be 7,420 gallons per month?

A. That sounds right. I would expect that.

Q. And did you do a calculation of what is the systems that you did not include, the remaining whatever number, 4- -- 500 systems?

A. I did not do the calculation of that.

Q. Well, after we subtract the total gallons of 3,340,670,000 gallons, we subtract the amount used at these four systems, that results in 2,775,922,000 gallons. Will you accept that, subject to check? For the remaining systems not included in those four.

A. I'll take your word for it. I've got -- I've done none of that math.

Q. And if we divide that by the number of other customers, the average consumption comes out to 4,149 gallons per month per customer?

A. It would make sense that the pilot program

has a much higher usage, yes. Those are the people we are trying to get conservation from.

Q. And the differential between the 7,420 and the 4,149 would be 3,271 gallons per month per customer, which equates to an increase of 79 percent by your four pilot systems?

A. Subject to check.

MR. GRANTMYRE: I would ask that we mark this next exhibit, Public Staff Thill Direct Cross Examination Exhibit Number 1. And this is pages 35 and 36 of the Public Staff prefiled cross examination exhibits.

COMMISSIONER BROWN-BLAND: All right. It will be so identified. Public Staff Thill Direct Cross Examination Exhibit 1, which is a two-page document with Aqua North Carolina, Inc. and the docket number, data request Number 120 centered at the top.

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

Q. Now, with respect to question, do you recognize this as the data request in which you answered?

A. I do.

Q. And it's in regards to the conservation pilot program?

A. Yes.

Q. Would you read into the record what the question was on A that begins with "a detailed description."

A. "A detailed description of the process and/or criteria used to identify systems with the greatest opportunity for operational relief, including all calculations, analyses, and/or other supporting documentation."

Q. And can you please read your answer that begins at the bottom of the first page and goes on to the second page? Could you read that entire paragraph, please?

A. "The Company did not perform a scientific study to determine systems for inclusion in the conservation pilot, but rather relied on the subjective input of the operations team that manage the challenges of these stressed systems each and every day. Bayleaf and The Cape were early nominations for inclusion due to their known operational challenges,

1 particularly during irrigation season, as
2 well as their vast sizes that might allow for
3 greater conservation impact. Arbor Run,
4 Merion, and Pebble Bay each experienced
5 operational challenges as well and were added
6 to the pilot in order to add further
7 diversity and geographic location and
8 customer consumption patterns."
9 Q. And would you read question B -- 1(b)?
10 Begins with "whether the Company."
11 A. "Whether the Company estimated the potential
12 cost savings including avoided capital cost,
13 reduced operating expenses, expected from the
14 operational relief associated with water
15 conservation prior to filing testimony on
16 December 31, 2019. If yes, please provide
17 the estimated cost savings amount and
18 supporting work papers and documentation."
19 Q. Could you please read your response that you
20 provided on (b) on the second page, please?
21 A. "Regarding operational cost savings, the
22 Company has assumed a certain level of
23 repression and consumption rates of the pilot
24 customers as explained in testimony. The

cost savings associated with that reduced volume flows through variable operating expenses, such as power and chemicals and the consumption adjustment factor. Projected future captain spend is not a direct consideration in the general rate case. As such, avoidance of any such potential future capital cost was similarly excluded from the rate case considerations."

Q. Now, in your testimony on page 21, you also discuss price elasticity; do you remember that?

A. I do.

MR. GRANTMYRE: And, Commissioner Brown-Bland, we ask this next cross examination exhibit be identified as Public Staff Thill Direct Cross Examination Exhibit 2, and it is pages 67 through 92 of our prefiled cross examination exhibits. It was listed originally as a rebuttal exhibit, but we are going to use it on direct instead.

COMMISSIONER BROWN-BLAND: Just a minute. It's 67 through 92?

MR. GRANTMYRE: Yes, ma'am, yes.

COMMISSIONER BROWN-BLAND: All right.

Would this be the one that is -- at the top says "NBER working paper series"?

MR. GRANTMYRE: Yes, it is.

COMMISSIONER BROWN-BLAND: All right. This document will be identified as Public Staff Thill Direct Cross Examination Exhibit 2.

MR. GRANTMYRE: I'm going to withdraw this exhibit for now and move it back to rebuttal. My highlighted sections don't show up on my copy, so I'll have to introduce it later. I'm sorry, I apologize.

COMMISSIONER BROWN-BLAND: All right. Disregard the previous identification.

Q. Now, you would agree that Aqua has the right in its next rate case to apply for increasing block rates for all its systems, not just these five; would that be correct?

A. (No audible response.)

Q. Mr. Thill?

A. That's correct.

Q. And you also apply for the CAM and have the CAM approved by the Commission, then your revenues are protected -- fairly well protected?

A. They're certainly better protected.

Q. And you admit the Public Staff has said to you that, if you had a pilot program -- well, first of all, the Public Staff is opposed to a pilot for a number of reasons; we could agree to that?

A. That would be your statement. I can't speak for you guys.

Q. Okay. Well, you read Mr. Junis' testimony, didn't you?

A. I read Mr. Junis' testimony; yes, I did.

Q. Okay. And you even cite that in your rebuttal testimony. We won't go into your rebuttal now, but you got through the points he makes in your rebuts.

A. That's correct.

Q. And although you withdrew the CAM, you're requesting some type of revenue reconciliation that is virtually the same as you applied for CAM in the rules that the Commission did not approve?

A. It is conceptually similar, yes. I would also point out that the CAM ruling was, in part, because it -- and I don't want to speak for the Commission, of course, but it's my understanding that part of the concern was that they didn't want to operate the CAM without taking into account the actual

rate design that goes with it.

Q. Now, in your reconciliation, you use the word throughout on page -- on page 12, line -- I'm sorry, page 23, line 12, in the middle of the sentence there, or the line, you use the word "revenue reconciliation"; isn't that correct?

A. That's correct.

Q. And then again down at the bottom on 22 in the question, the last few words are "revenue reconciliation"?

A. Correct.

Q. And if we turn to page 24, line 8, the first three words are "revenue reconciliation," correct?

A. Agreed.

Q. And line 11, again, the second and third word is "revenue reconciliation"? "Revenue requirement," I'm sorry.

A. Yeah, very different.

Q. And again, 14 -- line 14, the last two words are "revenue requirement"?

A. Revenue requirement, yes.

Q. And if the Commission did approve a pilot, wouldn't the Company be made whole if the revenues achieved during whatever period is exceeded the revenue

requirement?

A. Could you repeat that?

Q. If they gross revenues received during the 12-month period from these pilot companies exceeded the revenue requirement established in the rate case for the companies, wouldn't the Company have received 100 percent of the revenues based on the revenue requirement?

A. Well, depending on what customers we're talking about, because obviously growth, which presumably is where you're going, growth is a projected thing. Those customers were not part of the calculation to determine what the revenue requirement would have been to begin with any more than future costs are considered in the --

Q. But unless there are -- yeah, but the future costs are very minor. You know, with a water customer, basically if you're adding to a well system, and all these are well systems, you would only basically have an increase in chemical cost, an increase in purchase power for pumping, you would --

A. If you only --

COMMISSIONER BROWN-BLAND: If you overlap, I can guarantee the court reporter can't

get it, because a digital platform won't allow it. Let's be careful.

Q. But the EFC, didn't it say it was either 83 or 89 percent; one's water -- one's wastewater is a fixed cost, so therefore, only 17 percent or 11 percent would be variable and would be affected by customer growth; isn't that correct?

A. Well, I would say that that is correct with regards to the direct related cost, but as time progresses -- I mean, time is what brings those customers into the equation. Time also brings increases in other cost. Time will bring in, you know, annual raises. Those aren't taken into account in any sort of protected manner either to offset that growth.

Q. Excuse me just a minute, I'm trying to see if I have anything else. That's all the cross I have at this time. Thank you.

COMMISSIONER BROWN-BLAND: All right. Is there redirect?

MR. BENNINK: Yes. Just brief.

REDIRECT EXAMINATION BY MR. BENNINK:

Q. Mr. Thill, you were asked questions by the Public Staff about the Company's withdrawal of its request for a CAM in this case. And can you say why

you withdrew that request?

A. Well, I didn't make that decision, but I can tell you that I know some of the considerations were, you know, we had 30 days to rebut what that CAM might look like and make sure it's taken into account together with our holistic view of rate design. And to do that within 30 days in the middle of our rate case, we just didn't think was feasible as we move forward.

Q. And in this particular case, the Public Staff's testimony does indicate opposition to the Company's CAM as proposed, correct?

A. That is correct.

Q. And an integral part of your request was, in effect, a true-up or revenue reconciliation procedure?

A. For the pilot program, yes, because there are so many moving parts.

Q. And am I correct that, in the Commission's rulemaking docket where it adopted rules for the CAM, that was a recent order, the Commission, I think, did state that it would not consider customer growth as part of the reconciliation or true-up process; is that a correct statement?

A. That is. The Commission sided with the --

MR. GRANTMYRE: I object. I mean, the

Commission's order speaks for itself. He's not an expert to interpret or explain what the Commission meant in its order.

MR. BENNINK: Well, the Company has to interpret the Commission's order and apply the new order.

COMMISSIONER BROWN-BLAND: Yes. I will overrule the objection and let him speak to the Company's understanding.

THE WITNESS: Yeah. The Commission cited the specific language of the legislation, which talks about average per-customer use, as opposed to total revenue, which has been the position of the Public Staff.

Q. And in this case, in terms of your proposed conservation pilot, you have proposed a reconciliation process. And there, once again, the Public Staff is opposed to implementation or approval of your proposed conservation pilot, including the revenue reconciliation; isn't that correct?

A. Yeah. They've objected to the pilot overall, and specifically to the revenue reconciliation.

Q. And your -- your revenue reconciliation, as proposed for the pilot program, does not include an

adjustment for customer growth, does it?

A. It does not. It measures on the average per-customer use.

Q. And that would be consistent, in the Company's opinion, with the Commission's recent ruling regarding the CAM rulemaking; is that a correct statement?

A. I believe so.

Q. Mr. Grantmyre asked questions about the EFC report, and he -- on page 5 of your direct testimony -- would you read into the record -- I think you've previously done this but I'll ask you to do it again -- the sentence that's on lines 4 through 6?

A. Sure.

"The EFC report noted that short-term fixed expenses accounted for 83 percent or higher of Aqua's expenses for wastewater, and 89 percent or higher for water services."

Q. And so that says that -- and this has generally been what I've considered and heard to be the ballpark estimate, that the water services, approximately 90 percent of the costs are fixed, and for wastewater services, at least 80 percent are fixed cost. Do you agree with that?

A. I would agree with that.

Q. And how does that factor into the Company's proposed rate design?

A. Well, there's a balance that needs to be maintained. You know, if the only consideration was conservation, then it should be fully volumetric. If the only concern was the stability of revenues for the utility, then it should be flat rate. There has to be a balance somewhere in between. And so as we look at our expenses being primarily fixed for both water and sewer, you know, we've got 90 percent -- or almost 90 percent of our costs on the water side are fixed, but only 40 percent of our current revenue stream is fixed on the water side. And that's an imbalance that puts us at risk.

Q. And, in your opinion -- Mr. Grantmyre asked you questions about low users, in terms of the pilot, and the fact that the proposed rate design that you're using would not necessarily allow an extremely small user, but I think he used the term 1,000 to 2,000 gallons a month, much of the rate decrease; is that a correct paraphrase of his question?

A. Well, he certainly raised questions about whether or not there's enough incentive applied to the

low users, yes.

Q. And do you believe that there is enough in -- that the incentive that you proposed in your rate design for the pilot is enough incentive for low users?

A. Honestly, no, because there's not a lot to be gained from taking somebody who uses 2,000 gallons a month. There's not a lot of opportunity for that person. That person is already at a nondiscretionary -- or at a -- sorry, a nondiscretionary level. There's not a lot of fluff in somebody who's using 2,000 gallons. What we're trying to do in the pilot is to get that person who's using 20,000, 30,000. We've customers with 100,000 gallons of irrigation going out in the summertime. Those are the people that we're trying to get at.

So this is -- it is a zero-sum game. To the extent that we reduce rates too low, that has to be made up on the other side. And it becomes very punitive, particularly as a one-time first shot. Maybe this is something that progressively over time becomes a higher structure. That's why we're doing a pilot. We don't know how this is going to react -- how customers are going to react to this. But considering we've already got people whose bills will double -- and

1 those people are not ones that are currently paying $30
2 and are going to, you know, see an increase to 60.
3 They're the people who are paying $1,000 and will see
4 it increased to $2,000. If you're already paying
5 $1,000, they're well off. They're doing something well
6 in their financial portfolio.
7 So how much that increase to $2,000 is going
8 to affect them, we don't know. We certainly expect
9 that there be some level of impact, and that's why we
10 did the research on elasticity.
11 Q. And going back to the Fairways customers and
12 Mr. Grantmyre's questions, the rates there are
13 significantly lower than for AMC Water in particular,
14 correct?
15 A. They are very low; yes, sir.
16 Q. And so does it -- does it make sense for a
17 low user -- I mean, let me rephrase it.
18 If the standard that we discussed, that
19 90 percent of the costs for a water customer are fixed,
20 does it make sense to, you know, provide even a lower
21 base facilities charge or percentage for those
22 customers when you know there's such a -- almost
23 100 percent of the costs are fixed?
24 A. Yeah, I would say no. I mean, there is a

cost -- certainly, there is a greater cost to the Company, and therefore passed on to customers, from those people who use a lot of water. But there's a cost to that person for putting service at the ready for that 1,000-gallon-user person as well. And most of that is fixed cost. All those part costs and whatnot.

So it's certainly not the same cost. It would not make sense, I would agree, to take a fully flat rate approach to this. There has to be something in between, you know, and that's where we're missing out -- you know, there's a big disconnect between the structure for revenue and (sound failure) expenses.

(Reporter interruption due to WebEx sound failure.)

THE WITNESS: I think there's a big disconnect in the structure of revenue, which is, for the water side, 40/60, versus our expenses, which is essentially 90/10.

But also -- let me also add that it's not in a vacuum, and we understand the other concerns. You know, and that's why we're trying to work through this pilot program, and we're trying to do what else we can, because we understand that there are concerns about affordability and

conservation. So there's a lot of different factors that, you know, flow into that.

COMMISSIONER BROWN-BLAND: Mr. Bennink, you're on mute. Still on -- there you go.

Q. Mr. Thill, I want to ask you one question about Public Staff Cross Examination Exhibit Number 1. Do you have it in front of you?

A. (Witness peruses documents.)

All set.

Q. On page 2 of the exhibit, or page 36, the response to item -- to question B, you say the Company has assumed a certain level of repression in the consumption rates of the pilot customers.

What level of repression did you use?

A. We used the factor of minus 0.3, which is to say that, for every increase of 10 percent in the cost to the customer, that will reduce consumption by 3 percent.

Q. 3/10 of a percent or is it 3 percent?

A. 3 percent.

Q. Okay.

A. 10 percent versus 3.

Q. And where did you get that repression number?

A. That comes from -- I reviewed a dozen or

better reports, but the one that I focused mostly on was the exhibit Mr. Grantmyre started talking about, the NBER report.

Q. And was that also in the EF -- Environmental Finance Study?

A. Separate. So the EFP report -- I started with the broad approach, and in the NBER report, it came to a factor of minus 0.3 to minus 0.4. We went with the more conservative minus 0.3. The key in there is that that's the short run number. It acknowledges further in the report that, in the long run, that number increases to 0.6. So it doubles with respect to the reduction in consumption.

Again, we went with the more conservative. We relied on the EFC report which stated the number minus 0.3 because that number was specific to North Carolina. That's the only place where we found specific to this state. The NBER report was a compilation of hundreds of studies over time and across the USA.

MR. BENNINK: Commissioner Brown-Bland, that's all I have.

COMMISSIONER BROWN-BLAND: All right. Any questions by the Commission? All right.

Commissioner McKissick?

EXAMINATION BY COMMISSIONER MCKISSICK:

Q. Thank you, Mr. Thill. And I'd like to start where the last answer you provided in dealing with the price elasticity and repression.

Now, when you went back in and you were looking at, I guess you said, the NBER report, which looked at, I guess, hundreds of studies, why did you feel that that, in particular, would be the appropriate one to use for this particular pilot program? And if you could explain, again, how you would actually apply this to total normalized consumption and in setting the revenue requirements that would be needed.

A. Sure. So I focused on the NBER just because of the breadth. As I mentioned, that one is across hundreds of studies. It was really a study of studies. So it compiled a lot of information as opposed to, you know, one-off individual studies that would have provided, you know, important information but not at that same level of validity. So we're trying to get the best information that was available.

It's projected. So it's important to note it's a guess. So we're trying to get the best guess based on the best research that's out there. And

that's, again, because of the volume of activity that it looked at, that's why I focused on the NBER report. It was important for us to indicate, you know, does North Carolina fit the model of the NBER report. And that's why we look at the EFC report. They reference the minus 0.3 as the number here in North Carolina. That's in line with the NBER report. It's on the very low side of it, so all that kind of provided confirming evidence as we were drafting the program.

How it works is the model that we use was to take a look at all of the consumption for each individual premise, each individual bill. So if a customer -- you know, they've got 12 bills, and they're at their normal consumption, would give them a -- we took the bills as they were billed, and then we assigned what the new billing structure would be, took a look at how much their bill would increase or decrease. If that individual bill for that individual person increased by more than 10 percent, we ignored anything under 10 percent. If it increased by more than 10 percent, then we applied elasticity.

So we would say if your bill went up 10 percent, we expect now that your consumption would decline at 3 percent. And we extrapolated that out

across each of these bills across the entire population.

Q. In terms of the revenue requirements overall, I mean, how did you see that impacting Aqua in terms of that -- that rate structure you would impose at that time during -- as part of the pilot?

A. Well, we're trying to make sure it has no impact on the revenue requirement. So the revenue requirement is determined separately first. And then what we did is we said these particular customers, we know what sort of -- what their three-year average is. So we know what consumption is already assumed within this group. Now, if we're going to have repression, if that particular subset is going to reduce their consumption, how does that impact the rates just for them. It doesn't change how much revenue we collect, it just reassigns where that comes from. So now it's going to come from the higher users more so than the lower users.

Q. So let me ask you this. In terms of the percentages of the revenue requirement that would be incorporated, say, into each block for the pilot program, I mean, is it possible for you to file like a late-filed exhibit that would show the revenue

percentages for each block, for each of the five systems included in the pilot program?

A. Yeah, I'm sure we could pull something like that together.

Q. And could you explain how Aqua proposes to use the revenue reconciliation feature for the pilot program, and explain why you kind of feel that the proposal dealing with the reconciliation of the revenue based upon the average revenue per bill, how that would all work out, if you could?

A. Yeah. My -- my Exhibit 4, Thill Direct Exhibit 4 kind of walks through a few scenarios along those lines. But the general concept is that we're going to assume that the -- if consumption was expected to come in at, you know, 100 -- it's make-up numbers here, of course. But if there's 50,000 customers and they were expected to drive, you know, X number of dollars from those customers based on their consumption, and they've got an average consumption of 5,000 gallons. If they average consumption comes in at 4,900, then there's a deficit of those 100 gallons. And so the 100 gallons at an average rate across 50,000 people, we would determine what the detriment was to the Company.

Similarly, if we overcollect because we didn't get the elasticity that we expected, we're going to end up overcollecting as the Company, and we're going to give that back to the customers.

Now, an interesting part of this, which I'll have to admit came from a discussion with some folks at Carolina Water, is that the -- any excess that we collect would be given back ratably to the customers as essentially a credit to the DFC. So that to the extent that the high users are not conserving as much as we're trying to get them to, then they're not -- we're not diminishing that conservation signal by just giving the money back to them. We're now going to give it back to the lower users at a greater percentage of their bill, if you will.

Whereas, on the other hand, if they -- if we undercollect, we're going to bill it as a volumetric charge to still try to collect it from the highest users.

Q. That does provide greater context and ability to understand that somewhat more. Now, I know you indicated when you first began your testimony today that you would change for the 9-month period to the 12-month period, the period for which the -- I guess

the surcharge would be passed along. But the thing which I did not see, or maybe perhaps I missed it -- I did not see where Aqua explained how the carrying costs and interest related to the deficit, or excess accumulated during the 12-month reconciliation period would be appropriately addressed.

And if you could state whether Aqua intends to include in its calculation those carrying costs for either the deficit or excess due to the revenue reconciliation for the pilot program.

A. Yeah. I don't think we've gone on record as to say whether or not we believe there should be a carrying cost adjustment. I would just suggest that, as a matter of fairness, that if the Commission decides that there should be a carrying cost, that it go either way. So that to the extent there's an excess or a deficit, there would be a carrying cost assigned in a similar manner.

Q. And I also notice that Aqua does not mention how long the pilot program would last. You know, what point you consider it to be a sufficient pilot or a test to be able to extrapolate data and use it in a way it's fitting or appropriate.

Could you address how long you would

reasonably anticipate the pilots would last, and if it's consistent for the entire program or for different subcategories underneath it? And does Aqua have a -- you know, a true timeline for this in terms of the way it would work? If you could help me understand that a little bit further, how you anticipate it would be unfolded, what that timeline would be.

A. Sure. That's a very fair question. In fact, we've had some of those conversations with the Public Staff as well. This, of course, in order to get usable data, is going to take some period of time. And it's going to take -- you know, we use a three-year average currently in the ratemaking because seasonality will have impacts, and that will also have impacts with regards to what we see in the consumption patterns of these pilot program individuals.

So we would suggest that this has to last at least two to three full cycles in order to get usable data. And, you know, so this is something that should be evaluated, we believe, as part of, you know, future rate cases. So we have -- Aqua has indicated that we're likely to be back for rates on a fairly tight schedule going forward, as tight as 15 to 18 months.

That won't give us two cycles in the next

case, so it's probably, you know, two cases ahead of us where we can be in a position to provide some data to determine whether or not the pilot should either be terminated or expanded to the entire population, or just tweaked.

Q. Got it. So that's what I was trying to anticipate. So we're looking at probably two cycles out before we would really know what the -- before we'd have meaningful data, based upon the way Aqua anticipates this unfolding; is that correct?

A. I think that's fair, yes.

Q. And I guess, for reconciliation of balances during that period, I guess you would go on record as saying it would be as you articulated it earlier in terms of trying to extrapolate out how that might impact the current users underneath the pilot?

A. That's correct.

Q. All right. Thank you.

COMMISSIONER MCKISSICK: I don't have any further questions at this time.

COMMISSIONER BROWN-BLAND: All right. Commissioner Clodfelter.

EXAMINATION BY COMMISSIONER CLODFELTER:

Q. Thank you. Mr. Thill, can you hear me okay?

A. I can.

Q. Thank you. I want to ask you a couple of questions that touch on something that was discussed in connection with the pilot program, but it's not directly a feature of the pilot program, although I think it is related.

Does the Company require new customers, or customers who are within a system that's newly acquired by Aqua North Carolina, who have in-ground irrigation systems, to have those systems separately metered?

A. That's not an area I can really comment on. I don't know.

Q. Who would be the witness I should ask that question of?

A. Well, I know there's a lot of issues with irrigational law right now with regards to backflow devices and whatnot, and Amanda Berger is leading up that charge on our side.

Q. All right. I'll hold that for her. But let me ask you one more question. I think from what you just answered you probably can't answer this one, but let me try just to be safe.

Do you -- did the Company consider whether or not it should ask for authority -- I'm not sure it

needs authority, by the way -- but did it consider whether it should ask for authority from this Commission to require existing customers who have in-ground irrigation systems to install separate meters for those systems?

A. We have not with regards to, you know, this particular case. I can tell you that, with regards to the pilot program, we do have separate rates for irrigation. Understanding, though, that not everybody who irrigates, of course, is on a separate irrigation meter. So irrigation rates, themselves, start in the block 3. They don't get the benefit of those first two cheaper blocks. So we thought that that was a way to kind of equate those folks who were, you know, irrigating out of their home meter versus a separate meter.

Q. I understand that, and I appreciate that feature of the proposed pilot program, by the way. I was really exploring the techniques for trying to segregate customers. And, of course, that's why I focused on the meters. I'll ask Ms. Berger the remainder of my questions. Thank you, sir.

COMMISSIONER BROWN-BLAND:

Commissioner Hughes?

COMMISSIONER CLODFELTER: That's all I had.

COMMISSIONER BROWN-BLAND: All right. Commissioner Hughes?

COMMISSIONER HUGHES: Yes, thank you.

EXAMINATION BY COMMISSIONER HUGHES:

Q. Can I ask a few questions that are related to customer knowledge? So, again, I'm not sure that you're the right person to answer these. If not, maybe you could give us some ideas of who might be. But do you or does the Company have any information on the percentage of your pilot project customers that rely on direct draft or paperless delivery -- paperless billing?

My reason for this is, I think the idea is that you want to send a strong signal to these customers so that they actually see a link between how much they pay and how much they use. And I just know with a movement toward a lot of customers going either direct draft, there's a disconnect between what they're actually paying. Does that question make sense? And do you have any gut feeling about whether that's going to be an issue? And if those percentages are maybe different in the pilot area versus some of your other

servicing areas?

A. Yeah. I would say that the question certainly makes sense. The NBER study actually indicates that, just with the proper notice on billing alone can increase elasticity by I believe it was 0.3 percent. So it's -- not 0.3 percent, but by a factor of 0.3. So, to your point, that can certainly have an impact. And I, as a person that does a lot of that stuff electronically and don't open my bills a lot, it's -- to your point, I believe, it's going to take more to get that person to notice. But I don't think we've done that analysis within this group.

Q. Okay. I think it's going to come up a lot in the future. Again, this study was done in 2008, and I think you would see just across the industry a lot more customers relying on that kind of distance billing, I'll call it.

So is it possible to have a late filing of just the percentages of your customers now that currently have direct draft or paperless delivery, whatever is easy to get? I think it will help us in our reflection on rate setting, and particularly rate setting messages in the future. So if I could ask for that.

The second -- the second question is if you have any information or any gut feeling about customers in the pilot area that are high users not because of irrigation. In other words, they may have much larger families, they may -- multigenerational families living together, but they would be in those higher blocks, but it wouldn't necessarily be related to irrigation. And if you had any information at ail or gut feeling about that.

A. Yeah. As a family of six myself, I can appreciate that question. We certainly use our fair share of water, even without irrigating. So the structure that we've got right now within ANC essentially is a break-even at about 7,500 gallons. So keeping in mind that the overall average is 5,000. If you're using 7,500 or less, you will be no worse off within the pilot program. And so I don't think there's going to be a lot of those sorts of individuals.

We did take a look -- that one of the things that we introduced as part of this is what I call a volatility ratio. You get out exactly what you're talking about. What is the difference between the high months and the low months? How much discretionary usage do these folks have? And when you take a look at

1 those people with what I call a low-volatility ratio --
2 it means there's not much difference between those high
3 and low months -- those people have very low usage. I
4 mean, I think they average less than 4,000. It's those
5 high users, those high-volatility folks that are really
6 going to feel this. And the number of --
7 Q. That's --
8 A. In Fairways, the break-even is 12,000 because
9 the absolute level of rates are just so low. So even
10 less of an issue in that area.
11 Q. Okay. You answered my question exactly. How
12 would you respond, or has the Company thought about how
13 to respond to a complaint that says, under your revenue
14 reconciliation approach, we use less water like you
15 asked us to, and you came back and you increased our
16 rates? In other words, they used less -- they used
17 less water, it activated the revenue reconciliation,
18 and suddenly you're sending a surcharge. How would
19 your customer services, or you just as an individual,
20 respond to that complaint?
21 A. Well, to the extent that there's a surcharge,
22 that means their original rates were already higher
23 than they should have -- I'm sorry, lower than they
24 should have been. So, basically, we are correcting the

fact that your previous rate was too low. And that's -- that's how the ratemaking part of it works.

It's certainly not a conversation that anybody would like to have any more than the person who says my rates just doubled. You know, there's going to be a lot of awkward conversations.

Q. Last just quick question. Thank you. Last quick question. In your pilot study, I think there was some references by Mr. Grantmyre about the wells that were in use. But I'm curious. Isn't it all a well-driven, groundwater-driven set of systems, or do you have any purchased water in any of those pilot systems; do you know?

A. I don't know that for a fact. It's certainly overwhelmingly well water, but I can't tell you that there's no purchased water in there.

Q. Okay. That's it. Thank you very much.

COMMISSIONER BROWN-BLAND: All right. Are there other questions from the commissioners?

(No response.)

COMMISSIONER BROWN-BLAND: All right. Mr. Thill, I have just a couple.

EXAMINATION BY COMMISSIONER BROWN-BLAND:

Q. First, did the Company consider any other

methods for the reconciliation process besides the average revenue per bill?

A. I'm not aware of any.

Q. Can you answer why the Company didn't propose another means of reconciliation, such as the weighted average of each block?

A. Well, it also -- I mean, it -- essentially, the way it's driven is a weighted average version to come up with that average.

Q. All right. And there would be -- there would be no differences; would that be the Company's position?

A. I'd have to review it again to understand a little bit more, but I believe that's the way it was created, that it's a fully weighted average.

Q. All right. Thank you. So our staff has asked for some documentary information here, and we can work with you to get this -- to get this right, but I need to get Mr. Thill's answer about it. And I would ask that -- I see that Mr. Junis is in attendance, so I'd would ask him to listen up as well. But between Mr. Bennett, Mr. Thill, and Mr. Junis, this is what we're asking for.

Back January 15th, the Public Staff requested

that Aqua provide some additional missing files related to the rate application. And on January 29th, Aqua filed those responses and provided those additional files. Could the Company and/or working with the Public Staff make arrangement to get to the Commission staff the Excel files related to the billing determinants, and particularly the Excel files that are mentioned on pages 2 and 3 of Aqua's January 29th filing, and mentioned on page 11 of the response?

And also, we would request the Excel version, all of this with the working formulas intact, but this second one as well, the Excel versions of Exhibits F, H, and J of the application if they're not included in what was just requested.

And then we would also like to ask that you provide the Excel files, again with the working formulas intact, with a billing analysis update through March 31st that the Public Staff had requested. And we would appreciate all the supporting working papers that go along with those requests.

Is that something that's manageable, Mr. Thill?

A. Certainly.

Q. All right.

COMMISSIONER BROWN-BLAND: There are no other questions from the commissioners? Last chance?

COMMISSIONER HUGHES: I'm sorry. I forgot a question I was going to ask later --

COMMISSIONER BROWN-BLAND: Commissioner Hughes?

EXAMINATION BY COMMISSIONER HUGHES:

Q. Since you -- since you clearly, I think, stated in response to one of Mr. Grantmyre's questions that a fixed or flat wastewater charge was not conducive to conservation, could you just say a few words about why you are in opposition, then, to some type of -- some type of variable wastewater charge? If you know, you know, if you admitted that that doesn't promote conservation at all and I think you said that conservation is a Company objective.

A. Well, so yes. I would agree that those flat rates are not going to induce conservation. But I also don't necessarily think that they are related. There are certainly some tangential relationships. But to the extent that our -- that Aqua's water increases or decreases has very little impact on what happens with our expenses related to wastewater. Because typically

1 those fluctuations on the water side are going to be
2 more related to irrigation, except discretionary usage.
3 So the more you try to equate conservation
4 that happens on the water side with revenues on the
5 sewer side, you're really disassociating the expense
6 from the revenue. You know, our costs are still
7 overwhelmingly fixed. And so whereas there is a
8 disconnect in the -- or the stability of Aqua within
9 the current wastewater structure, again, being that
10 most of our rates are flat, for all the residential
11 anyway, it is vary variable for commercial, but that's
12 not a big part of our business.
13 So that certainly trumps the 83 percent, I
14 believe it was, fixed expense within the sewer side.
15 But that is very different than, you know, from a
16 perspective to the Company and what the impact is
17 versus the disproportionality that exists on the water
18 side where we've got 90 percent fixed cost and only
19 40 percent of it on the revenue side.
20 So we're trying to look at this as a
21 holistic. You know, I don't want to speak for the
22 Company, but I would -- that it would be a lot easier
23 to embrace the -- some aspect of variability on the
24 sewer side if it wasn't so lopsided on the water side.

You know, we have to operate as a combined business, so that's how we look at it.

Q. Okay. Thank you. No further questions.

COMMISSIONER BROWN-BLAND: I think just before we move on to questions on Commission questions, we'll take just a quick break. Let's do -- let's come back on the record at 10:50. And would the host mute everyone and everyone turn off your cameras, please. Thank you.

(At this time, a recess was taken from 10:39 a.m. to 10:52 a.m.)

COMMISSIONER BROWN-BLAND: Looks like we're ready to go. Are there questions on the Commission's questions?

MS. TOWNSEND: No questions from the Attorney General.

MR. GRANTMYRE: The Public Staff just has a few.

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

RECROSS EXAMINATION BY MR. GRANTMYRE:

Q. With regard to the questions by Commissioner McKissick, I believe you testified that the pilot would need to go through two or three cycles

to be -- produce data that you felt would be appropriate to use going forward; is that correct?

A. That is correct.

Q. Now, you also testified in response to Mr. McKissick that the Company expected to be filing rate cases every 15 to 18 months; isn't that correct?

A. Yes, it is.

Q. Now, when -- your pilot, wouldn't it basically delay any full conservation rates for all the customers by waiting three or four years to actually implement, increasing block rates for all the customers?

A. It would delay that in order to give us time to understand how we might implement it and what that impact might be, yes.

Q. But you also talked that -- in your testimony, about the seven largest cities have increasing block rates, didn't you?

A. Structured very differently, but yes.

Q. Each one is structured differently, but wouldn't it be more appropriate if we were going to move towards some conservation rates that were meaningful, that the Company merely come in in its next rate case, which would be filed, I guess, 15 to

18 months after December 31, 1219 -- so as I count it up, that would either be March or -- March 31 or June 30 of next year -- file for increasing block rates for all the customers and introduce your CAM at the same time, and we could achieve some meaningful conservation rates for all the customers?

A. We could. I don't know what that structure would look like, because we just don't have that kind of data yet. Again, I'll point to the analysis just between, I believe it was Fayetteville and Charlotte, that the two programs are very different, both in their BFC as well as their volumetric element. And so they have a very different conservation signal. And part of that might have to do with, you know, any number of factors, the socioeconomic piece of those two groups.

Q. But you will admit that your pilot program would delay full implementation of increasing block rates for all the customers?

A. That is correct. If the decision is made that that's the optimal rate design that we want going forward.

Q. But you understand that the Public Staff could also promote -- propose increasing block rates, and really the Commission will decide what rate

structure they approve; is that correct?

A. Certainly. It's ultimately the Commission's decision.

Q. Thank you. That's all the questions I have.

COMMISSIONER BROWN-BLAND: Further questions?

MR. BENNINK: I've got a couple of questions.

COMMISSIONER BROWN-BLAND: All right, Mr. Bennett.

REDIRECT EXAMINATION BY MR. BENNINK:

Q. First, Mr. Thill, I believe you were asked by Commissioner McKissick about the true-up mechanism for the pilot or the revenue reconciliation mechanism.

Can you tell again -- state again why that mechanism is crucial to the Company's willingness to put this pilot project into effect?

A. Certainly. You know, of course the -- I think most people on this call know that, to the extent that the realized consumption does not (WebEx sound failure) with the consumption used to set rates, the Company will undercollect from those customers. And in this case, we've got a pilot program that is specifically designed to reduce consumption. So if we

just leave rates based on the three-year historical average, but purposely intend that we collect less, the Company will be out some level of revenue.

We can discuss whether or not 0.3 is the right elasticity number. There are -- but the general impetus is that this is supposed to drive down consumption. And if we don't have some sort of revenue reconciliation, that means the Company is fully funding that and basically essentially working against itself. The more successful the pilot program would be, the bigger the deficit the Company would absorb. The Company would be working against itself.

Q. And would that situation be exacerbated if the Commission were, in effect, to approve the Public Staff's -- approve both the pilot and the Public Staff's recommended rate design of 30/70 for water and 60/40 for sewer?

A. Yeah. I mean, that's as -- you know, we heard a lot yesterday from Mr. Becker about ROE and how much we're actually able to earn. And there were arguments over whether that number should have been six or six and a half, and there's, you know, some recalculations done, but it still came down to -- even the recalculated number was about 300 basis points

below authorized.

And the Public Staff's position would continue to drive greater variability in revenue, and at the same time do that with the intent of creating further conservation, which not only makes it more variable, but also less likely to achieve the three-year average consumption levels that have been used to determine rates.

Q. I want to follow up on the question that Mr. Grantmyre asked you. And that is that, in the next case, he suggested that you could propose a Company-wide all include -- all-customer inclusive inclining block rate proposal. Did I correctly understand that?

A. That's my understanding.

Q. That's not what you're proposing today, is it? You want the pilot?

A. That's correct. We want to start getting information. And, you know, we could do as Mr. Grantmyre said and propose a Company-wide version next time. We could have proposed a Company-wide version today. But the reality is that we don't know what that would look like. And if you were to talk to the City of Charlotte, if you were to talk to the City

of Fayetteville, they would give you two different answers because they have two very different structures themselves.

We did talk to the City of Raleigh and got some of their concerns or considerations as they went through some of their rate design elements. I know Mr. Becker had those conversations. So, you know, we've done some of the research. Ultimately, the answer is we're not sure. You know, we're just trying to get the best information available today to start this process. You know, the longer we wait -- and this is part of Mr. Grantmyre's point, I believe, is that the longer we wait, the less effective it is. So we need to start getting some information, and that's why we've got the pilot out there today.

Q. And it is true, isn't it, that the Public Staff could itself have come in in this case and proposed a Company-wide rate design that included inclining block rates?

A. They could have. And what's interesting about that question, now that you're asking, is that in the, I think it was W-100, Sub 59 block with regard to rate design, the Public Staff did recommend that block design is the optimal way to go. Without any more

specificity than we have really. I think there's a general consensus that the block design provides the right design correctly, and that's a really important part of it.

Designed correctly, the block design can accomplish the ultimate goal, which is to create some of that conservation and relieve some of the stress on the systems that are out there. And, you know, water is -- is a special commodity that we need to treat as gold.

Q. But the truth is the Public Staff made no such proposal in this case, did it?

A. They did not.

Q. And instead, they -- they -- their proposal is to significantly decrease the base facility charge percentage versus the usage percentage, correct?

A. They did. And even interesting within there is that -- I was reading back through it last night, and I think I missed it the first time through -- but the language was it proposed a 30/70 assuming that the CAM was either rejected by the Commission or withdrawn by the Company. I'm not sure what the alternative was. But here we have a situation where they were trying -- the Public Staff put forth a proposal that would create

greater uncertainty with a greater volumetric number, but conditioned it on that there not be a revenue adjustment mechanism to provide a floor for the Company.

There's reference in testimony that repeats some of the language of the Commission about trying to create conservation and efficiency while also measuring up against the revenue sustainability -- stability, sorry, and sufficiency. I don't see that as a two-sided equation coming from the Public Staff's version.

MR. BENNINK: Commissioner Brown-Bland, that's all of the questions I have. I do have one request regarding the requested late-filed exhibits, and that would be that the Company is certainly very willing to provide those exhibits, including the exhibits requested by Commissioners McKissick and Hughes and the Commission staff. If possible, we would request that they be reduced to writing so -- particularly before we get the transcript so that we have an exact understanding of what is being requested.

COMMISSIONER BROWN-BLAND: All right, Mr. Bennink. We'll have you work with our staff on

that. That's acceptable to us. Thank you.

MR. BENNINK: All right. That's all.

COMMISSIONER BROWN-BLAND: All right. Are there any motions at the conclusion of this direct testimony?

MR. BENNINK: Yes. I would move into evidence Mr. Thill's direct exhibits, I think that was 1 through 6 with a Revised 4.

COMMISSIONER BROWN-BLAND: All right. There being no objection, that motion is allowed, and the exhibits submitted by Mr. Thill will be received into evidence.

(Thill Direct Exhibits 1 through 6 and Revised Thill Direct Exhibit 4 were admitted into evidence.)

MR. GRANTMYRE: The Public Staff would move that Public Staff Thill Direct Exhibit -- Direct Cross Examination Exhibit 1 be admitted too.

COMMISSIONER BROWN-BLAND: And that motion also is allowed. And exhibit -- the Cross Exhibit 1 is received into evidence at this time.

(Public Staff Thill Direct Cross Examination Exhibit 1 was admitted into evidence.)

COMMISSIONER BROWN-BLAND: Being nothing further for you right now, Mr. Thill, you may, in the figurative sense, step down. Thank you.

THE WITNESS: Thank you.

COMMISSIONER BROWN-BLAND: All right. I believe there's an agreement between the parties that we're going to leave the applicant's case for a moment here and interject part of the Public Staff's case.

MS. JOST: That's correct. Good morning. This is Megan Jost with the Public Staff. Pardon?

COMMISSIONER BROWN-BLAND: I just said good morning.

MS. JOST: Good morning. At this time, we would like to move some evidence into the record, beginning with the testimony and exhibit of the Public Staff witnesses who've been excused, if that is okay.

COMMISSIONER BROWN-BLAND: Yes, that's fine.

MS. JOST: All right. So we would request that the testimony of the following Public Staff witnesses be copied into the record as if

given orally from the stand and that their exhibits be identified as prefiled and entered into evidence. Those are the testimony of John R. Hinton, consisting of 49 pages, Appendices A and B, and Hinton Exhibits 1 through 7, which were filed on May 19, 2020.

The testimony of Lynn Feasel, consisting of 33 of pages, and Feasel Exhibit 1, consisting of schedules 1 through 9, which were filed on May 29, 2020.

The testimony of Michelle M. Boswell, consisting of five pages, Appendix A, and Boswell Exhibit 1 filed on May 29, 2020.

And the testimony of Lindsay Q. Darden, consisting of 30 pages, and Darden Exhibits 1 through 5, also filed on May 29, 2020.

COMMISSIONER BROWN-BLAND: All right. There being no objection to that motion, it will be allowed and the testimonies of witnesses Hinton, Feasel, Boswell, and Darden, as described by Ms. Jost, will be received into evidence and treated as if given orally from the witness stand. Also, their appendices are accepted as part of that evidence, and the exhibits will be identified as

they were premarked.

(Public Staff Hinton Exhibits 1 through 7, Public Staff Feasel Exhibit 1 with Schedules 1 through 9, Boswell Exhibit 1, and Darden Exhibit Nos. 1 through 5 were admitted into evidence.)

(Whereupon, the prefiled direct testimony of John R. Hinton, the prefiled direct testimony of Lynn Feasel, the prefiled direct testimony of Michelle M. Boswell, and the prefiled direct testimony of Lindsay G. Darden were copied into the record as if given orally from the stand.)

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-218, SUB 526

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	))))))	TESTIMONY OF JOHN R. HINTON PUBLIC STAFF – NORTH CAROLINA UTILITIES COMMISSION

AQUA NORTH CAROLINA, INC.

DOCKET NO. W-218 SUB 526

TESTIMONY OF JOHN R. HINTON

ON BEHALF OF THE PUBLIC STAFF

NORTH CAROLINA UTILITIES COMMISSION

MAY 19, 2020

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

A. My name is John R. Hinton and my business address is 430 North Salisbury Street, Raleigh, North Carolina. I am the Director of the Economic Research Division of the Public Staff. My qualifications and experience are provided in Appendix A.

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

A. The purpose of my testimony is to present to the North Carolina Utilities Commission (Commission) the results of my analysis and my recommendations as to the fair rate of return to be used in establishing rates for water and sewer utility service provided by Aqua North Carolina, Inc. (Aqua or Company).

Q. WHAT IS THE CURRENTLY APPROVED COST OF CAPITAL FOR AQUA?

A. In the last Aqua general rate case, Docket No. W-218, Sub 497, the Commission approved an overall weighted cost of capital of 7.17% consisting of a capital structure with 50.00% long-term debt and 50.00% common equity, a cost rate of long-term debt of 4.63%, and a cost rate of common equity of 9.70%.

Q. WHAT IS THE COST OF CAPITAL REQUESTED BY AQUA IN THIS PROCEEDING?

A. Aqua has requested an overall weighted cost of capital of 7.18%. This applied for rate of return is based on a hypothetical capital structure as of September 30, 2019, that is comprised of 50.00% long-term debt, 50.00% common equity. The Company has requested a cost rate of long-term debt of 4.25%, and a cost rate for common equity of 10.10%.

Q. HOW DOES AQUA WITNESS D'ASCENDIS DEVELOP HIS RECOMMENDATION?

A. Aqua witness Dylan W. D'Ascendis utilizes three cost of equity methods: (1) Discounted Cash Flow (DCF); (2) the Risk Premium Model which relies on the Predictive Risk Premium method (PRPM) and the Total Market Approach RPM; and (3) Capital Asset Pricing Model (CAPM). He applies these methodologies to a proxy group of

six publically traded water companies. Witness D'Ascendis' first method relies on the DCF model which produces an 8.81% estimated cost of equity.

Witness D'Ascendis' risk premium model is based on two methods that yield a 10.12% estimated cost of equity, which is an average of his 10.84% PRPM result and the 9.39% risk premium result using an Adjusted Market Approach.

His third method incorporates the mean and medium results of his traditional and empirical capital asset pricing model (CAPM) and (ECAPM) applications that result in a 9.35% cost rate for common equity. The model incorporates a risk-free rate of return, beta coefficient, and the expected return on the market. To derive the expected return on the market, the witness relies on a historical arithmetic return on the S&P 500 of 11.89% and two forecast based returns on the S&P 500 of 13.83% and 14.52%. With these and other inputs, he estimated the cost of equity by averaging the mean and median with the CAPM and ECAPM results that produced his 9.35% estimated cost of equity.

His fourth approach applies the above three methods to a group of non-price regulated companies that he selected with the use of Value Line's beta coefficients along with the residual standard errors that resulted with a 11.29% estimated cost of equity.

His conclusion for the cost of equity using his four methods as applied to his utility and non-utility groups of companies is 9.80%. Given that witness D'Ascendis believes that Aqua's small size relative to his proxy groups is more risky, he increases the baseline cost of equity by 0.20% and he includes a flotation cost adjustment of seven basis points, which raises his recommended cost rate of common equity to 10.07%, which he rounds to 10.10%.

Q. WHAT IS THE OVERALL RATE OF RETURN RECOMMENDED BY THE PUBLIC STAFF?

A. The Public Staff recommends an overall rate of return of 6.56%, based on a hypothetical capital structure consisting of 50.00% long-term debt and 50.00% common equity. The recommended overall cost of capital is based on a recommended debt cost rate of 4.21% and an 8.90% cost rate for common equity. Relative to the Company's last rate case, the reduction in the Public Staff's recommended return on equity (ROE) represents a 30 basis point reduction from a 9.20% cost rate for common equity. Based on the Company's proposed rate base, capital structure, and cost of debt, the differences in the Company's 10.10% ROE and the Public Staff's 8.90% ROE lead to an approximate $ 1.9 million increase in Aqua's revenue requirements.

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY STRUCTURED?

A. The remainder of my testimony is presented in the following six sections:

I. Legal and Economic Guidelines for Fair Rate of Return

II. Present Financial Market Conditions

III. Appropriate Capital Structure and Cost of Long-Term Debt

IV. The Cost of Common Equity Capital

V. Concerns with Company Witness D'Ascendis' Testimony

VI. Summary and Recommendations

I. LEGAL AND ECONOMIC GUIDELINES FOR FAIR RATE OF RETURN

Q. PLEASE BRIEFLY DESCRIBE THE ECONOMIC AND LEGAL FRAMEWORK OF YOUR ANALYSIS.

A. Public utilities possess certain characteristics of natural monopolies. For instance, it is more efficient for a single firm to provide a service such as water production and distribution or wastewater collection and treatment than for two or more firms offering the same service in the same area to do so. Therefore, regulatory bodies have assigned franchised territories to public utilities to provide services more efficiently and at a lower cost to consumers.

Q. WHAT IS THE ECONOMIC RELATIONSHIP BETWEEN RISK AND THE COST OF CAPITAL?

A. The cost of equity capital to a firm is equal to the rate of return investors expect to earn on the firm's securities given the securities' level of risk. An investment with a greater risk will require a higher expected return by investors. In Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591, 603 (1944) (Hope), the United States Supreme Court stated:

> [T]he return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.

In Bluefield Waterworks & Impr. Co. v. Public Service Comm'n, 262 U.S. 679, 692-93 (1923) (Bluefield) the United States Supreme Court stated: 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, but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and

economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market, and business conditions.

These two decisions recognize that utilities are competing for the capital of investors and provide legal guidelines as to how the allowed rate of return should be set. The decisions specifically speak to the standards or criteria of capital attraction, financial integrity, and comparable earnings. The Hope decision, in particular, recognizes that the cost of common equity is commensurate with risk relative to investments in other enterprises. In competitive capital markets, the required return on common equity will be the expected return foregone by not investing in alternative stocks of comparable risk. Thus, in order for the utility to attract capital, possess financial integrity, and exhibit comparable earnings, the return allowed on a utility's common equity should be that return required by investors for stocks with comparable risk. As such, the return requirements of debt and equity investors, which is shaped by expected risk and return, is paramount in attracting capital.

It is widely recognized that a public utility should be allowed a rate of return on capital, which will allow the utility, under prudent management, to attract capital under the criteria or standards referenced by the Hope and Bluefield decisions. If the allowed rate of return is set too high, consumers are burdened with excessive costs, current investors receive a windfall, and the utility has an incentive to overinvest. Likewise, customers will be charged prices that are greater than the true economic costs of providing these services and consumers will consume too few of these services from a point of view of efficient resource allocation. If the return is set too low, then the utility stockholders will suffer because a declining value of the underlying property will be reflected in a declining value of the utility's equity shares. This could happen because the utility would not be earning enough to maintain and expand its facilities to meet customer demand for service, cover its operating costs, and attract capital on reasonable terms. Lenders will shy away from the company because of the increased risk that the utility will default on its debt obligations. Because a public utility is capital intensive, the cost of capital is a very large part of its overall revenue requirement and is a crucial issue for a company and its ratepayers.

The Hope and Bluefield standards are embodied in N.C. Gen. Stat. § 62-133(b)(4), which requires that the allowed rate of return be sufficient to enable a utility by sound management:

> "…to produce a fair return for its shareholders, considering changing economic conditions and other factors, . . . to maintain its facilities and services in accordance with the reasonable requirements of its customers in the territory covered by its franchise, and to compete in the market for capital funds on terms that are reasonable and are fair to its customers and to its existing investors."

N.C. Gen. Stat. § 62-133(b)(4) (2017).

On April 12, 2013, the North Carolina Supreme Court decided State ex rel. Utils. Comm'n v. Cooper, 366 N.C. 484, 739 S.E. 2d 541 (2013) (Cooper). In that decision, the Supreme Court reversed and remanded the Commission's January 27, 2012 Order in Docket No. E-7, Sub 989, approving a stipulated return on equity of 10.50% for Duke Energy Carolinas, LLC. In its decision, the Supreme Court held: (1) that the 10.50% return on equity was not supported by the Commission's own independent findings and analysis as required by State ex rel. Utils. Comm'n v. Carolina Util. Customers Ass'n, 348 N.C. 452, 500 S.E.2d 693 (1998) (CUCA I), in cases involving non-unanimous stipulations, and (2) that the Commission must make findings of fact regarding the impact of changing economic conditions on consumers when determining the proper return on equity for a public utility. In Cooper, the Court's holding introduced a

new factor to be considered by the Commission regardless of whether there is a stipulation.

In considering this new element, the Commission is guided by ratemaking principles laid down by statute and interpreted by a body of North Carolina case law developed over many years. According to these principles, the test of a fair rate of return is a return on equity that will provide a utility, by sound management, the opportunity to: (1) produce a fair profit for its shareholders in view of current economic conditions, (2) maintain its facilities and service, and (3) compete in the marketplace for capital. State ex rel. Utils. Comm'n v. General Tel. Co., 281 N.C. 318, 370, 189 S.E.2d 705, 738 (1972). Rates should be set as low as reasonably possible consistent with constitutional constraints. State ex rel. Utils. Comm'n v. Pub. Staff-N. Carolina Utils. Comm'n, 323 N.C. 481, 490, 374 S.E.2d 361, 366 (1988). The exercise of subjective judgment is a necessary part of setting an appropriate return on equity. Id. Thus, in a particular case, the Commission must strike a balance that: (1) avoids setting a return so low that it impairs the utility's ability to attract capital, (2) avoids setting a return any higher than needed to raise capital on reasonable terms, and (3) considers the impact of changing economic conditions on consumers.

Q. WHAT IS A FAIR RATE OF RETURN?

A. The fair rate of return is simply a percentage, which, when multiplied by a utility's rate base investment will yield the dollars of net operating income that a utility should reasonably have the opportunity to earn. This dollar amount of net operating income is available to pay the interest cost on a utility's debt capital and a return to the common equity investor. The fair rate of return multiplied by the utility's rate base yields the dollars a utility needs to recover in order to earn the investors' required return on capital.

Q. HOW DID YOU DETERMINE THE FAIR RATE OF RETURN THAT YOU RECOMMEND IN THIS PROCEEDING?

A. To determine the fair rate of return, I performed a cost of capital study consisting of three steps. First, I determined the appropriate capital structure for ratemaking purposes, i.e., the proper proportions of each form of capital. Utilities normally finance assets with debt and common equity. Because each of these forms of capital have different costs, especially after income tax considerations, the relative amounts of each form employed to finance the assets can have a significant influence on the overall cost of capital, revenue requirements, and rates. Thus, the determination of the appropriate capital structure for ratemaking purposes is important to the utility and to ratepayers. Second, I determined the cost rate of each form of capital. The individual debt

issues have contractual agreements explicitly stating the cost of each issue. The embedded annual cost rate of debt is generally calculated with the annual interest cost divided by the debt outstanding. The cost of common equity is more difficult to determine because it is based on the investor's opportunity cost of capital. Third, by combining the appropriate capital structure ratios for ratemaking purposes with the associated cost rates, I calculate an overall weighted cost of capital or fair rate of return.

II. PRESENT FINANCIAL MARKET CONDITIONS

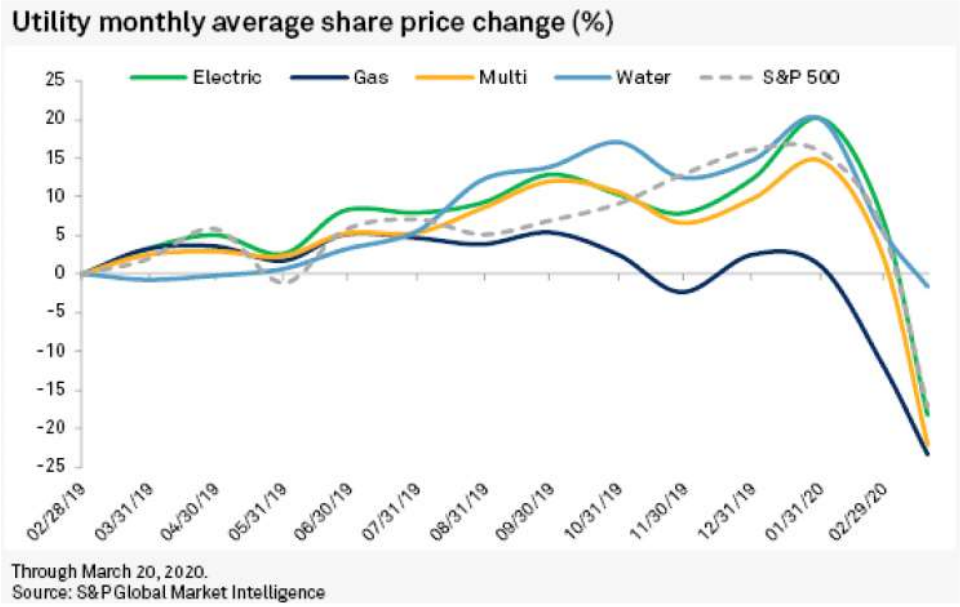
Q. CAN YOU BRIEFLY DESCRIBE CURRENT FINANCIAL MARKET CONDITIONS?

A. Yes. The cost of financing is much lower today than in the more inflationary period of the 1990s. More recently, the continued low rates of inflation and expectations of future low inflation rates have contributed to even lower interest rates. By the close of this proceeding, the Company will have received three rate increases over the last six years (Docket Nos. W-218, Sub 363, Sub 497, and the current proceeding). According to the April 2020 Mergent Bond Record, Moody's index yields on long-term "A" rated public utility bonds have fallen 87 basis points to 3.50% from 4.37% at December 18, 2018, the date the Commission issued its final order in Docket No. W-218, Sub 497. Relative to the filing of the cost of capital

settlement on January 17, 2014, in Docket No. W-218, Sub 363, yields on Moody's A-rated utility bonds are 113 basis points lower than the average 4.63% yield observed during January 2014 as illustrated in Hinton Exhibit 1.

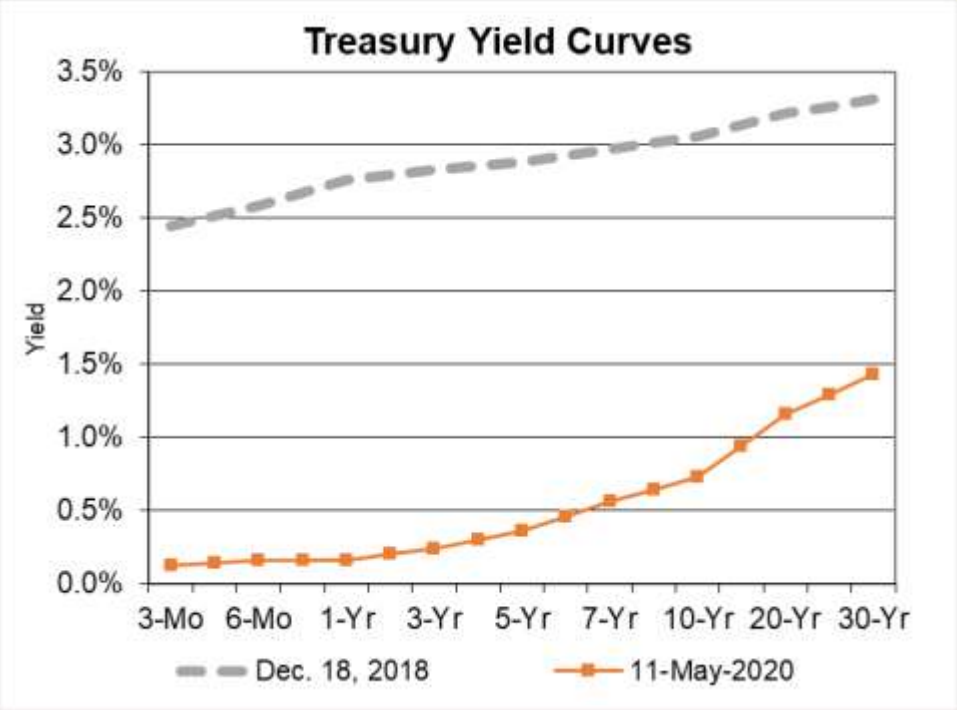
Recent decreases in interest rates and the stock market are also due to concerns over the coronavirus pandemic. However, water utility stocks have survived the stock market crash relatively well. The stability with the common stock prices of water utilities was noted in the March 23, 2020 S&P Global Report entitled, "Despite volatility, water utility valuation premiums persist." As of March 20, 2020, these concerns have also led to a 33% drop in the Dow Jones Industrial Average as reported by S&P Global Market Intelligence. The report noted that the Dow Jones Utility Index has lost 27% of its value; however, water utilities had only lost 14% of their value over the same period. Furthermore, the report identified the lower Beta coefficients with water utilities' stocks and that these stocks have historically been considered largely recession-resistant.

Shown below is a graph from the report with the complete publication in Exhibit 2:



Q. HOW HAVE INTEREST RATES CHANGED SINCE THE COMPANY'S LAST RATE CASE?

A. The below graph shows the lower treasury yields that, on average, are over 200 basis points lower for almost all durations since the issuance of the Commission's final order in Aqua's 2018 rate case in Docket No. W-218, Sub 497.



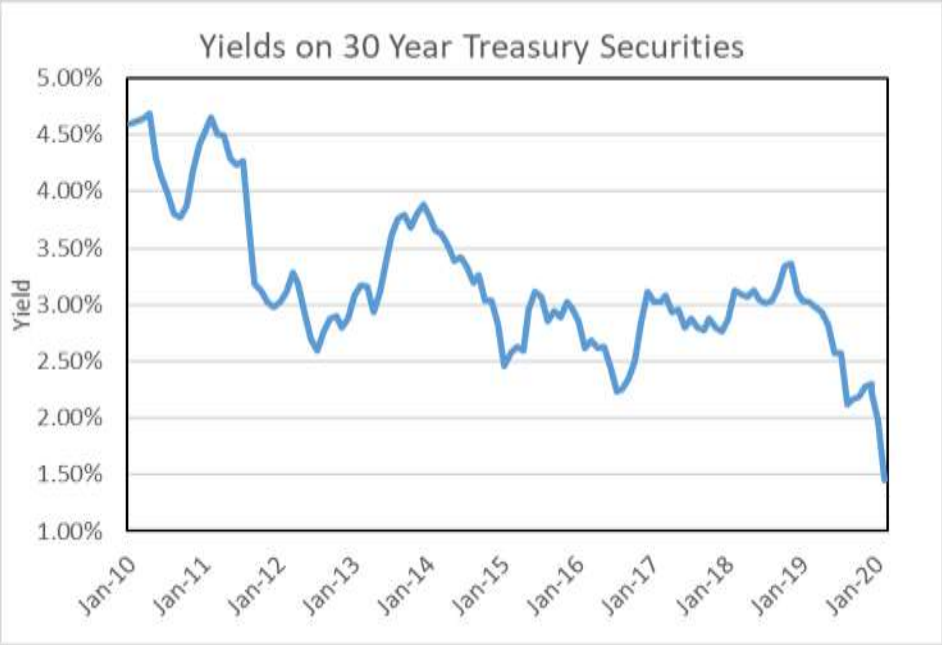
The lower interest rates, especially for longer-term securities, and the stable inflationary environment of today indicate that borrowers are paying less for the time value of money. This is significant since utility stocks and utility capital costs are highly interest rate-sensitive relative to most industries within the securities markets. Furthermore, given that investors often view purchases of the common stocks of utilities as substitutes for fixed income investments, the reductions in interest rates observed over the past ten or more years has generally followed the decreases in investor required rates of return on common equity.

Q. WITH RECENT DECREASES IN INTEREST RATES, DO YOU RELY ON INTEREST RATE PREDICTIONS IN YOUR INVESTIGATION?

A. No. I do not rely on interest rate forecasts to determine the cost of equity. Rather, I believe that relying on current interest rates, especially in relation to yields on long-term bonds, is more appropriate for ratemaking. It is reasonable to expect that investors are pricing bonds in the marketplace that are based on expectations on the domestic and international demand and supply of capital, future interest rates, future inflation rates, and other factors. While I have a healthy respect for forecasting, I am aware of the risk of relying on predictions of rising interest rates to determine utility rates. An example of this is in the testimony of Company witness Pauline M. Ahern in the 2013 Aqua rate case in Docket W-218, Sub 363. In that proceeding, witness Ahern identified several interest rate forecasts by Blue Chip Financial Forecasts of 30-year Treasury Bonds yields that were predicted to rise to 4.3% in 2015, 4.7% in 2016, 5.2% in 2017, and 5.5% for 2020 through 2024[1]. As illustrated in the graph below, these forecasts significantly over-estimated actual interest rates for 30-year Treasury Bonds. Similar over-estimated forecasts can be identified in witness D'Ascendis' Rebuttal

[1] Docket W-218 Sub 363, T. Vol. 2, page 171, lines 8-9.

Exhibit No. 12, in the Company's 2018 rate case where the Blue Chip Consensus Forecasts predicted the 30-year Treasury Bonds would rise to 3.70% by the fourth quarter of 2019. According to the Federal Reserve, the highest observed yield on 30-year Treasury Bonds for the fourth quarter of 2019 is 2.43%, a forecast error of 127 basis points. In my opinion, these types of errors make these forecasts inappropriate for ratemaking. As such, I tend to place more weight with current market determined interest rates. Shown below are historical yields on 30-year treasury bonds:



[2] Docket W-218 Sub 497, T. Vol. 6, Official Exhibits, page 467.

III. APPROPRIATE CAPITAL STRUCTURE AND COST OF LONG-TERM DEBT

Q. WHY IS THE APPROPRIATE CAPITAL STRUCTURE IMPORTANT FOR RATEMAKING PURPOSES?

A. For companies that do not have monopoly power, the price that an individual company charges for its products or services is set in a competitive market, and that price is generally not influenced by the company's capital structure. However, the capital structure that is determined to be appropriate for a regulated public utility has a direct bearing on the fair rate of return, revenue requirement, and therefore, the prices charged to captive ratepayers.

Q. PLEASE EXPLAIN THE TERM CAPITAL STRUCTURE AND HOW THE CAPITAL STRUCTURE APPROVED FOR RATEMAKING PURPOSES AFFECTS RATES.

A. The capital structure is simply a representation of how a utility's assets are financed. It is the relative proportions or ratios of debt and common equity to the total of these forms of capital, which have different costs. Common equity is far more expensive than debt for ratemaking purposes for two reasons. First, as mentioned earlier, there are income tax considerations. Interest on debt is deductible for purposes of calculating income taxes. The cost of common equity, on the other hand, must be "grossed up" to allow

the utility sufficient revenue to pay income taxes and to earn its cost of common equity on a net or after-tax basis. Therefore, the amount of revenue the utility must collect from ratepayers to meet income tax obligations is directly related to both the common equity ratio in the capital structure and the cost of common equity. A second reason for this cost difference is that the cost of common equity must be set at a marginal or current cost rate. Conversely, the cost of debt is set at an embedded rate because the utility is incurring costs that are previously established in contracts with security holders.

Because the Commission has the duty to promote economic utility service, it must decide whether or not a utility's requested capital structure is appropriate for ratemaking purposes. An example of the cost difference can be seen in the Company's filing. Based upon the Company's requested capital cost rates, each dollar of its common equity and long-term debt supporting the retail rate base has the following approximate annual costs (including income tax and regulatory fee) to ratepayers:

(1) Each $1 of common equity costs a ratepayer approximately 12 cents per year.

(2) Each $1 of long-term debt costs a ratepayer approximately 4 cents per year.

Q. WHAT CAPITAL STRUCTURE HAS THE COMPANY REQUESTED IN THIS CASE?

A. The Company's application requests to use a hypothetical capital structure of 50.00% long-term debt and 50.00% common equity.

Q. DO YOU SUPPORT THE CAPITAL STRUCTURE PROPOSED BY THE COMPANY IN THIS CASE?

A. Yes. I have reviewed the Company's recorded balances of common equity and long-term debt as of March 31, 2020, that are comprised of 52.77% equity and 47.23% debt. However, the balance of common equity contains an acquisition premium $14,069,166 from the purchase of Heater Utilities, which if removed from the balance of common equity would lower the percent of common equity to 49.94% and increase the percent of long-term debt to 50.06%. Given that the Company's proposed capital structure is reasonable, I believe that the proposed hypothetical capital structure comprised of 50% common equity and 50% long-term debt is reasonable and appropriate for ratemaking.

Q. WHAT IS YOUR RECOMMENDED COST OF LONG-TERM DEBT?

A. I recommend the use of the Company's updated cost of debt of 4.21% as of March 31, 2020. Since the filing of the W-1, Item 3b in the 2018 rate case Docket No. W-218 Sub 497, the Company has

refinanced much of its long-term debt and lowered its embedded cost by approximately 40 basis points. Unlike Carolina Water Service of North Carolina (CWSNC), Aqua has two loans that are associated with the rehabilitation of water infrastructure that was enabled through the State Revolving Fund Program authorized by the Safe Drinking Water Act. However, these loans were issued in 2013; as such, the Public Staff urges the Company to continue to investigate this source of funding, which is at cost rates that are typically lower than that available in the market. My recommended capital structure and cost of debt is as follows:

AQUA

as of March 31, 2020

	Ratio	Cost Rate
Long-Term Debt	50.00%	4.21%
Common Equity	50.00%	
Total	100.00%	

IV. THE COST OF COMMON EQUITY CAPITAL

Q. HOW DID YOU DEFINE THE COST OF COMMON EQUITY?

A. The cost of equity capital for a firm is the expected rate of return on common equity that investors require in order to induce them to purchase shares of the firm's common stock. The return is expected given that when the investor buys a share of the firm's common stock, he does not know with certainty what his returns will be in the future.

A: DCF METHOD

Q. HOW DID YOU DETERMINE THE COST OF COMMON EQUITY CAPITAL FOR THE COMPANY?

A. I used the discounted cash flow (DCF) model and the Risk Premium model to determine the cost of equity for the Company.

Q. PLEASE DESCRIBE YOUR DCF ANALYSIS.

A. The discounted cash flow model is a method of evaluating the expected cash flows from an investment by giving appropriate consideration to the time value of money. The DCF model is based on the theory that the price of the investment will equal the discounted cash flows of returns. The return to an equity investor comes in the form of expected future dividends and price appreciation. However, as the new price will again be the sum of the discounted cash flows, price appreciation is ignored, and

attention focused on the expected stream of dividends. Mathematically, this relationship may be expressed as follows:

Let D_1 = expected dividends per share over the next twelve months;

g = expected growth rate of dividends;

k = cost of equity capital; and

P = price of stock or present value of the future income stream.

Then,

$$P = \frac{D_1}{1+k} + \frac{D_1(1+g)}{(1+k)^2} + \frac{D_1(1+g)^2}{(1+k)^3} + \ldots + \frac{D_1(1+g)^{t-1}}{(1+k)^t}$$

This equation represents the amount an investor would be willing to pay for a share of common stock with a dividend stream over the future periods. Using the formula for a sum of an infinite geometric series, this equation may be reduced to:

$$P = \frac{D_1}{k-g}$$

Solving for k yields the DCF equation:

$$k = \frac{D_1 + g}{P}$$

Therefore, the rate of return on equity capital required by investors is the sum of the dividend yield (D_1/P) plus the expected long-term growth rate in dividends (g).

Q. DID YOU APPLY THE DCF METHOD DIRECTLY TO AQUA?

A. No, Aqua common equity is not publicly traded; rather it is a wholly owned subsidiary of Essential Utilities, Inc. (formally named Aqua America, Inc.). Thus to estimate the investor required rate of return, I applied the DCF method to a risk-comparable investments comprised of a group water utilities followed by Value Line Investment Survey (Value Line). The standard edition of Value Line covers eight water companies. From there, I excluded Consolidated Water Co. because of its significant overseas operations.

Q. WHAT MEASURES OF RISK DID YOU REVIEW TO DETERMINE THE COMPARABILITY OF INVESTING IN WATER UTILITIES?

A. I reviewed standard risk measures that are widely available to investors that are considered by most investors when making investment decisions. The beta coefficient is a measure of the sensitivity of a stock's price to overall fluctuations in the market. The Value Line Investment Survey beta coefficient describes the relationship of a company's stock price with the New York Stock Exchange Composite. A beta value of less than 1.0 means that the stock's price is less volatile than the movement in the market; conversely, a beta value greater than 1.0 indicates that the stock price is more volatile than the market.

I reviewed the Value Line Safety Rank, which is defined as a measure of the total risk of a stock. The Safety Rank is calculated by averaging two variables: (1) the stock's index of price stability, and (2) the Financial Strength rating of the company. In addition, I reviewed the S&P Common Stock Rating. The stock rating system takes into consideration two important factors in the determination of a stock's rating: the stability and growth of earnings and dividends. However, the stock rating does not consider a company's balance sheet or other factors. The stock rating system has seven grades, with A+ being the highest rating possible.

I also reviewed Moody's and S&P's Bond Rating, which are assessments of the creditworthiness of a company. Credit rating agencies focus on the creditworthiness of the particular bond issuer, which includes a detailed and thorough review of the potential areas of business risk and financial risk of the company. These and other risk measures for the comparable group are shown in my Exhibit 3 and are further explained in Appendix B.

Q. HOW DID YOU DETERMINE THE DIVIDEND YIELD COMPONENT OF THE DCF?

A. I calculated the dividend yield by using the Value Line estimate of dividends to be declared over the next 12 months divided by the price of the stock as reported in the Value Line Summary and Index sections for each week of the 13-week period of February 14, 2020 through May 8, 2020. A 13-week averaging period tends to smooth out short-term variations in the stock prices. This process resulted in an average dividend yield of 1.7% for the comparable group of water utilities.

Q. HOW DID YOU DETERMINE THE EXPECTED GROWTH RATE COMPONENT OF THE DCF?

A. I employed the growth rates of the comparable group in earnings per share (EPS), dividend per share (DPS), and book value per share (BPS) as reported in Value Line over the past ten and five years. I also employed the forecasts of the growth rates of the comparable group in EPS, DPS, and BPS, as reported in Value Line. The historical and forecast growth rates are prepared by analysts of an independent advisory service that is widely available to investors and should also provide an estimate of investor expectations. I include both historical known growth rates and forecast growth rates because it is reasonable to expect that investors consider both sets of data in deriving their expectations.

Finally, I incorporated the consensus of various analysts' forecasts of five-year EPS growth rate projections, as reported in Yahoo Finance. The dividend yields and growth rates for each of the companies, is shown in my Exhibit 4.

Q. WHAT IS YOUR CONCLUSION REGARDING THE COST OF COMMON EQUITY TO THE COMPANY BASED ON THE DCF METHOD?

A. Based upon the DCF analysis for the comparable group of water utilities, I determined that a reasonable expected dividend yield is 1.7% with an expected growth rate of 6.40% to 7.40%, which yields an estimated range of 8.10% to 9.10%. In making that determination, I gave significant weight to the DCF results with the forecasted EPS growth rates from Value Line and Yahoo Consensus EPS estimates that produced a 9.0% and 9.2% result. My estimate for the lower end of the range is based on the average DCF result using both historical and forecast growth rate data. As such, I believe that 8.60% cost of common equity for Aqua, which is the center point estimate of my DCF results, is most reasonable.

B: REGRESSION ANALYSIS METHOD

Q. PLEASE DESCRIBE YOUR RISK PREMIUM ANALYSIS.

A. The equity risk premium method can be defined as the difference between the expected return on a common stock and the expected

return on a debt security. The differential between the two rates of return is indicative of the return investors require in order to compensate them for the additional risk involved with an investment in the Company's common stock over an investment in the Company's bonds that involves less risk.

In order to quantify the risk premium, I need estimates of the cost of equity and the cost of debt at contemporaneous points in time. This method relies on approved returns on common equity for water utility companies from various public utility commissions that are published by the Regulatory Research Associates, Inc. (RRA), within SNL Global Market Intelligence. In order to estimate the relationship with a representative cost of debt capital, I have regressed the average annual allowed equity returns with the average Moody's A-rated yields for Public Utility bonds from 2006 through 2020. The regression analysis, which incorporates years of historical data is combined with recent monthly yields to provide an estimate of the current cost of common equity.

Q. WHAT ARE THE STRENGTHS OF USING ALLOWED RETURNS?

A. The use of allowed returns as the basis for the expected equity return has strengths over other approaches that involve models that subtract a cost rate of debt from the estimated equity return. One strength of my approach is that authorized returns on equity are

generally arrived at through lengthy investigations by various parties with opposing views on the rate of return required by investors. Thus, it is reasonable to conclude that the approved allowed returns are good estimates for the cost of equity.

Q. WHAT WERE THE RESULTS OF YOUR RISK PREMIUM ANALYSIS?

A. The summary data of risk premiums shown on my Exhibit 5, page 1 of 2 indicates that the average risk premium is 5.05%, with a maximum premium of 5.97% and minimum premium of 3.73%, which when combined with the average of the last six months of A-rated bond yields produces yields with an average cost of equity of 8.40%, a maximum cost of equity of 9.32%, and a minimum cost of equity of 7.08%. However, to better estimate the current cost of equity, I employ a statistical regression in order to quantify the relationship of allowed equity returns and bond costs. My Exhibit 5, page 2 of 2, displays a regression analysis of the data that indicates a significant statistical relationship of the allowed equity returns and bond costs, such that a one percent decrease in the bond cost corresponds to an increase of approximately 30 basis points in the equity risk premium.[3] While various studies on the cost of equity capital have differed on the level of the negative relationship of

[3] The regression indicated a significant statistical relationship of ROE=0.08599 + 0.26148, with an adjusted R^2=0.7732.

interest rates and risk premiums, there has been agreement that as interest rates fall, there is an increase in the premium.[4] Applying this relationship to the current utility bond cost of 3.35%[5] resulted in a current estimate of the cost of equity of 9.40%.

Q. GIVEN YOUR STUDY ON THE COST OF EQUITY, WHAT IS YOUR RECOMMENDED COST OF EQUITY?

A. Based on all of the results of my DCF model that indicate a cost of equity of 8.60% and Risk Premium model that indicates a cost of equity of 9.40%. The average of those two results is 9.00%, which I maintain, is reasonable estimate of the investor required rate of return on common equity for Aqua.

Q. TO WHAT EXTENT DOES YOUR RECOMMENDED RATE OF RETURN ON COMMON EQUITY TAKE INTO CONSIDERATION THE IMPACT OF A WATER/SEWER SYSTEM IMPROVEMENT MECHANISM PURSUANT TO N.C. GEN. STAT. § 62-133.12 ON THE COMPANY'S FINANCIAL RISK?

A. In my opinion, the water and sewer improvement charge mechanisms (WSIC and SSIC) provide the ability for enhanced cost recovery of the eligible capital improvements reducing regulatory lag through incremental and timely rate increases. I

[4] Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, "The Risk Premium Approach to Measuring a Utility's Cost of Equity." Financial Management, Spring 1985, pp. 33-45.

[5] The 3.71% current bond yield was determined using the most recent ten-month average yield-to-maturity rate of Moody's A-rated Utility Bond Yields.

believe these mechanisms are seen by debt and equity investors as supportive regulations that mitigate business and regulatory risk. As such, I believe that these mechanisms are noteworthy and are supportive of my recommendation.

Q. DO YOU BELIEVE THAT THE COMMISSION SHOULD RECOGNIZE THE REDUCTION IN INVESTMENT RISK FROM THE CONSUMPTION ADJUSTMENT MECHANISM (CAM)?

A. Yes. I believe that the enhanced protection from decreasing customer revenue will stabilize earnings, which should contribute to a reduction in perceived business risk and investment risk. Consumption adjustment mechanisms are relatively new to the water utility industry; however, similar mechanisms have been employed in the natural gas industry. In North Carolina, Piedmont Natural Gas Company, Inc.'s Consumption Utilization Tracker program was first approved in Docket No. G-9, Sub 499, and later renamed Margin Decoupling Tracker (MDT), and Public Service Company of North Carolina, Inc. has a similar program which has worked to help stabilize the Company's earnings.

However, in those rate case proceedings where the trackers were approved, there was no explicit recognition of the decrease in the Company's business risk in those proceedings or subsequent proceedings, indicating that any direct benefit to customers was

lost. This was, in part, due to the fact that similar trackers were in operation with various other LDCs, and an argument could be made the risk reduction was somewhat captured in the market prices of the Company's common stock. However, it is my understanding that only two companies in witness D'Ascendis' and my groups of water utilities have subsidiaries with a CAM - California Water Service Company and American Water Works.

I believe that some recognition of the reduction in business risk introduced through the mechanism is reasonable to be enacted in this proceeding. However, quantifying this benefit is difficult. In a prior California Public Utilities Commission (CPUC) order, 91-10-042, the CPUC equated the mechanism with having the effect of a 20 basis point reduction in ROE due to reduced business risk relating to the request of certain small and medium sized (Class C and D) water utilities. In recognition of the subjective nature involved, I believe that a 10 basis point reduction in the cost rate for common equity provides a minimal degree of sharing in the benefits of the CAM. Assuming a CAM is approved by the Commission, my recommended cost of common equity for Aqua would be reduced by 10 basis points to 8.90%.

Q. WHAT OTHER EVIDENCE DID YOU CONSIDER IN YOUR ASSESSMENT OF THE REASONABLENESS OF YOUR RECOMMENDED RETURN?

A. In regard to reasonableness assessment with financial risk, I considered the pre-tax interest coverage ratio produced by my cost of capital recommendation. Based on the recommended capital structure, cost of debt, and equity return of 8.90%, the pre-tax interest coverage ratio is approximately 3.7 times. This level of coverage is higher than observed in the recent CWSNC rate case, which is primarily due to Aqua's lower cost rate of debt. This level of pre-tax interest coverage and funds flow coverage should allow Aqua to qualify for a single "A" bond rating.

Q. TO WHAT EXTENT DOES YOUR RECOMMENDED RATE OF RETURN ON EQUITY TAKE INTO CONSIDERATION THE IMPACT OF CHANGING ECONOMIC CONDITIONS ON AQUA'S CUSTOMERS?

A. I am aware of no clear numerical basis for quantifying the impact of changing economic conditions on customers in determining an appropriate return on equity in setting rates for a public utility. Rather, the impact of changing economic conditions nationwide is inherent in the methods and data used in my study to determine the cost of equity for utilities that are comparable to Aqua. I have reviewed certain information on the economic conditions in the

areas served by Aqua, specifically, the 2014, 2015, 2016, 2017, and 2018 data on total personal income from the Bureau of Economic Analysis (BEA) and the Development Tier Designations published by the North Carolina Department of Commerce for the counties in which Aqua's systems are located.

The BEA data indicates that from 2017 to 2018, total personal income by county grew at a compound annual growth rate (CAGR) of 5.0 %, which is slightly lower than the rate of 5.5% for the whole state and from 2014 to 2018, total personal income by county grew by 18.0 %, which is slightly lower than the rate of 20.3% for the entire state.

The North Carolina Department of Commerce annually ranks the state's 100 counties based on economic well-being and assigns each a Tier designation. The most distressed counties are rated a "1" and the most prosperous counties are rated a "3." The rankings examine several economic measures such as household income, poverty rates, unemployment rates, population growth, and per capita property tax base. The 40 most distressed counties are designated as Tier 1, the next 40 as Tier 2, and the 20 least distressed as Tier 3. This yields an average county Tier ranking of 1.8 for the state. For the years 2016 through 2020, the average Tier ranking was 2.1 for the counties in the areas served by Aqua and in

each year, the average was higher than the state average. Both these economic measures indicate that Aqua's service areas has experienced stable economic conditions until the recent coronavirus pandemic.

Q. WHAT HAS BEEN THE IMPACT OF THE CORONA VIRUS PANDEMIC ON THE UNEMPLOYMENT RATES IN THE COUNTIES IN AQUA'S SERVICE TERRITORY?

A. While it is too early to tell its full impacts, the coronavirus pandemic has led to an increase in unemployment throughout the state of North Carolina. The North Carolina Department of Commerce issued a press release on April 29, 2020, which stated that the unemployment rate increased in 97 of the state's 100 counties during March 2020. The release indicated that the statewide unemployment rate for March 2020 was 4.2%. The March 2020 unemployment rate for the counties in Aqua's service territory was slightly higher than the state's unemployment rate at 4.4%. While the unemployment data for April 2020 is expected to worsen with rates of 10% or more, it is my expectation that the current slowdown in North Carolina's economy will abate as we enter into phases two and three of Governor Roy Cooper's plan and that the economy will improve by the end of the third quarter and into the fourth quarter.

As discussed above, it is the Commission's duty to set rates as low as reasonably possible consistent within constitutional constraints. This duty exists regardless of the customers' ability to pay. Moreover, the rate of return on common equity is only one component of the rate established by the Commission. N.C. Gen. Stat. § 62-133 sets out an intricate formula for the Commission to follow in determining a utility's overall revenue requirement. It is the combination of rate base, expenses, capital structure, cost rates for debt and equity capital, and capital structure that determines how much customers pay for utility service and how much investors receive in return for their investment. The Commission must exercise its best judgment in balancing the interests of both groups. My analysis indicates that my recommended rate of return on equity will allow the Company to properly maintain its facilities, provide adequate service to its customers, attract capital on terms that are fair and reasonable to its customers and investors, and will result in rates that are just and reasonable.

V. CONCERNS WITH COMPANY WITNESS D'ASCENDIS' TESTIMONY

Q. DO YOU HAVE CONCERNS ABOUT COMPANY WITNESS D'ASCENDIS' TESTIMONY?

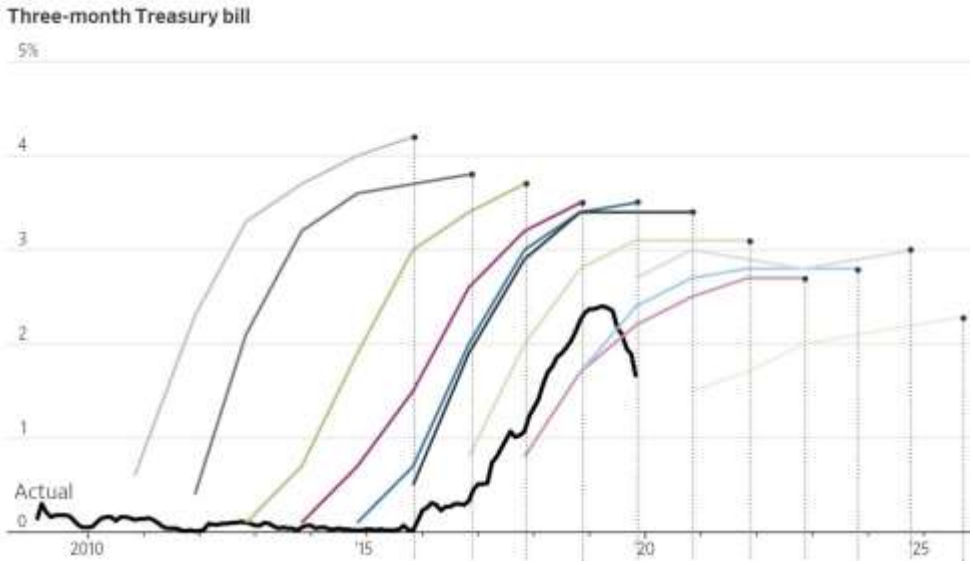
A. Yes. I have identified several areas of concern with his testimony.

Interest Rate Forecasts for Ratemaking

As noted above, I have concerns with forecast errors associated with the use of interest rate forecasts to determine the cost of equity. In this proceeding, Mr. D'Ascendis relies on the Blue Chip Consensus Forecasts of 30-year treasury yields for his risk-free rate of 2.64% in his CAPM analysis, as shown in his Exhibit 1, Schedule DWD-5. However, it is worth noting that the witness relied on a similar average of forecasts for 30-year yields in his predictive CAPM analysis in the 2018 rate case. The calculation of the 3.54% risk free rate is derived from eight individual point in time forecasts from the second quarter of 2018 through 2028; however, six of the eight point forecasts, which cover the period through the third quarter of 2019, have already transpired which allow one to review the accuracy of these forecasts. Since the filing of his 2018 rate case testimony, the highest daily yield observed during the third quarter of 2019 is 2.43%, the average was 2.23%, and the lowest yield was 1.95%. As observed in prior rate cases, interest rate forecasts have a tendency to over-estimate the future level of interest rates by a significant degree, which is why I maintain they are inappropriate for ratemaking.

These persistent forecasting errors were extensively discussed in a Wall Street Journal article published on Wednesday, December 18,

2019 entitled, "Economists Got it All Wrong. They are Trying to Figure Out Why." The article notes that predictions of interest rates have consistently proved to be too high and that they have been casting around for an answer and a theory to explain their inability to make accurate predictions months ahead, let alone years ahead. The article provided a couple of possible explanations; however, it concludes that it might take the next decade to determine what really happened.



Sources: Blue Chip Economic Indicators (forecasts); Federal Reserve Bank of St. Louis.

Risk Adjustment for Small Size

Another concern with Mr. D'Ascendis' testimony is his 20 basis point adjustment for the size of Aqua. I do not believe that it is appropriate to add a risk premium to the cost of equity due to the size of a regulated utility. Aqua is owned by Essential Utilities, Inc.

Essential Utilities has a significant influence over the balances of common equity and long-term debt of Aqua, and it determines, the amounts of dividend payments to the parent corporation and the frequency of those payments. My reasons for concern are as follows: first, from a regulatory policy perspective, ratepayers should not be required to pay higher rates because they are located in the franchise area of a utility of a size that is arbitrarily considered to be small. Further, if such adjustments were routinely allowed, an incentive would exist for large existing utilities to form subsidiaries when merging or even to form subsidiaries to obtain higher allowed returns. Lastly, Aqua operates in a franchise environment that insulates the Company from competition, and it operates with procedures in place that allow for rate adjustments for eligible capital improvements, cost increases, and other unusual circumstances that impact its earnings.

Aqua operates in the water and sewer industry, where expensive bottled water provides the only alternative to utility service. It is factually correct that rating agencies and investors add a risk factor for small companies with relatively limited capital resources; however, the inherent protection from competition removes this risk that would otherwise be a concern to investors.

I testified to these same concerns in the last CWSNC rate case in Docket No. W-354, Sub 360, where the Commission found that a size adjustment was not warranted. Similar arguments were made in a 1997 CWS System, Inc., rate case in Docket No. W-778, Sub 31, where witness Frank Hanley of AUS Consultants relied on similar cost of capital methods as witness D'Ascendis, as noted on pages 824 through 825 of the Commission's Eighty-Seventh Report of Orders and Decisions. In a 1994 CWSNC rate case, the Commission was not persuaded to accept an adjustment for small size and its elevated risk, as noted in on page 520 in its Eighty-Fourth Report of Orders and Decisions. The explicit consideration of the small size of a regulated utility was argued before this Commission in a rate case involving North Carolina Natural Gas, Inc. (NCNG) in Docket No. G-21, Sub 293. In an order dated December 6, 1991, the Commission disagreed with the Company witness who testified that the Company's small size warranted the selection of other small sized companies in his proxy group. The Commission stated on page 563 of its Eighty-First Report of Orders and Decisions:

> "Dr. Andrews selected a group of 16 companies, including NCNG, in his DCF model (and his CAPM) because they are all publicly traded, they are all small in size, and they are all principally in the local gas distribution business. He testified that these companies were the "best available* in terms of being comparable to NCNG. In contrasting his comparable group to those of

> witness Hinton, Dr. Andrews stated that it was better to have some similarity in size among the companies even if this meant some dissimilarity in financial attributes. The Commission disagrees. If a group of companies is to be screened for comparability in terms of investor expectations, financial attributes are far more relevant than size."

While there are published studies that address how the small size of a company relates to higher risks, Dr. Annie Wong[6] published a study that focuses on the size of regulated utilities and risk. Whereas, published journal articles generally rely on company size and return data for a multitude of privately held companies covered by the Center for Research in Security Prices[7]; any correlation with the smaller size of a company and higher stock returns is dominated by industrial firms, as Dr. Wong notes in her published article. Dr. Wong has tested the data for a size premium in utilities and concluded that, "Unlike industrial stocks, utility stocks do not exhibit a significant size premium. As explained, there are several reasons why such a size premium would not be attributable to utilities because they are regulated closely by state and federal agencies and commissions, and hence, their financial performance is monitored on an ongoing basis by both the state and federal governments."

[6] Annie Wong, "Utility Stocks and the Size Effect: An Empirical Analysis," Journal of the Midwest Finance Association, pp. 95-101, (1993).

[7] Center for Research in Security Prices, University of Chicago, Booth School of Business, Chicago, IL.

Lastly, Mr. D'Ascendis' performed a statistical analysis known as the coefficient of variation (CoV) to assess the added risk with smaller utility companies. I have reviewed his analysis and I am not persuaded that his analysis adequately supports his conclusion for a 20 basis point adjustment for Aqua's small size.

CAPITAL STRUCTURE OF A PARENT CORPORATION AS COMPARED TO THAT OF A REGULATED UTILITY

While I agree with Mr. D'Ascendis' testimony that the proposed 50.00% common equity is reasonable, I disagree with his comparison of the equity ratios of his Utility Proxy Group that is based on the parent corporation's or the holding company's common equity ratio shown on page 2 of his Schedule DWD-2. The schedule shows average common equity ratios over the period 2014 through 2018 that range from 54.75% to 56.41%, with an overall average equity ratio of 55.57%. While he notes that the Company has requested a lower equity ratio than his Utility Proxy Group, it is my opinion that this comparison is deficient, in that, it is better to contrast recent Commission approved common equity ratios for regulated water and wastewater utilities than to make comparisons with equity ratios of a corporate parent or a holding company. Often, parent corporations are invested in other non-regulated businesses that involve higher risks and higher rates of returns, as compared to the regulated operations of a water and

wastewater utility. Additional, the acquisition policies of large corporate utilities may result in equity ratios that may not be comparable to Aqua or Essential Utilities, Inc. As such, I believe a better comparison of financial risk in connection with an equity ratio is demonstrated in my Exhibit 6 which has the average annual approved common equity ratios for water and wastewater utilities of 50.81% for the years 2014 through 2019 as compiled by the Regulatory Research Associates of S&P Global Market Intelligence. Similarly, the average all of the individual rate case decisions is 51.04%. The data indicates that the average approved equity ratios of water and wastewater utilities are significantly less than the five-year average equity ratio of 55.57% identified on page 2 of witness D'Ascendis' Schedule DWD-2, and it is relatively close to the Company's proposed and Public Staff's recommended equity ratio of 50.00%.

<u>Flotation Cost Adjustment</u>

Q. DO YOU AGREE WITH MR. D'ASCENDIS' THAT FLOTATION COSTS ASSOCIATED WITH THE ISSUANCE OF COMMON EQUITY SHOULD BE RECOVERED EVEN IF THESE COSTS ARE OUTSIDE THE TEST YEAR OR IMMEDIATE FUTURE?

A. No. This Commission has previously concluded that without evidence in the record of plans to issue new common stock in the

immediate future, an allowance for flotation costs is not justified.[8] Additionally, in *State ex rel. Utilities Commission v. Public Staff*, 331 N.C. 215, 415 S.E.2d 354 (1992), the North Carolina Supreme Court reversed a Commission decision that included an increment for purported future financing costs for Duke Power on the grounds that the record contained no evidence that the company intended to issue stock in the immediate future. Furthermore, Essential Utilities, Inc., the parent Company of Aqua, has not incurred flotation costs during the test year that was associated with a public offering which was intended to fund necessary capital expenditures for utility services. As such, I do not believe any consideration of a flotation cost is warranted. Furthermore, it is my opinion that the immediate future is limited to the close of this evidentiary proceeding.

Q. HAVE THERE BEEN SIMILAR REQUESTS TO RECOVER ISSUANCES EXPENSES DUE TO HISTORICAL FLOTATION COSTS AND EXPECTED FLOTATION COSTS?

A. Yes. In a 1993 Dominion Energy North Carolina, Inc. rate case in Docket No. E-22, Sub 333, Company witness William Avera argued that the failure to collect past floatation costs warranted a 25 basis point adjustment to the cost rate for common equity. However, the Commission stated on page 319 in its Eighty-Third Report of Orders and Decisions:

[8] *Citizens Telephone Co*., 81 N.C.U.C. at 663.

> "The Commission rejects witness Avera's 25 basis point flotation cost adjustment to the cost of equity and finds no support for witness Carney's testimony that the Company has never collected past floatation costs."

Also, in a 2002 BellSouth rate case involving the pricing of Unbundled Network Elements (UNE), Bellsouth witness Dr. Billingsley included a flotation cost adjustment in his quarterly DCF model to account for the presumed 5% downward pressure on stock prices associated with the issuance of new common stock. However, the Commission stated on pages 145 and 146 in its Ninety-Third Report of Orders and Decisions:

> "Witness Billingsley included a flotation cost adjustment in his quarterly DCF model to account for the presumed 5% downward pressure on stock prices associated with the issuance of new common stock. Witness Hinton disagreed with this adjustment, and testified that since there was no evidence in the record that BellSouth expected a common stock issuance in the future, there was no basis for a flotation cost adjustment.
>
> This Commission has previously concluded that without evidence in the record of plans to issue new common stock in the near term, an allowance for flotation costs is not justified. Additionally, in State ex rel. Utilities Commission v. Public Staff, 331 N.C. 215, 415 S.E.2d 354 (1992), the North Carolina Supreme Court reversed a Commission decision that included an increment for purported future financing costs for Duke Power on the grounds that the record contained no evidence that the company intended to issue stock in the immediate future. For this same reason, the Commission did not accept witness Billingsley's recommended flotation cost adjustment in the First UNE Order.

> Based on the foregoing and all of the evidence presented, the Commission rejects witness Billingsley's 5% adjustment for flotation costs as being unsupported by the evidence. None of the witnesses for BellSouth indicated that a common stock issuance is expected in the immediate future."

Q. DO YOU AGREE WITH CONCERNS TO ADD BASIS POINTS TO THE DCF BASED COST OF EQUITY TO ACCOUNT FOR MARKET TO BOOK RATIOS SIGNIFICANTLY GREATER THAN 1.0?

A. No. Witness D'Ascendis Rebuttal Testimony filed in Aqua's last rate case in Docket No. W-218, Sub 497 argued that the fact that the market to book ratios of the water utility proxy group was approximately 2.10 times and that led to inaccuracies in the DCF model. Furthermore, one needs to de-leverage the implied cost of equity with the use of the Modigliani/Miller equation, which Mr. D'Ascendis testified would increase my recommended DCF result from a 8.70% cost of equity to 10.13%[9]. In my opinion, this argument presumes that the value of assets prescribed by regulated accounting methods and market valuation is in some degree of lock-step, which I do not accept. Secondly, FERC and the FCC have ruled in prior cost of capital investigations that claims that market-to-book valuations being greater than 1.0 leads the

[9] Docket No. W-218, Sub 497, T. Vol. 7, page 27, lines 14-16.

DCF model to understate of the cost of equity[10]. FERC found that during periods of falling interest rates, the cost of equity falls; however, the result is a tendency for utilities to earn more than their shareholders require and market values will exceed book values. FERC went on to say there is a similar tendency with rising interest rates and rising costs of equity in that, utilities will file frequent rate cases in order to protect their shareholders, and the result will be to maintain their market-to-book ratios during periods of rising equity costs. Furthermore, in 1988, the FERC noted that this argument "is an old one, and the problem of circularity inherent in that approach has been long and widely recognized".

VI. SUMMARY AND RECOMMENDATIONS

Q. WOULD YOU PLEASE SUMMARIZE YOUR RECOMMENDATIONS CONCERNING THE COST OF CAPITAL?

A. Based upon the results of this study, it is my recommendation that the appropriate capital structure to employ for ratemaking purposes in this proceeding consists of 50.00% long-term debt and 50.00% common equity. The appropriate embedded cost of long-term debt associated with this capital structure is 4.21%, and the recommended cost of common equity of 8.90%. My recommended

[10] Federal Communications Commission Record 91-389, p. 7196 and Federal Register, Vol 53, No. 24, pages 3,347 and 3,348.

overall weighted cost of capital produced is 6.56%, as shown in my Exhibit 7.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

QUALIFICATIONS AND EXPERIENCE

JOHN ROBERT HINTON

I received a Bachelor of Science degree in Economics from the University of North Carolina at Wilmington in 1980 and a Master of Economics degree from North Carolina State University in 1983. I joined the Public Staff in May of 1985. I filed testimony on the long-range electrical forecast in Docket No. E-100, Sub 50. In 1986, 1989, and 1992, I developed the long-range forecasts of peak demand for electricity in North Carolina. I filed testimony on electricity weather normalization in Docket Nos. E-7, Sub 620, E-2, Sub 833, and E-7, Sub 989. I filed testimony on customer growth and the level of funding for nuclear decommissioning costs in Docket No. E-2, Sub 1023. I filed testimony on the level of funding for nuclear decommissioning costs in Docket Nos. E-7, Sub 1026 and E-7, Sub 1146 and Docket No. E-2, Sub 1219. I have filed testimony on the Integrated Resource Plans (IRPs) filed in Docket No. E-100, Subs 114 and 125, and I have reviewed numerous peak demand and energy sales forecasts and the resource expansion plans filed in electric utilities' annual IRPs and IRP updates.

I have been the lead analyst for the Public Staff in numerous avoided cost proceedings, filing testimony in Docket No. E-100, Subs 106, 136, 140,

148, and Sub 158. I have filed a Statement of Position in the arbitration case involving EPCOR and Progress Energy Carolinas in Docket No. E-2, Sub 966. I have filed testimony in avoided cost related to the cost recovery of energy efficiency programs and demand side management programs in Dockets Nos. E-7, Sub 1032, E-7, Sub 1130, E-2, Sub 1145, and E-2, Sub 1174.

I have filed testimony on the issuance of certificates of public convenience and necessity (CPCN) in Docket Nos. E-2, Sub 669, SP-132, Sub 0, E-7, Sub 790, E-7, Sub 791, and E-7, Sub 1134.

I filed testimony on the merger of Dominion Energy, Inc. and SCANA Corp. in Docket Nos. E-22, Sub 551, and G-5, Sub 585.

I have filed testimony on the issue of fair rate of return in Docket Nos. E-22, Sub 333; E-22, Sub 412; E-22, Sub 532, P-26, Sub 93; P-12, Sub 89; P-31, Sub 125; P-100, Sub 133b; P-100, Sub 133d (1997 and 2002); G-5, Sub 327; G-5, Sub 386; G-9, Sub 351; G-9, Sub 743; G-21, Sub 293; G-21, Sub 442; W-778, Sub 31; W-218, Sub 319, and W-218, Sub 497, W-354, Sub 360; W-354, Sub 364; and in several smaller water utility rate cases. I have filed testimony on credit metrics and the risk of a downgrade in Docket No. E-7, Sub 1146 and Docket No. E-7, Sub.1214.

I have filed testimony on the hedging of natural gas prices in Docket No. E-2, Subs 1001 and 1018. I have filed testimony on the expansion of natural gas in Docket No. G-5, Subs 337 and 372. I performed the financial analysis in the two audit reports on Mid-South Water Systems, Inc., Docket No. W-100, Sub 21. I testified in the application to transfer of the CPCN rom North Topsail Water and Sewer, Inc. to Utilities, Inc., in Docket No. W-1000, Sub 5. I have filed testimony on rainfall normalization with respect of water sales in Docket No. W-274, Sub 160.

With regard to the 1996 Safe Drinking Water Act, I was a member of the Small Systems Working Group that reported to the National Drinking Water Advisory Council of the U.S. Environmental Protection Agency. I have published an article in the National Regulatory Research Institute's Quarterly Bulletin entitled Evaluating Water Utility Financial Capacity.

RISK MEASURES

VALUE LINE SAFETY RANK

The Safety Rank is a measure of the total risk of a stock. It includes factors unique to the company's business such as its financial condition, management competence, etc. The Safety Rank is derived by averaging two variables: the stock's Price Stability Index, and the Financial Strength Rating of the company. The Safety Rank ranges from 1 (Highest) to 5 (Lowest).

VALUE LINE BETA (ß)

The Beta is derived from a regression analysis between weekly percent changes in the price of a stock and weekly percent price changes in the New York Stock Exchange Composite Index over a period of five years.

There has been a tendency over the years for high Beta stocks to become lower and for low Beta stocks to become higher. This tendency can be measured by studying Betas of stocks in five consecutive intervals. The Betas published in the Value Line Investment Survey are adjusted for this tendency and hence are likely to be better predictors of future Betas than those based exclusively on the experience of the past five years.

The New York Stock Exchange Composite Index is used as the basis for calculating the Beta because this index is a good proxy for the complete equity portfolio. Since Beta's significance derives primarily from its usefulness in portfolios rather than individual stocks, it is best constructed by relating to an overall market portfolio. The Value Line Index, because it weights all stocks equally, would not serve as well.

The security’s return is regressed against the return on the New York Stock Exchange Composite Index over the past five years so that 259 observations of weekly price changes are used. Value Line adjusts its estimate of Beta ($ß_i$) for regression described by Blume (1971). The estimated Beta is adjusted as follows:

$$\text{Adjusted } ß_i = 0.35 + 0.67ß$$

VALUE LINE FINANCIAL STRENGTH RATING

The Financial Strength Ratings are primarily a measure of the relative financial strength of a company. The rating considers key variables such as coverage of debt, variability of return, stock price stability, and company size. The Financial Strength Ratings range from the highest at A++ to the lowest at C.

VALUE LINE PRICE STABILITY INDEX

The Price Stability Index is based upon a ranking of the standard deviation of weekly percent changes in the price of a stock over the last five years. The top 5% carry a Price Stability Index of 100; the next 5%, 95; and so on down to an Index of 5.

VALUE LINE EARNINGS PREDICTABILITY INDEX

The Earnings Predictability Index is a measure of the reliability of an earnings forecast. The most reliable forecasts tend to be those with the highest rating (100), the least reliable (5).

S&P BETA (ß)

The Beta is derived from a regression analysis between 60 months of price changes in a company's stock price (plus corresponding dividend yield) and the monthly price changes in the S&P 500 Index (plus corresponding dividend yield). Prices and dividends are adjusted for all subsequent stock splits and stock dividends.

S&P BOND RATING

The S&P Bond Ratings is an appraisal of the credit quality based on relevant risk factors. S&P reviews both the company's financial and business profiles. Shown below are the rankings:

AAA An extremely strong capacity to pay interest and repay principal.

AA+ A very strong capacity to pay interest and repay principal.
AA There is only a small degree of difference between "AAA" or "AA."
AA- debt issues.

A+ A strong capacity to pay interest and repay principal. These
A these ratings indicate the obligor is more susceptible to
A- changes in economic conditions than AAA" or "AA" debt issues.
BBB+ An adequate capacity to pay interest and repay principal.
BBB economic conditions or changing circumstances are more likely to
BBB- lead to a weakened capacity to pay interest and repay principal.

BB+ "BB" indicates less near-term vulnerability to default than other
BB speculative issues. However, these bonds face major ongoing
BB- uncertainties or exposure to adverse conditions that could lead to inadequate capacity to meet timely interest and principal payments.

S&P STOCK RANKING

The S&P Stock Rankings is an appraisal of the growth and stability of the company's earnings and dividends over the past 10 years. The final score for each stock is measured against a scoring matrix determined by an analysis of the scores of a large and representative sample of stocks. Shown below are the rankings:

A+	Highest
A	High
A-	Above average
B+	Average
B	Below Average
B-	Lower
C	Lowest
D	In Reorganization
NR	Not rated

MOODY'S BOND RATING

Moody's Bond Ratings assign a rating on the creditworthiness of an obligor. Such ratings reflect both the likelihood of default and any financial loss suffered in the event of a default. Shown below are the rankings:

Aaa Obligations rated Aaa are judged to be of the highest quality with minimal risk.

Aa Obligations rated Aa are judged to be of the high quality and are subject to low credit risk.

A Obligations rated A are considered upper-medium-grade and are subject to low credit risk.

Baa Obligations rated Baa are subject to moderate credit-risk. They are considered medium-grade and are subject to substantial credit risk.

Ba Obligations rated Baa are subject to have speculative and are subject to substantial credit risk.

B Obligations rated B are considered speculative and are subject to high credit risk.

Caa Obligations rated Caa are judged to be of poor standing and are subject to very high credit risk.

Ca Obligations rated Ca are highly speculative and are likely in, or very near default with some prospect of recovery in principle and interest.

C Obligations rated C are the lowest-grade class of bonds and are typically in default, with little prospect of recovery in principle and interest.

Sources:

1. Value Line Investment Analyzer, Version 3.0.15a, New York, NY.
2. Standard & Poor's, Utility Compustat II, September 15, 1993, New York, NY.

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-218, SUB 526

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	))))))	TESTIMONY OF LYNN FEASEL PUBLIC STAFF – NORTH CAROLINA UTILITIES COMMISSION

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

AQUA NORTH CAROLINA, INC.
DOCKET NO. W-218, SUB 526

TESTIMONY OF LYNN FEASEL
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION

May 26, 2020

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND PRESENT POSITION.

A. My name is Lynn Feasel and my business address is 430 N. Salisbury Street, Raleigh, North Carolina. I am a Staff Accountant with the Accounting Division of the Public Staff – North Carolina Utilities Commission, and represent the using and consuming public.

Q. HOW LONG HAVE YOU BEEN EMPLOYED BY THE PUBLIC STAFF?

A. I have been employed by the Public Staff since November 6, 2016.

Q. WILL YOU STATE BRIEFLY YOUR EDUCATION AND EXPERIENCE?

A. I am a graduate of Baldwin Wallace University with a Master of Business Administration degree in Accounting. I am a Certified Public Accountant licensed in the State of North Carolina. Prior to joining the Public Staff, I was employed by Franklin International in Columbus, Ohio until June 2013. Additionally, I worked for ABB, Inc.,

from September 2013 until October 2016. I joined the Public Staff as a staff accountant in November 2016. Since joining the Public Staff, I have worked on rate cases involving water and sewer, natural gas, and electric companies, filed testimony and affidavits in various general rate cases, updated earnings reports for Carolina Water Service, Inc. of North Carolina, Aqua North Carolina, Inc. (Aqua, Aqua NC, or Company), and various natural gas companies, calculated refunds to consumers from AH4R and Progress Residential, and reviewed franchise and contiguous filings for multiple water and sewer companies.

Q. WHAT ARE YOUR DUTIES?

A. I am responsible for analyzing testimony, exhibits, and other data presented by parties before the North Carolina Utilities Commission (Commission). I have the further responsibility of performing the examinations of books and any other data and data request responses provided by public utilities in proceedings before the Commission, and summarizing the results into testimony and exhibits for presentation to the Commission.

Q. WHAT IS THE NATURE OF THE APPLICATION IN THIS PROCEEDING?

A. On December 31, 2019, Aqua filed an application with the Commission seeking authority to adjust rates and charges for water

and sewer service in all of its service areas in North Carolina, approval of a conservation pilot program, deferral accounting, and modification of certain terms and conditions for the provision of water and sewer utility services. My investigation included a review of the application filed by the Company, an examination of the Company's books and records for the test year and post-test year, and a review of any additional documentation provided by the Company in response to written and verbal data requests.

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

A. The purpose of my testimony in this proceeding is to present the results of my investigation of the levels of revenue, expenses, and investment filed by Aqua in support of its requested increase in operating revenues for its Aqua uniform water operations (Aqua Uniform Water), Aqua uniform sewer operations (Aqua Uniform Sewer), Brookwood water operations (Brookwood Water), Fairways water operations (Fairways Water), and Fairways sewer operations (Fairways Sewer).

Q. WOULD YOU BRIEFLY DESCRIBE THE PRESENTATION OF YOUR TESTIMONY AND EXHIBITS?

A. Yes. My testimony contains a discussion of each issue resulting from my investigation, and my exhibit consists of schedules showing the

calculation of my adjustments to revenues, expenses, and rate base. My schedules also reflect adjustments recommended by other Public Staff witnesses, as follows:

1) The recommendations of Public Staff witness Boswell regarding protected excess deferred income taxes (EDIT).
2) The recommendations of Public Staff witness Henry regarding the following items:
   (a) Unamortized rate case expense;
   (b) Unamortized repair tax credit; and
   (c) Net plant in service.

Q. WHAT ADJUSTMENTS WILL YOU DISCUSS?

A. The accounting and ratemaking adjustments that I will discuss relate to the following items:

(a) Accumulated deferred income tax (ADIT);
(b) Purchase acquisition adjustment (PAA) and accumulated amortization of PAA;
(c) Amortization expense - PAA;
(d) Salaries and wages;
(e) Miscellaneous expense;
(f) Employee pension and benefits;
(g) Insurance;
(h) Payroll taxes;

(i) Contract services - other; and

(j) Contra-OH allocations.

ACCUMULATED DEFERRED INCOME TAX (ADIT)

Q. PLEASE EXPLAIN YOUR ADJUSTMENTS TO ACCUMULATED DEFERRED INCOME TAX (ADIT).

A. I have made several adjustments to ADIT. First, I have updated ADIT associated with rate case expense to reflect the unamortized balance recommended by Public Staff witness Henry. Next, I have adjusted ADIT to include the amounts associated with the Public Staff's recommended levels of unamortized repair tax credit costs recommended by Public Staff witness Henry. Next, I have adjusted ADIT to update actual amounts associated with post-test year additions based on calculations provided by the Company. Finally, I have adjusted ADIT to include the flowback of protected EDIT recommended by Public Staff witness Boswell that was inadvertently excluded from the filing. These adjustments result in a decrease of $513,154 for ADIT.

PURCHASE ACQUISITION ADJUSTMENT (PAA) AND ACCUMULATED AMORTIZATION OF PAA

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO PURCHASE ACQUISITION ADJUSTMENT (PAA) AND ACCUMULATED AMORTIZATION OF PAA.

A. I removed the post-test year PAA additions and associated accumulated amortization reflected in the application and replaced them with the actual post-test year PAA additions through March 31, 2020, and calculated accumulated amortization of the post-test year PAA additions based on the information provided by the Company. I updated the Company's test year accumulated amortization of PAA with the calculated accumulated amortization of PAA within the test year based on the in-service date, amortization rate, and amortization policy of the Company. I also updated the net acquisition incentive adjustment (AIA) for post-test year additions through the cutoff date, March 31, 2020, and updated the accumulated amortization of AIA based on the in-service date, amortization rate, and the amortization policy. These adjustments result in an increase of $90,781 in PAA and a decrease of $72,152 in accumulated amortization of PAA.

PAA AMORTIZATION EXPENSE

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO PAA AMORTIZATION EXPENSE.

A. I have calculated the PAA and AIA amortization expense to reflect my adjustments to PAA and AIA through March 31, 2020. These adjustments result in an increase of $3,541 in amortization expense.

SALARIES AND WAGES

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO SALARIES AND WAGES.

A. I have made the following adjustments to salaries and wages:

1) Remove capitalized time credit-labor;
2) Add transportation regular payroll expense;
3) Update payroll to March 23, 2020;
4) Remove open positions;
5) Remove temporary employees;
6) Adjust overtime pay;
7) Adjust standby pay;
8) Adjust leave without paid employees' salary;
9) Remove bonus allocated to shareholders; and
10) Remove executive compensation allocated to shareholders.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO REMOVE CAPITALIZED TIME CREDIT-LABOR.

A. The salaries and wages amount on the application did not exclude the capitalized time credit for labor; instead the Company combined all capitalized credits and listed them as a separate line item in the application. I removed capitalized time credit for labor cost according to the data from Exhibit B1/B2 to reflect the salaries and wages net of capitalized time credit expense before any additional adjustments.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO ADD TRANSPORTATION REGULAR PAYROLL EXPENSE.

A. On Exhibit B1/B2, the Company treated transportation regular payroll expense as salaries and wages, but on the application, this expense was not included as salaries and wages. I made the adjustments to include this expense in salaries and wages.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO UPDATE SALARIES AND WAGES.

A. On April 6, 2020, Aqua provided the Public Staff with an updated calculation of salaries and wages as of March 23, 2020. I adjusted salaries and wages to reflect the Company's updates for current active employees, exclude the allocation of salaries and wages to non-utility operations and other states, and remove the capitalized

expense based on the updated salaries and wages and the expense percentage provided by the Company.

Aqua's pro forma balance for salaries and wages includes labor costs allocated from 1) corporate service; 2) corporate sundries; and 3) Aqua Customer Operations (ACO). After reviewing the Company updates to salaries and wages and responses to the Public Staff's data requests, I recommend the following adjustments:

1) Labor cost allocated from corporate service: Aqua included 42 terminated employees and a portion of new hired employees' salary in the application. I removed the 42 terminated employees' salary and added in a normalized year of salary for the new hired employees. Based on the Company's response to Data Request 114, Item 1, there were nine employees that were terminated after the end of test year but whose positions were not filled by March 31, 2020. Therefore, I removed the salaries of these nine employees that were allocated to Aqua NC. Bonus allocated from corporate service was also included in the application. Based on the Company's response to Public Staff Data Request 16, Item 1, I removed 35% of the short term incentive plan and 50% of the stock options and awards, and allocated it to the shareholder.

2) Labor cost allocated from ACO: Aqua included a portion of new hired employees' salaries in the application. I normalized the salaries on the Company's book to a full year for the new hired employees. Based on the Company's response to Data Request 113, Item 1, there were 10 employees that were terminated after the end of test year whose positions were not filled by March 31, 2020. Therefore, I removed the salaries of these 10 employees that were allocated to Aqua NC. There were also two employees that were transferred to Aqua Illinois and Aqua NC after the end of the test year. The one employee transferred to Aqua NC was already included in Aqua NC salaries, so I removed both of their salaries allocated to Aqua NC from ACO. Bonus allocated from ACO was also included in the application. Based on the Company's response to Public Staff Data Request No. 16, Item 1, I removed 35% of the short term incentive plan and 50% of the stock options and awards and allocated it to the shareholder.

Q. HAS THE COMPANY INCLUDED OPEN POSITIONS IN ITS CALCULATION OF SALARIES AND WAGES FOR THIS CASE?

A. Yes. In its application, the Company included estimated salaries for 5 open or new positions. On April 6, 2020, the Company provided an updated calculation of labor expense reflecting the March 23, 2020, actual salaries for the 179 active employees and one employee that

was hired on April 13, 2020. The Company also included salaries for 2 open positions in its update, for a total of 182 positions.

Q. SHOULD THE COMPANY BE ALLOWED TO INCLUDE SALARIES FOR OPEN POSITIONS IN RATES?

A. No. The Public Staff has evaluated the test year open employee positions at Aqua NC where one employee left employment at Aqua NC on a date certain, and a period of time elapsed before the date the replacement employee began work. During this period for this vacant position, Aqua NC did not pay wages, payroll taxes, or group medical insurance, nor provide other employee benefits. Aqua NC experiences open positions every year. On May 19, 2020, there are five full time Aqua NC open positions listed on the Aqua America website. Aqua NC should not have nonexistent expenses included in the revenue requirement.

During the test year ending September 30, 2019, there were a total of 24 full time employees that left employment at Aqua NC whose positions were later filled by full time replacement employees. Based upon the total number of days the full time employee vacancies existed, the Public Staff is adjusting out the wages, payroll taxes, group medical insurance, and other benefits for 4.82 positions. This adjustment normalizes the open positions over the entire test year.

The salaries and benefits calculated for the 4.82 open positions were based on the updates provided by the Company on April 6, 2020.

1) I removed salaries and wages for two open positions as of March 23, 2020, listed as Facility Operator I and Facility Operator III.
2) I removed salaries and wages for one position that was filled on April 13, 2020, listed as Facility Operator II.
3) I removed salaries and wages for one position that was terminated on April 1, 2020, listed as meter reader.
4) I used the average salaries and wages of the above four positions to calculate the estimated salaries and wages for the fifth position and removed it from salaries and wages.

The update cutoff, including the customer count, utilized by the Public Staff in this proceeding is March 31, 2020. It would not be appropriate to add employees hired after March 31, 2020, for newly approved positions without a matching of revenues, due to added customer growth beyond March 31, 2020.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO REMOVE TEMPORARY EMPLOYEES.

A. In the Company's updated salaries and wages, two temporary employees were included. I removed them because they were not full time or part time employees and the expenses related to them

should not be treated as salaries and wages; instead their wages should be treated as contract service expense.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO OVERTIME PAY.

A. In its application, Aqua calculated overtime pay by dividing projected salaries and wages as of April 1, 2020, by annual hours to get an annual hourly pay rate by department. This annual hourly rate was then multiplied by 1.5 to get an annual overtime pay rate. The annual overtime pay rate was multiplied by the actual overtime hours to yield overtime cost to include in salaries and wages.

The Public Staff disagrees with this methodology of calculating overtime wages for several reasons. First, employees in the same department have different hourly rates. Using an average hourly rate to calculate the overtime cost for all employees in each department does not reflect the actual overtime cost. Second, the Company used projected cost instead of actual salaries and wages at March 31, 2020, to calculate the overtime rate. Third, there could be some employees who left the Company during the test year but whose overtime cost was still included.

Based on the reasons stated above, I calculated actual overtime pay for each active employee based on the updated payroll as of March 23, 2020.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO STANDBY PAY.

A. I removed the standby pay for employees terminated during the test year.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO LEAVE WITHOUT PAY EMPLOYEES SALARY.

A. During the test year period, there were 3 employees on personal leave, 24 employees on FMLA Continuous leave, 3 employees on FMLA Intermittent leave, and 2 employees on short term disability leave for more than 26 weeks. According to the Company's responses to Public Staff Data Request 34, Item 2, and Data Request 23, Item 1, these employees were not paid during the period of time when they left; therefore, I removed the portion of the salary they were not paid during this period.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO REMOVE BONUS TO SHAREHOLDERS.

A. The Company's application included bonuses paid to North Carolina employees and bonus allocated from corporate service and ACO during the test year, including Short-Term Incentive (STI) bonuses, stock options, restricted stock units amortization, and performance share units amortization. According to Aqua NC's most recent policies for the STI Plan, 50% of the metric weight depends on financial while 17.5% of the 50% is directly related to Aqua America's

earnings per share. Earnings per share directly benefit the shareholders' value instead of providing a benefit to the ratepayers. Therefore, I have removed 17.5% of the bonuses paid to NC employees from expenses and allocated them to the Company's shareholders. According to Aqua Services, Inc.'s most recent policies for the STI Plan, 50% of the metric weight depends on financial while 35% of the 50% is directly related to Aqua America's earnings per share. Earnings per share directly benefit the shareholders' value instead of providing a benefit to the ratepayers. Therefore, I have removed 35% of the bonus expenses allocated from corporate service and ACO and allocated them to the Company's shareholders. According to Aqua America, Inc.'s most recent policies for the 2009 Omnibus Equity Compensation Plan, the plan will encourage the participants to contribute to the success of the Company, align the economic interests of the participants with those of the shareholders, and provide a means through which the Company can attract and retain officers, other key employees, non-employee directors, and key consultants of significant talent and abilities for the benefit of its shareholders and customers. Therefore, I removed 50% of the stock options, restricted stock units amortization, and performance share units amortization paid to NC employees that were allocated from corporate service and ACO, and allocated them to the Company's shareholders.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO EXECUTIVE COMPENSATION.

A. My adjustment to Executive Compensation includes the removal of 50% of the total compensation of the top five executives, which is comprised of total annual salary, Short Term Incentive Plan (STIP), Long Term Incentive Plan (LTIP), and Benefits. The Public Staff has identified the top five Aqua America's executives who have charged compensation to Aqua NC. In this case, the top five Aqua America's officers are the Chief Executive Officer and President, Executive Vice President and Chief Financial Officer, Executive Vice President and Chief Operating Officer, Executive Vice President and Chief Strategy and Corporate Development Officer, and Executive Vice President, General Counsel and Secretary. As presented on Public Staff Feasel Exhibit I, Schedule 4, this adjustment is used to reflect the fact that the executives' duties and compensation encompass a substantial amount of activities that are closely linked to shareholder interests.

Q. IS YOUR RECOMMENDATION BASED ON THE PREMISE THAT THE COMPENSATION OF THE AQUA AMERICA CEO AND OTHER EXECUTIVE OFFICERS YOU HAVE SELECTED ARE EXCESSIVE OR SHOULD BE REDUCED?

A. No. This recommendation is based on the Public Staff's belief that it is appropriate and reasonable for the shareholders of the very large

water and wastewater utilities to bear some of the cost of compensating those individuals who are most closely linked to furthering shareholder interests, which are not always the same as those of ratepayers.

Q. WHAT IS THE PREMISE FOR REMOVING 50% OF THE TOP EXECUTIVES' COMPENSATION?

A. Officers have fiduciary duties of care and loyalty to shareholders, but not to customers. Consequently, the Company's executive officers are obligated to direct their efforts not only to minimizing the costs and maximizing the reliability of Aqua's service to customers, but also to maximizing the Company's earnings and the value of its shares. It is reasonable to expect that management will serve the shareholders as well as the ratepayers; therefore, a portion of management compensation and pension should be borne by the shareholders.

The executive compensation for the five Aqua America executives includes Short Term Incentive Annual Cash Incentive (STI) payments which are 50% based upon Aqua America's earnings per share and return on equity. The Long Term Incentive for Performance Share Grants for 2019 was based 26.5% on Aqua America's total shareholder return vs. large investor owned utilities, and 26.5% on Aqua America's total shareholder return vs. the S & P

Mid Cap Utilities index. In addition for 2019, the performance based stock options were based on Aqua America's achievement of at least an adjusted return on equity equal to 150 basis points below the return on equity granted by the Pennsylvania Public Utility Commission during Aqua Pennsylvania's (Aqua America's Pennsylvania water subsidiary) last rate proceeding. Aqua America's total shareholder return consists of dividends to shareholders and the increase in the price of Aqua America's common stock. Aqua America reports on page 42 of the Essential 2020 Proxy that its total shareholder's return for 2019 was 40.41%.

The compensation objectives for the five named Executive Officers are listed on page 45 Essential 2020 Proxy as follows:

Long Term Equity Incentive Awards

Form	Compensation Objective
Restricted Stock Units	**Align executive interests with shareholder interests,** retain key executives (emphasis added)
Performance Share Units	**Align executive interests with shareholder interests,** creates a strong financial incentive for achieving or exceeding long-term performance goals (emphasis added)
Performance Based Stock Options	**Align executive interests with shareholder interests;** through financial performance based nature, provides strong incentives to achieve core Company goals." (Emphasis added).

The fixed base salary of the President and CEO was 24.9% of his total compensation as shown on page 61 of the Essential 2020 Proxy. The fixed base salary of the other four executive officers range from 34.2% to 39.1%, as shown on pages 62 and 63 of the Essential 2020 Proxy. The average of the fixed base salary of all five executives is 34.7%.

The Board of Directors Compensation Committee during 2019 made key decisions for 2020 compensation plan designs, including as stated on Essential 2020 Proxy on page 50:

> Revised the balance between base compensation and long term incentives for Mr. Franklin (CEO) to a heavier weighting (53%) on long term incentives in the total compensation package **to further underscore drive for long-term value creation for shareholders**. (Emphasis added).

The Essential 2020 Proxy on page 50 also stated

> Similarly, the grant of restricted stock units, when coupled with our stock ownership requirements, **further aligns interests of the management with the shareholders by increasing the number of shares each member of management hold**. (Emphasis added).

The Essential 2020 Proxy further states on page 51

> Stock Ownership Guidelines - Designed to focus named executive officers on the long-term performance of the Company **and align the interests of our executives with our shareholders** by encouraging named executive officers to maintain a significant ownership interest in the Company. (Emphasis added).

The Short Term Incentives Award on page 52 of the Essential 2020 Proxy has the metric of 50% Financial, broken down to Adjusted Earnings Per Share 35% and Return on Equity 15%. The stated rationale is: “This award measure aligns the executive to results for the shareholders.”

The total STI Essential 2020 Proxy payments to the five executives as shown on page 64 totaled $2,161,244, of which 45.5% was based

upon Aqua America's earnings per share and 17.05% based upon Aqua America's return on equity, as shown on page 63.

The compensation paid to these five executives is heavily based upon Aqua America's earnings per share and Aqua America's total shareholder return. These performance measures heavily benefit Aqua America's shareholders. It is appropriate that 50% of the total compensation (including benefits) to the five executive officers should be allocated to Aqua America's shareholders.

Adjusting the compensation of the top five executives is consistent with the positions taken by the Public Staff in past general rate cases involving investor-owned utilities serving North Carolina retail customers. Some of these cases include Duke Energy Progress (DEP) 2018 General Rate Case (Docket No. E-2 Sub 1142), Duke Energy Carolinas' (DEC) 2018 General Rate Case (Docket No. E-7, Sub 1146), Public Service Company of North Carolina's (PSNC) 2016 General Rate Case (Docket No. G-9, Sub 565), Piedmont's 2013 General Rate Case (Docket No. G-9, Sub 631) and Piedmont's 2019 General Rate Case (Docket No. G-9, Sub 743). DEC, DEP, and Dominion Energy North Carolina have all made executive compensation adjustments in their respective general rate cases to remove a portion of their top executives' total compensation. The Public Staff has consistently updated each utility's adjustments to

reflect a 50% reduction of the top executives' total compensation in each of the general rate case proceedings.

Aqua America is a publically traded large investor-owned utility with a market capitalization on May 19, 2020, of $9.8 Billion. Aqua America's market capitalization is the second highest of the publicly traded investor-owned water and wastewater utilities. Aqua NC is the largest Commission-regulated water and wastewater utility with more than 100,000 customers, more than double the number of customers of the second largest, and ten times more customers than the third largest Commission-regulated water and wastewater utility. The Public Staff recommends that Aqua NC's executive compensation allocation from Aqua America be allocated 50% to the Aqua America shareholders, the same as the Commission-regulated electric and natural gas utilities.

MISCELLANEOUS EXPENSE

Q. PLEASE EXPLAIN YOUR ADJUSTMENTS TO MISCELLANEOUS EXPENSE.

A. I made the following adjustments to miscellaneous expense:

1) Capitalized time credit-other-miscellaneous: I removed capitalized time credit other for miscellaneous cost according to the data from Exhibit B3-s in my adjustment to reflect miscellaneous

expense net of capitalized time credit expense before my other adjustments.

2) Board of Director (BOD): I made an adjustment to remove 50% of the expenses associated with the Aqua America BOD that have been allocated to the Aqua NC jurisdiction, as presented on Public Staff Feasel Exhibit I, Schedule 7. Aqua NC does not have a separate BOD. The expenses allocated to the Aqua NC jurisdiction encompass the BOD's compensation, Directors' and Officers' liability insurance, and other miscellaneous BOD expenses. The Essential Utilities, Inc. Board of Directors Corporate Governance Guidelines revised February 3, 2020, state on page 6:

II. RESPONSIBILITIES OF THE BOARD

> 1. It is the responsibility of the Board to provide guidance and direction on the Corporation's general business goals and strategy and to provide general oversight of, and direction to management **so that the affairs of the Corporation are conducted in the long term interests of all its shareholders.** (Emphasis added).

In addition, in Responsibilities of the Board, no. 10 (page 8) for director compensation it states **". . . compensation should align the director's interests with the long-term interest of shareholders. . . .**" (Emphasis added).

The shareholders vote on the election of directors. The customers do not have a vote. It is clear the BOD is responsible for acting in the best interests of the shareholders.

The 2019 compensation to each of the eight Aqua America independent directors was $90,000 cash, plus stock grants equal to $90,000 in value, as shown on the Essential 2020 Proxy, page 33. The compensation for each independent director for 2020 increases to $100,000 cash, plus stock grants equal to $100,000 in value as shown on the Essential 2020 proxy, page 33. The Aqua America CEO and BOD Chairman does not receive separate director compensation. The test year BOD compensation and expense allocation to Aqua NC was $190,717. Public Staff Feasel Exhibit 1 Schedule 7, Line 3, Line 4, and Line 6 shows the reduction of 50% of the BOD compensation and expenses through the third quarter of 2019.

The nine Aqua America directors own a total 306,037 shares of Aqua America common stock as shown on the Essential 2020 Proxy, page 36. Based upon the May 18, 2020 market close for Essential Utilities of $41.02 per share, the 306,037 director owned shares have a combined total value of $12,533,638. This large director stock ownership further aligns the directors' interests with shareholders.

The Public Staff believes that it is appropriate and reasonable for the shareholders of the larger water and wastewater utilities to bear a reasonable share of the costs of compensating those individuals who have a fiduciary duty to protect the interests of shareholders, which may differ from the interests of ratepayers. The premise of this adjustment is closely linked to the premise of the adjustment made by the Public Staff related to executive compensation. Furthermore, Directors' and Officers' liability insurance, while a necessary expense for a corporation, is obtained to defend the BOD in lawsuits brought by shareholders for issues such as merger claims and shareholders' derivatives. Therefore, the Public Staff recommends it is appropriate for both ratepayers and shareholders to equally share the cost of BOD expenses.

3) Other miscellaneous expenses: I removed miscellaneous expenses allocated to Aqua NC from Corporate Sundries in the amount of $10,490 that were prior to the test year, one time deduction, and annualize an expense item.

EMPLOYEE PENSIONS AND BENEFITS

Q. PLEASE EXPLAIN HOW YOU ADJUSTED EMPLOYEE PENSIONS AND BENEFITS EXPENSE.

A. I removed capitalized time credit for employee pensions and benefits cost based on data from Exhibit B3-a in my adjustment to reflect the

pension and benefits net of capitalized time credit expense before my other adjustments. In addition I am recommending the following adjustments to pensions and benefits:

1) Update NC benefits to match the updates to salaries and wages: I made matching adjustments to pensions and benefits related to adjustments made to salaries and wages for updates to March 23, 2020.

2) Update NC benefits for five positions which were open but were filled with new hired employees: I updated pensions and benefits for the five open positions that were originally included in this application but were replaced with new hired employees.

3) Remove four employees who were terminated after September 30, 2019: I removed the pension and benefit for four employees who were terminated after September 30, 2019.

4) Remove estimated pensions and benefits for one position: I used the average pensions and benefits to calculate the estimated pensions and benefits expense for the fifth position and removed it from pensions and benefits expense to align with the open position adjustments.

5) Remove full time employees who are not qualified for Long-Term Disability (LTD) benefits as of March 31, 2020: According to

the Company's insurance policies, there is a 12-month waiting period for LTD. There were 16 employees who have not qualified for all LTD benefits as of March 31, 2020, so I removed their benefits from expenses.

6) Remove full time employees who are not qualified for AD&D & Life (Life) benefits as of March 31, 2020: According to the Company's insurance policies, there is a 1st day of the month after 30 days waiting period for life benefits. There were two employees who had not qualified for all life benefits as of March 31, 2020, so I removed their benefits from expenses.

7) Remove full time employees who are not qualified for Dental, Medical, and Vision benefits as of March 31, 2020: According to the Company's insurance policies, there is a 1st day of the month after 30 days waiting period for Dental, Medical, and Vision benefits. There were two employees who had not qualified for Dental, Medical, and Vision benefits as of March 31, 2020, so I removed their benefits from expenses.

8) Remove unqualified employee benefit expense allocated from Corporate Sundries: I removed $17,834 of employee benefit expenses allocated to Aqua NC from Corporate Sundries that were outside of the test year, for employee personal accessories, or for one-time retirement dinners.

INSURANCE EXPENSE

Q. PLEASE EXPLAIN HOW YOU ADJUSTED INSURANCE EXPENSE.

A. First, I adjusted the insurance premiums to reflect the current premiums for Aqua America, Inc., the parent company of Aqua North Carolina, Inc., provided by the Company, and allocated them to Aqua using the following factors:

(a) The amounts of premiums paid by the Company for workers' compensation, general liability insurance, Marsh fees, and executive risk insurance are based on payroll. Therefore, I have allocated premiums for these policies to North Carolina based on payroll information provided by the Company. Ohio had a separate workers' compensation policy and was not included in the total workers' compensation policy for Aqua America. Therefore, I excluded Ohio payroll in my calculation of payroll factor allocation percentage for the workers' compensation premium.

(b) I allocated the automobile premium based on the number of automobiles for North Carolina as a percentage of the total number of automobiles for all states.

(c) I allocated property insurance and cyber security insurance to North Carolina based on the values of the property covered by the current policy;

(d) The pollution control liability insurance premium is based on revenues, and I allocated this premium to North Carolina based on the revenues used to calculate the premium;

(e) I allocated umbrella premium and claims handling expense to North Carolina based on the weighted average allocation factors including payroll, customer counts, and property values for Aqua NC. The reason is that umbrella insurance and claims handling expense is related to employee benefits, customer, and property. Therefore, it is more appropriate to take into consideration all three factors.

Next, I adjusted claims for workers' compensation, general liability, and automobile insurance to reflect the average of claims paid for North Carolina for the last five years. The Company changed the methodology used to summarize the claims paid in the past years. Instead of using the claims incurred in each year, Aqua NC used the claims actually paid in each year. The change of this methodology caused a duplicated reporting of claims incurred in one year but paid in future years. After reviewing the data provided by the Company, I removed the duplicated reported claims to reflect an accurate amount of claims paid in the past five years. This is a one-time

adjustment. In the future rate cases, there is no need to remove duplicated claims reported as long as the Company uses the same methodology used in this rate case.

I also included surety bonds for North Carolina based on information provided by the Company.

I then allocated my adjusted levels of workers' compensation premium, workers' compensation claims, automobile premium, and automobile claims between capital, non-utility operations, and water and sewer expense based on the expense percentage provided by the Company. These adjustments resulted in a total insurance cost for North Carolina of $622,323.

I allocated all insurance items to the five North Carolina entities based on the same allocation factors used to allocate insurance premiums and claims from Aqua America to Aqua NC. These adjustments resulted in a decrease in insurance expense of $203,813.

PAYROLL TAXES

Q. WHY DID YOU ADJUST PAYROLL TAXES?

A. I made an adjustment to reflect payroll taxes based on the Public Staff's recommended level of salaries at the current payroll tax rates. This adjustment results in a decrease of $207,673 in payroll tax

expense. Unlike salaries and wages, pension and benefits, and miscellaneous expenses, for which I removed the capitalized time credits to reach the net expenses before any other adjustments, I did not remove the capitalized time credit for payroll tax expenses in my adjustments to reach payroll taxes net of capitalized credit expense. Instead, I directly compared my calculated payroll tax net of capitalized time credit expense with the Company's payroll tax in the application to calculate my adjustment. The reason was that there were three types of payroll taxes, including Federal Insurance Contributions Act (FICA), Federal Unemployment Tax Act (FUTA), and State Unemployment Tax Act (SUTA). I had the total capitalized time credit for payroll taxes for each rate division but I did not have it broken down by the three types of payroll taxes. Therefore, I was not able to compare my final payroll tax net of capitalized credit expenses to that of the Company by these three categories.

<u>CONTRACT SERVICE OTHER</u>

Q. PLEASE EXPLAIN HOW YOU ADJUSTED CONTRACT SERVICE OTHER.

A. I made an adjustment to remove $67,776 of contract service other expense allocated to Aqua NC from Corporate Sundries that were outside of the test year and expenses beneficial to the shareholders.

CONTRA-OH ALLOCATIONS

Q. PLEASE EXPLAIN HOW YOU ADJUSTED CONTRA-OH ALLOCATIONS.

A. I made an adjustment to remove capitalized labor, capitalized benefit, capitalized payroll tax, capitalized insurance, and capitalized miscellaneous from contra-OH allocation to avoid removing the overhead allocation twice from expenses.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-218, SUB 526

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	))))))	TESTIMONY OF MICHELLE M. BOSWELL PUBLIC STAFF – NORTH CAROLINA UTILITIES COMMISSION

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-218, SUB 526

TESTIMONY OF MICHELLE M. BOSWELL
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION

MAY 26, 2020

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND PRESENT POSITION.

A. My name is Michelle M. Boswell. My business address is 430 North Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am a Staff Accountant with the Accounting Division of the Public Staff – North Carolina Utilities Commission.

Q. BRIEFLY STATE YOUR QUALIFICATIONS AND DUTIES.

A. My qualifications and duties are included in Appendix A.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to supplement the prefiled direct testimony of Public Staff witness Henry to present the accounting and ratemaking adjustments I am recommending regarding federal protected excess deferred income taxes (EDIT).

Q. MS. BOSWELL, PLEASE DESCRIBE THE SCOPE OF YOUR INVESTIGATION INTO THE COMPANY'S FILING.

A. My investigation included a review of the application, testimony, exhibits, and other data filed by Aqua North Carolina, Inc. (Aqua or Company). The Public Staff has also conducted extensive discovery in this matter, including the review of numerous responses provided by the Company in response to data requests.

Q. PLEASE DESCRIBE THE ORGANIZATION OF YOUR EXHIBITS.

A. Boswell Exhibit 1 presents the calculation of federal protected EDIT effects on the Company's rate base and income statement.

Q. PLEASE DESCRIBE YOUR RECOMMENDED ADJUSTMENTS TO FEDERAL PROTECTED EDIT.

A. In the Company's previous rate case in Docket No. W-218, Sub 497, Aqua and the Public Staff reached an agreement that the protected EDIT would be flowed back following the tax normalization rules utilizing the average rate assumption method (ARAM) required by IRC Section 203(e), based on the reduction of tax rates due to the passage of the Tax Cuts and Jobs Act, as outlined in Section II of the Partial Agreement and Stipulation filed on September 17, 2018. In the same docket, the Commission ordered "The Company's protected federal excess deferred income taxes (EDIT) should be flowed back to customers by amortizing the protected EDIT over a

period of time equal to the expected lifespan of the plant, property, and equipment with which they are associated, in accordance with the normalization rules of the United States Internal Revenue Service (IRS)." The protected EDIT are deferred taxes related to timing differences arising from the utilization of accelerated depreciation for tax purposes and another depreciation method for book purposes. These deferred taxes are deemed protected because the IRS does not permit regulators to flow back the excess to ratepayers immediately, but instead requires that the excess be flowed back to ratepayers ratably over the life of the timing differences that gave rise to the excess, per IRC Section 203(e).

In the present case, the Company neglected to include the flowback of federal protected EDIT in determining the calculation of its proposed revenue requirement. I have made an adjustment to include the return of protected federal EDIT based upon the Company's calculation of the net remaining life of the timing differences, utilizing the Company's current composite tax rate to calculate the annual amortization, net of tax, to be flowed back to ratepayers. Boswell Exhibit 1 presents the impacts of the flow back of federal protected EDIT on rate base and the income statement. Public Staff witness Henry Exhibit I depicts the impact of the updated federal protected EDIT as shown on Boswell Exhibit 1.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

APPENDIX A

QUALIFICATIONS AND EXPERIENCE

MICHELLE M. BOSWELL

I graduated from North Carolina State University in 2000 with a Bachelor of Science degree in Accounting. I am a Certified Public Accountant.

I am responsible for analyzing testimony, exhibits, and other data presented by parties before this Commission. I have the further responsibility of performing the examinations of books and records of utilities involved in proceedings before the Commission, and summarizing the results into testimony and exhibits for presentation to the Commission.

I joined the Public Staff in September 2000. I have performed numerous audits and/or presented testimony and exhibits before the Commission addressing a wide range of electric, natural gas, and water topics. I have performed audits and/or presented testimony in Duke Energy's 2010 REPS Cost Recovery Rider; the 2008 REPS Compliance Reports for North Carolina Municipal Power Agency 1, North Carolina Eastern Municipal Power Agency, GreenCo Solutions, Inc., and EnergyUnited Electric Membership; Duke Energy Carolinas LLC 2017 rate case, four recent Piedmont rate cases; the 2016 rate case of Public Service Company of North Carolina (PSNC), the 2012 rate case for Dominion Energy North Carolina (DENC, formerly Dominion North Carolina Power), Duke Energy Progress LLC 2013 and 2017 rate case, several Piedmont, NUI Utilities Inc. (NUI), and Toccoa

annual gas cost reviews; the merger of Piedmont and NUI; and the merger of Piedmont and North Carolina Natural Gas (NCNG).

Additionally, I have filed testimony and exhibits in numerous water rate cases and performed investigations addressing a wide range of topics and issues related to the water, electric, and telephone industries.

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-218, SUB 526

In the Matter of Application of 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	))))))	TESTIMONY OF LINDSAY DARDEN PUBLIC STAFF – NORTH CAROLINA UTILITIES COMMISSION

AQUA NORTH CAROLINA, INC.
DOCKET NO. W-218, SUB 526

TESTIMONY OF LINDSAY DARDEN
ON BEHALF OF THE PUBLIC STAFF –
NORTH CAROLINA UTILITIES COMMISSION

MAY 26, 2020

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND PRESENT POSITION.

A. My name is Lindsay Darden. My business address is 430 North Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am an engineer with the Water, Sewer, and Telephone Division of the Public Staff – North Carolina Utilities Commission (Public Staff).

Q. BRIEFLY STATE YOUR QUALIFICATIONS AND DUTIES.

A. I graduated from North Carolina State University, earning a Bachelor of Science Degree in Civil Engineering. I am a licensed Professional Engineer (PE - State of North Carolina #042110). I am also certified as a B-Well Operator (#130281) by the North Carolina Water Treatment Facility Operators Certification Board. I worked for the North Carolina Department of Environmental Quality (DEQ), Public Water Supply Section for four years prior to joining the Public Staff in December 2016. Prior to working for DEQ, I worked for Smith Gardner, an engineering consulting firm.

Q. WHAT ARE YOUR DUTIES IN YOUR PRESENT POSITION?

A. My duties with the Public Staff are to monitor the operations of regulated water and wastewater utilities with regard to rates and service. The activities associated with these duties include conducting field investigations to review, evaluate, and recommend changes in the design, construction, and operations of regulated water and wastewater utilities; presenting expert testimony in formal hearings; and presenting information, data, and recommendations to the North Carolina Utilities Commission (Commission).

Q. BRIEFLY EXPLAIN THE SCOPE OF YOUR INVESTIGATION REGARDING THIS RATE INCREASE APPLICATION.

A. On December 31, 2019, Aqua North Carolina, Inc. (Aqua or Company), filed an application with the Commission, in Docket No. W-218, Sub 526, seeking authority to increase its rates for providing water and wastewater utility service in all of its service areas in North Carolina. My areas of investigation in this proceeding have been the review of company records and the review of Department of Environmental Quality (DEQ) records. I have also assisted the Public Staff Accounting Division with the review of the following expenses: Sludge Hauling, Contract Services – Engineering, Contract Services – Other, Contract Services – Lab Testing, and Purchased Water.

Q. HAVE YOU INSPECTED AQUA'S WATER AND SEWER SYSTEMS?

A. No, due to the COVID-19 outbreak and the "stay at home" order issued by North Carolina Governor, Roy Cooper, the Public Staff was unable to conduct site visits prior to the filing of its testimony. If necessary, the Public Staff will conduct site visits when the public witness hearings are rescheduled. Those hearings were originally scheduled to take place in April 2020, but were postponed until further order of the Commission in response to the COVID-19 outbreak and Governor Cooper's "stay at home" order.

EXPENSES

Q. HAVE YOU RECOMMENDED ANY ADJUSTMENTS TO EXPENSES RELATED TO AQUA'S WATER AND WASTEWATER OPERATIONS?

A. Yes, I have provided Public Staff witness Windley Henry with recommended adjustments to expenses related to sludge hauling, contractual services – engineering, contractual services – other, contractual services – lab testing, and purchased water.

SLUDGE HAULING EXPENSE

The sludge hauling expense contained in the Company's application includes the test year booked expenses and a pro forma adjustment

to the ANC Sewer rate entity. The pro forma adjustment reflects a price increase for sludge hauling in the Denver area of the Central region of ANC Sewer. In order to investigate the Company's requested sludge hauling expense I reviewed the historical sludge hauling quantity and expense data provided by Aqua in response to Public Staff Data Request No. 7.

The sludge hauling level recommended by the Public Staff is based on a three-year average of data from December 2016 through November 2019. This is the time period for which the Company provided the most current sludge hauling records in response to Public Staff Data Request No. 7. The use of a three-year average is appropriate because it properly accounts for system maintenance requirements that can cause the quantity of sludge hauled to vary from year to year. Examples of system maintenance requirements are the need to pump out digesters, clarifiers, or equalization tanks or to clean ponds, all of which could cause a temporary increase in the quantity of sludge hauled. By basing its sludge hauling recommendation on a three-year average of data from December 2016 through November 2019, the Public Staff has appropriately accounted not only for routine sludge hauling, but also for variations caused by system maintenance requirements.

A three-year average is also appropriate because sludge hauling levels fluctuate periodically and three years is the typical period of time used when analyzing expenses or performing other calculations that are impacted by periodic fluctuations. For example, transportation fuel cost expense calculations and the billing analysis (i.e., usage levels) use three-year averages in order to ensure that periodic fluctuations are not over or under emphasized. Similarly, the use of a three-year average when calculating sludge hauling levels ensures that periodic fluctuations, such as fluctuations due to general system maintenance are, given appropriate weight in the analysis.

For the reasons explained above, a three-year average has been used to evaluate the sludge hauling expenses in rate cases filed by other utility companies including Carolina Water Service, Inc. of North Carolina and Scientific Water and Sewerage Corporation. The Public Staff's use of a three-year average in this case is consistent with its practice those cases.

While the Public Staff generally advocates the use of a three-year average to evaluate sludge hauling expenses, it also recognizes that certain site-specific factors may require the three-year average to be adjusted. For this reason, the Public Staff reviewed additions and removals of wastewater treatment plants (WWTPs), other

construction projects, and/or changes in operations, and made appropriate adjustments to its recommendation based on these factors. These adjustments are described below.

Two WWTPs, The Legacy and Westfall WWTPs located in the Central region of the ANC Sewer rate entity, started producing sludge in April 2018 and October 2017, respectively. In order to adjust the three-year average to account for the addition of these two plants, the Public Staff first calculated the average monthly sludge hauling quantities for the plants based on available historical data. This average was then added to the sludge hauling quantities for the months during the three-year average period when the two plants were not yet in operation. This adjustment to the historical data accurately incorporates the addition of The Legacy and Westfall WWTPs into the three-year average calculation for the ANC Sewer rate entity.

In the response to Public Staff Data Request No. 79, Question 1, the Company described significant operational changes that occurred starting in April 2017 at The Cape WWTP, which is in Aqua's Fairways Sewer rate entity. In April 2017, the Dolphin Bay WWTP was retired and the effluent was rerouted to The Cape WWTP. At the same time, a new equalization basin was brought online which increased the flow at the plant. The rerouting of the Dolphin Bay

WWTP and equalization basin addition, combined with customer growth in 2018 and 2019, resulted in an increase in the average monthly quantity of sludge hauled at The Cape WWTP. Furthermore, construction activities associated with plant modifications and expansion at The Cape WWTP are currently underway and are expected to continue through 2021.

The Public Staff's analysis of the past three years of sludge hauling quantity data for the Fairways region shows a consistent increase in sludge hauling quantities with the test year monthly sludge hauling average being significantly higher than the three-year average. Based on the magnitude and duration of the increase, the three-year average does not accurately represent the expected sludge hauling quantity going forward. For this reason, the Public Staff recommends that an exception be made to its recommended three-year analysis and that the test year average sludge hauling quantity instead be used to determine the expected cost of sludge hauling for the Fairways region.

Based on the foregoing analysis of sludge hauling levels and the current sludge hauling pricing derived from invoices provided by Aqua, the Public Staff recommends the following sludge expense levels:

	Aqua Application	Public Staff Recommendation
ANC Sewer	$ 604,775	$ 590,239
Fairways Sewer	$ 170,439	$ 169,995

My calculations are shown in **Darden Exhibit 1**.

CONTRACTUAL SERVICES – ENGINEERING

I reviewed Aqua's expenses for Contractual Services – Engineering for water and wastewater operations based on invoices and documentation provided by the Company. Based on my review, I agree that the following expense levels requested by the Company in its application accurately reflect expected expense levels going forward:

	Total Expense
ANC Water	$ 9,986
ANC Sewer	$ 11,385
Brookwood Water	$ 966
Fairways Water	$ 323
Fairways Sewer	$ 207

CONTRACTUAL SERVICES – OTHER

I reviewed Aqua's Contractual Services - Other expenses for both water and wastewater operations. Aqua filed several pro forma adjustments to the Contractual Services – Other expense as part of

its application. Based on my investigation, I agree with the following pro forma adjustments:

	Pro forma Amount
Test Year AU/GL Corrections	$ 0[1]
Governors Club Increase	$ 7,255
Information Technology (IT) Charge Analysis	$ 34,512
Impact of 2109/2020 Postage Increase	$ 8,365
US Infrastructure Company (USIC) Charges for Quarter 4 2018	$ 22,369
Water Remediation Treatment (WRT) Unit 2019 Costs	$ 1,677
Allocation of 9001 Testing	$ (12,425)
Johnston County Transmission and Distribution (T&D)	$ 27,257

The NC Temporary Labor Removal pro forma adjustment was reviewed by Public Staff Accounting and is addressed in the testimony of Public Staff witness Lynn Feasel.

The Company adjusted US Infrastructure Company (USIC) Charges for Quarter 4 2018. In Adjustment # B3-m, the Company states that the adjustment was made because charges were over accrued in September 2018, causing the Quarter 4 2018 amounts to be short. Typically, expenses are not adjusted for over accruals outside the test year in order to avoid an understated test year amount. Likewise,

[1] Multiple adjustments across different rate entities net to $0

expenses are typically not adjusted for under accruals outside the test year in order to avoid an overstated test year amount. An understated test year amount would result in the Company not recovering the full cost of the expense, and an overstated amount would result in customers paying inflated rates. In the present case, Aqua provided updated expense data through March 2020. The Public Staff compared the test year monthly average for the pro forma adjusted amount and non-adjusted amount to the trailing 12 months average and to the monthly average calculated for May 2018 through March 2020. After review and comparison of the additional data, the Public Staff determined that the pro forma adjusted amount is reasonable and accepts the USIC Charges for Q4 2018 pro forma adjustment amount. While the Public Staff finds the amount of the pro forma adjustment to be reasonable, for the reasons explained above, it disagrees with the methodology underlying the adjustment (i.e., adjusting for over accruals outside the test year in order to avoid an understated test year amount) and therefore recommends that the adjustment not be precedential.

Pump Maintenance

The GL Account "736400 SW-Contract Services-Other-Pump Maintenance" includes the expenses associated with sewer main jetting and sewer line maintenance. Aqua is required to complete

jetting for 10% of the gravity sewer mains of all wastewater systems annually. In Public Staff Data Request No. 83, Question 4, the Public Staff asked the Company to identify the invoices and amounts of any expenses other than jetting costs that had been booked to this account. The Company's response stated in part, "Certain sewer line maintenance expenses beyond just the main jetting services are also included in that account as more fully described in column H of the jetting log attached hereto." Based on the Company's response, I totaled all amounts from Column H that did not include jetting in the work description and determined that $5,727 for ANC Sewer and $16,639 for Fairways Sewer was for sewer line maintenance and not jetting expense.

Although the Company is required to complete jetting for 10% of the gravity sewer mains annually, in some circumstances additional jetting is reasonable and necessary. In Public Staff Data Request No. 6, Question 4, the Public Staff asked the company to provide the DEQ collection system permit or other documentation supporting the 100% jetting of applicable systems. The Company's response included two systems that require 100% jetting: Emerald Plantation and Grande Villas. The Company's response also stated as follows:

> The larger NCDEQ Aqua permitted collection systems are not specifically required to clean 100% of the lines for compliance with cleaning; however, the overarching requirement for all collection systems is that discharge

> from these systems is not permitted. Aqua recognizes that some of our systems have greater cleaning frequency requirements to prevent sanitary sewer overflows due to terracotta (vitrified clay pipe) sewer lines with root intrusion, or fats, oil and grease build-up rates due to customer usage. Lastly, some systems are small and partially cleaning those systems is an inefficient process.

The Company did not specify to which systems these exceptions to the 10% jetting requirement would apply. Therefore, to complete the jetting analysis, I assumed that the systems the Company identified in the W-218, Sub 497, rate case as being 100% jetted, were required to be 100% jetted during the test period for the present rate case due to the reasons that Aqua cited in its response to Public Data Request No. 6, Question 4. Adding the systems I identified as requiring 100% jetting to the remaining systems, which require 10% jetting, results in 14% overall jetting. Based on my calculations, the actual jetting rate during the test period was 17%.

I calculated a reasonable jetting cost based on the total length of gravity sewer for each region and the jetting goal of 10%, with the exception of the systems described above that require 100% jetting. I calculated the expected cost based on current pricing verified by Company invoices. I then added the sewer line maintenance expenses in the amounts of $5,727 for ANC Sewer and $16,639 for Fairways Sewer to the calculated jetting costs for the respective systems to determine the total expense for the Pump Maintenance

account. Based on this analysis, the Public Staff recommends the following expense levels for Contractual Services – Other – Pump Maintenance:

	Aqua Application	Public Staff Recommendation
ANC Sewer	$ 157,720	$ 139,054
Fairways Sewer	$ 30,574	$ 32,269

My calculations are shown in **Darden Exhibit 2**.

CONTRACTUAL SERVICES – LAB TESTING EXPENSES

I reviewed Aqua's Contractual Services – Lab Testing expenses, which are also referred to as water and wastewater testing expenses. The Public Staff's analysis for testing expenses reflects the most current testing requirements, changes to the number or frequency of each test, and current testing costs, represented over the required frequency (monthly, annually, and every three, six, or nine years) for each test. The Company included documentation for compliance sampling and process sampling, which is also referred to as operational testing.

For compliance sampling, the types of compliance tests that must be performed and the testing frequency are determined by DEQ compliance standards for the Safe Drinking Water Act for each water

system, and by DEQ wastewater permits for each wastewater system. For operational testing, the types of tests, frequencies, and thresholds are determined by the Company.

Aqua provided the Public Staff with the compliance testing frequency schedule for each water and wastewater system. Using this information, I calculated the water and wastewater testing expense as the Public Staff customarily has, using current testing schedules going forward, amortizing the expense over the number of years corresponding to the testing frequencies for the various tests, and using the current unit costs for the tests.

Aqua also provided the Public Staff with operational testing data, including invoices and records, for various types of operational testing. The types of operational testing include, but are not limited to, additional sampling for iron and manganese beyond the required compliance testing, per- and polyfluoroalkyl substances (PFAS) sampling, Notice of Deficiency monitoring sampling, and wastewater process sampling.

Aqua's total per books expenses appear to be reasonable levels of expense and are largely consistent with the expense levels I calculated using the Public Staff's customary method. Therefore, the Public Staff agrees with the amounts provided by Aqua for the water testing expense listed below:

	Total Expense
ANC Water	$ 681,418
Brookwood Water	$ 65,937
Fairways Water	$ 19,827

The Public Staff does not agree with the Company's applied for wastewater testing expense due to its addition to the total wastewater testing amounts of the following percentage increases as an incidental costs:

	Incidental Increase
Central Area	2.5%
Denver Area	2.5%
Kernersville Area	5%
Wilmington Area	5%

The Public Staff's recommended amount includes all compliance and operational testing provided by the Company and has been updated for price changes. I am not aware of any justification for the incidental costs added by the Company and they were therefore removed from my calculation to accurately reflect the actual amount spent on wastewater testing.

While I disagree with the Company's addition of the incidental costs, I do not take issue with any other aspect of the Company's applied for wastewater lab testing expenses. I verified the frequency of the

compliance testing and the current testing pricing. Furthermore, the process sampling or operational testing provided by Aqua for each system appears to be reasonable. Based on this analysis, the Public Staff recommends the following for wastewater lab testing expenses:

	Aqua Application	Public Staff Recommendation
ANC Sewer	$ 293,263	$ 281,394
Fairways Sewer	$ 14,853	$ 13,848

My calculations are shown in **Darden Exhibit 3**.

PURCHASED WATER

Q. PLEASE DESCRIBE YOUR INVESTIGATION OF AQUA'S PURCHASED WATER EXPENSES.

A. I reviewed Aqua's expenses for purchased water for both the ANC Water and Brookwood Water rate entities using data provided by Aqua for the gallons purchased from third party providers and the gallons billed to Aqua customers for each purchased water system. In its application, Aqua proposed a pro forma adjustment to update the pricing of the purchased water systems to the most up-to-date rates. While the Public Staff agrees that the purchased water expense should be calculated using the most up-to-date, known rates, the Public Staff finds the total purchased water expense level filed in Exhibit B3-b to its application in the amount of $2,114,412 to

be excessive. The Public Staff instead recommends a total purchased water expense level of $2,052,045 which it calculated using the total gallons purchased (adjusted for water loss, if applicable) from the invoices provided by the Company and the most up-to-date rates. In the following section, I discuss my review of Aqua's purchased water expenses in more detail and provide the Public Staff's response to the Company's testimony regarding Current Annual Real Losses (CARL) and water audits.

Purchased Water Expense Update

In its purchased water expense update filed on April 21, 2020, Aqua requested an additional Item 18 adjustment in the amount of $43,431.57. Aqua stated the adjustment was made to reflect the impact of a proposed July 2020 rate increase for Johnston County purchased water accounts. The proposed rate increase is pending approval by the Johnston County Board of Commissioners. The Public Staff does not support this adjustment because the rate change has not yet been approved by the Johnston County Board of Commissioners and the adjustment is therefore not known and measurable.

Appropriate Water Loss Standard

Aqua proposes that CARL be used to "prioritize the Company's water systems for water leak reduction improvement plans and efforts that are needed," as stated by Company witness Pearce on page 5, lines 1 through 4, of his direct testimony. Referencing the American Water Works Association (AWWA) Manual of Water Supply Practices M36, Water Audits and Loss Control Programs, witness Pearce states on page 3, line 19, through page 4, line 2, of his direct testimony, "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." The Public Staff agrees with the Company that the CARL and water audits are beneficial tools for monitoring and addressing water loss issues and supports the Company's use of CARL and water audits for the detailed analysis of water systems. Furthermore, the Public Staff does not take issue with the Company's payment during the test year of $20,215 to Kunkel Water Efficiency Consulting (KWEC) to validate the Company's water loss audits. Because the data produced by KWEC has the potential to help Aqua improve operational practices to address and minimize water loss, the Public Staff agrees with the Company's request to include this cost as a capitalized expense. However, based on the Company's response to Public Staff Data

Request No. 15, Question 7, it is the Public Staff's understanding that consulting services will not be needed for every water loss audit and that future water loss audits would be completed by Aqua staff.

While water audits can help the Company to quantify and categorize the source of water loss that occurs in a system, the fact that water loss can be quantified and attributed to specific sources, such as flushing or line breaks, does not necessarily mean that the quantified amount is appropriate to be recovered in rates from customers.

Use of the CARL and water loss audits as a substitute for a standard of water loss is also problematic because they rely heavily on potentially inaccurate estimates to calculate apparent water loss. To determine the CARL, values for variables such as customer meter inaccuracies and systematic data handling errors must be inputted in the AWWA water audit report worksheet to complete the calculations. **Darden Exhibit 4** is an example of an AWWA water audit report worksheet. If a metered value is unavailable, the worksheet instructs the user to provide an estimated value and indicate the user's confidence in the accuracy of that estimated value. These values are used to calculate apparent (measurable) water losses, which are then deducted from total water losses to determine the CARL value. Because the values used to calculate apparent water losses are typically difficult to measure and accurately quantify, apparent water

losses calculated using these estimates may have varying levels of accuracy. This is reflected in the Water Audit Data Validity Score of 53 out of 100 shown on page two of **Darden Exhibit 4**. For this additional reason, CARL values should not serve as a substitute for a standard level of water loss in the determination of a recoverable water loss expense level.

Finally, the CARL and water loss audits do not provide a water loss limit or objective for the Company to work to achieve, and then maintain or improve upon. Without a water loss limit or objective, there is no financial incentive for the Company to address the underlying issues contributing to water loss. The Commission addressed this issue in its Order Approving Partial Settlement Agreement and Stipulation, Granting Partial Rate Increase, and Requiring Customer Notice issued on December 18, 2018, in Docket No. W-218, Sub (Sub 497 Order). Specifically, on page 116 of the Sub 497 Order, the Commission stated as follows:

> [T]he Commission finds that it is in the best interest of both Aqua NC and its customers for the Company to be mindful of an acceptable standard of water loss as its monitors its water losses from period to period. The Commission is of the opinion that with an established water loss standard in place, Aqua NC will more aggressively seek to investigate water losses and will strive to identify the cause(s), and make the necessary corrections, if applicable, more expeditiously.

While water loss percentages have decreased for some of the Company's purchased water systems as compared to the W-218, Sub 497, rate case, many water loss percentages have remained substantially the same or have increased. Therefore, the Public Staff believes that a standard of water loss is still needed in order to incentivize the Company to identify and resolve the causes of water loss. The Public Staff also notes that, absent a limit on the allowable level of water loss, customers may be paying both the cost of excessive water loss and the cost of any capital investments to reduce the excessive water loss. The Public Staff asserts that this is not appropriate for ongoing cost recovery.

The Public Staff asserts that the appropriate standard of water loss for use in this proceeding is 15%. This level is consistent with the AWWA's recommendation that action should be taken when water loss is 15% or greater. It is also consistent with the Commission's finding and conclusion on page 117 of the Sub 497 Order that 15% was a reasonable and appropriate amount of recoverable water loss for use in the rate case proceeding and would "encompass[] reasonable levels of necessary operational flushing, flushing due to compliance issues, and leaks; and also encourage[] the Company to monitor and address water losses." While Company witness Pearce disagrees in his direct testimony with the 15% allowable water loss advocated by the Public

Staff and approved by the Commission in the W-218, Sub 497, rate case, he fails to suggest an alternative level of allowable water loss.

Site-Specific Factors Contributing to Water Loss

On page 4, lines 8 through 11, of his direct testimony, Aqua witness Pearce states, "[f]or 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 leaks." In the W-218, Sub 497, rate case and in this rate case, the Public Staff considered known and measurable factors that can contribute to water loss and analyzed each system that exceeded the allowable 15% water loss threshold to determine whether the allowable water loss quantity should be adjusted. As part of this analysis, the Public Staff served the Company with its Data Request No. 4, Question 1, which asked, "If the water losses during the test year exceed 15% or there is a calculated surplus for any systems, please provide a detailed explanation for the loss or surplus including the root cause, actions taken, and planned actions." The Company's response described the water loss audits conducted by KWEC and an acoustic survey conducted at Chapel Ridge, but did not provide system specific data on quantifiable sources of water loss. Therefore, the Public Staff submitted several follow-up data requests in order to obtain system specific water loss data from the Company

necessary to complete the Public Staff's system specific water loss analysis.

In response to Public Staff Data Request No. 100, Question 1, Aqua provided the total amount of flushing recorded for each purchased water system. The Public Staff reviewed the flushing amounts for the purchased water systems that exceeded the 15% allowable water loss. Of the 10 purchased water providers for which Aqua exceeded the 15% allowable water loss, only 5 had flushing amounts recorded by Aqua in the test year. Table 1 below includes the total amount of flushing in the test year, including fire department flushing[2], the total amount of water loss, and the percentage of the water loss attributed to flushing for those five providers.

Table 1

Provider	TY Flushing Total (gallons)	TY Water Loss (gallons)	Flushing as a % of Water Loss
City of Hickory	58,000	1,208,292	4.8%
City of Mount Airy	18,600	1,363,800	1.4%
Davidson Water	43,218	2,116,040	2.0%
Town of Forest City	900	557,400	0.2%
Town of Pittsboro	487,868	7,216,500	6.8%

[2] The Chapel Ridge purchased water system, supplied by the Town of Pittsboro, is Aqua's only system that includes fire department flushing.

Due to the low percentage of water loss attributable to flushing, the Public Staff determined that an adjustment to the 15% allowable water loss amount was not appropriate for any of the purchased water systems. For these specific systems, the amount of flushing that occurred during the test year was reasonable and allowed for the recovery of other sources of water loss within the 15% allowable water loss amount.

In response to Public Staff Data Request No. 100, Question 4, Aqua provided a record of all the distribution system repair and replacement projects completed during the test year. Also in response to Public Staff Data Request 100, Question 4, Aqua estimated that for all purchase water systems a total of 952,678 gallons were lost due to main breaks and leaks that were repaired during the test year. For reference, the Company reported 53,250,159 gallons of total water loss during the test year.[3]

When a main break or leak is repaired, the system no longer experiences water loss caused by that known main break or leak. The Company recovers all project costs associated with the repair of a main

[3] For reference, the U.S. Geological Survey (USGS) illustrates, "A good-sized bath holds 40 gallons, so a million gallons would be 25,000 baths. . . ."

Available at https://www.usgs.gov/special-topic/water-science-school/science/a-million-gallons-water-how-much-it?qt-science_center_objects=0#qt-science_center_objects (last visited May 21, 2020)

break or leak either as a maintenance and repair expense or as a capitalized replacement. Although customers should not have to continue to pay for water loss that occurred in the test year due to main breaks and leaks have been repaired, main breaks and leaks are unfortunate but expected phenomena in water systems and will inevitably occur going forward and will result in new water loss. Due to the expectation that new main breaks and leaks will occur, and because it is difficult to accurately estimate the amount of water loss caused by main breaks and leaks, the Public Staff believes the amount of water Aqua estimates it lost due to main breaks repaired during the test year is a reasonable estimate of water loss due to main breaks and leaks going forward. Therefore, the Public Staff does not recommend an adjustment to remove from the gallons purchased the 952,678 gallons Aqua estimates were lost due to main breaks repaired during the test year.

Cost Benefit Analysis

In addition to the recoverable water loss expense, the Company seeks the recovery of capital project expenses to study system specific water loss and address various aspects of water loss. For example, the Company spent $135,236 on leak detection and engineering consulting services to study and address water loss at the Chapel Ridge purchased water system. Before capital projects

such as this are undertaken, a cost-benefit analysis is necessary to determine whether the cost of the project is reasonable in relation to the water loss it seeks to address. Undertaking an expensive capital project in order to eliminate a small amount of water loss may not be prudent. Therefore, it is reasonable to expect the Company to evaluate whether projects to address water loss are cost beneficial before undertaking them.

A good example of such a project is the District Metered Area pilot installation for Chapel Ridge which the Company described in its response to Public Staff Data Request No. 15, Question 5, as follows:

> During the Chapel Ridge acoustic survey, twenty-four customer leaks were discovered on the customer's side of the meter. These leaks were small and did not register on the nutating disk meters. As an option, Aqua is considering the installation of meters with improved abilities to measure low flows for systems like Chapel Ridge. The peer-reviewed journal article, Sumrak et al. – available at http://dx.doi.org/10.5942/jawwa.2016.108.0069, provides data on the relative accuracy of nutating disk meters as compared to electronic meters. At flows below 1/8 gallon per minute, the nutating disk meters skewed the meter readings to below AWWA standards for accuracy. If the installed meters are reading only ninety percent of actual for the 24 low flow customer leaks, this would equate to 157,680 gallons per year or $2,159 per year. These 24 meters were reading zero consumption due to these customer side leaks which could be estimated to be 1/16 gallon per minute leaks. This would equate to 788,400 gallons per year or $10,793 per year.

> The article states the electronic meters tested measured within AWWA standards at the low flowrates. It must be noted that the electronic meters are significantly more expensive than conventional nutating disk meters, and the battery life has not been proven. However, if the additional recoverable capital expense reduces the utilities exposure to "expense reductions" then it may be necessary to install meters with greater ability to measure low flowrates.

The Company describes the cost of water loss due small leaks on the customer's side of the meters. Aqua states that the cost of this water loss is $2,159 per year if the meters are reading ninety percent of the actual, and $10,793 if the meters are reading zero percent of the flow. The Public Staff was not given pricing information for the electronic meters but, according to the Company, they "are significantly more expensive than conventional nutating disk meters." The Public Staff opposes increasing the cost of service to customers with capital projects that are not expected to be equally or more than offset by a reduction in water loss expense or improvements in water quality and/or reliability.

<u>Public Staff Recommendation</u>

Based on the analysis of the Company's purchased water expenses described above, the Public Staff recommends a 15% allowable amount of water loss in this rate case. The Public Staff believes, as the Commission noted in the Sub 497 Order, that this level of allowable water loss "encompasses reasonable levels of necessary

operational flushing, flushing due to compliance issues, and leaks; and also encourages the Company to monitor and address water losses." While the Public Staff recognizes that it is sometimes appropriate to adjust the allowable level of water loss for system specific circumstances, the Public Staff did not identify any such circumstances based on the information provided by the Company in response to Public Staff data requests. Based on the Public Staff's recommended 15% allowable water loss, I calculated reductions in the quantity of water purchased from the 10 third-party providers as follows:

Table 2

Provider	Test Year Units[4] (kgal.)	Water Loss[5]	PS Adjusted Units[6] (kgal.)
City of Asheville	1,304	26%	1,134
City of Hickory	5,029	24%	4,496
City of Mount Airy	5,365	25%	4,707
City of Morganton	5,831	16%	5,758
City of Newton	1,117	30%	921
Davidson Water	8,085	26%	7,022
Hendersonville Water	12,290	24%	10,976
Town of Forest City	2,469	23%	2,249
Town of Pittsboro	32,565	22%	29,822
Town of Spruce Pines	2,433	25%	2,135

[4] The quantities are per Aqua's rate case filing W-1, Item 10, Exhibit B3-b-1.
[5] Calculated by comparing the gallons sold to gallons purchased in Exhibit B3-b-1.
[6] Calculated quantity of purchased water allowing a maximum of 15% water loss.

The calculations of the reduced purchased water quantities and expenses are shown in **Darden Exhibit 5**. Based on my calculations, the Public Staff recommends the following Purchased Water expenses:

	Aqua Application	Public Staff Recommendation
ANC Water	$ 1,850,078	$ 1,787,711
Brookwood Water	$ 264,334	$ 264,334

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

MS. JOST: Thank you. We have six additional documents that we would like to move into evidence. The first being the motion of the Public Staff to compel filed in this docket on April 22, 2020.

The second is Henry Revised Exhibit 1, consisting of Revised Schedules 1A through 3-7E. And Henry Revised Exhibit 2, consisting of Revised Schedule 1 filed on July 7, 2020 in this docket.

The third is Feasel Revised Exhibit 1 consisting of Revised Schedules 1 through 9, filed on July 7, 2020, in this docket.

The fourth is Junis Revised Exhibits 7, 9, 13, 15, and 17 filed in this docket on July 7, 2020.

COMMISSIONER BROWN-BLAND: Ms. Jost, just for my benefit, would you repeat those exhibits again?

MS. JOST: Yes. Those are Junis Revised Exhibits 7, 9, 13, 15, and 17.

COMMISSIONER BROWN-BLAND: All right. Thank you.

MS. JOST: All right. The fifth item is

the comments of the Public Staff filed in Docket Number W-100, Sub 59, the generic rate design proceeding, on May 22, 2019.

And the final document is the reply comments of the Public Staff filed in Docket Number W-100, Sub 59, the generic rate design proceeding on June 19, 2019.

COMMISSIONER BROWN-BLAND: All right. Those documents will be received into evidence at this time as described by Ms. Jost.

MS. JOST: Thank you.

(Motion of the Public Staff to Compel; Henry Revised Exhibit 1, consisting of Revised Schedules 1(a) through 3-7(e); Henry Revised Exhibit 2, consisting of Revised Schedule 1; Feasel Revised Exhibit 1, consisting of Revised Schedules 1 through 9; Junis Revised Exhibits 7, 9, 13, 15, and 17; Comments of the Public Staff filed in Docket Number W-100, Sub 59; and Reply Comments of the Public Staff filed in Docket Number W-100, Sub 59 were admitted into evidence.)

MS. JOST: And at this time, the Public Staff calls the panel of Windley Henry and Charles Junis.

COMMISSIONER BROWN-BLAND: All right. Give me just a moment and I'll move you on to --

MR. BENNINK: Can I ask a -- can I ask a question for clarification?

COMMISSIONER BROWN-BLAND: Yes, Mr. Bennink.

MR. BENNINK: We've been discussing the pilot and rate design. I guess maybe we did agree to this, but it seems to me, at this juncture, it might be more appropriate to have Mr. Junis on those issues.

MR. GRANTMYRE: The Public Staff decides the order of witnesses, not the Company.

COMMISSIONER BROWN-BLAND: Was that a question about the order of witnesses? I didn't understand your question, Mr. Bennink.

MR. BENNINK: I'll withdraw it.

COMMISSIONER BROWN-BLAND: All right. And I'm just queuing you up here. Okay.

Whereupon,

WINDLEY HENRY AND CHARLES JUNIS,

having first been duly affirmed, were examined and testified as follows:

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

DIRECT EXAMINATION BY MS. JOST:

Q. Mr. Henry, can you please state name, business address, and present position for the record?

A. (Windley Henry) I'm Windley Henry with the Public Staff accounting division. Address is 430 North Salisbury Street, Raleigh, North Carolina. And my current position is the accounting manager of the water, sewer, and telecommunication section of the Public Staff accounting division.

Q. Thank you. Mr. Junis, could you please state your name, business address and present position for the record?

A. (Charles Junis) Yes. My name is Charles M. Junis. I work at 430 North Salisbury Street in Raleigh, North Carolina. And I'm an engineer with the Public Staff in the water, sewer, and telecommunications division.

Q. Thank you. On May 29, 2020, did you, Mr. Henry and Mr. Junis cause to be filed in this docket -- I'm sorry, I withdraw that.

On May 29, 2020, did you cause to be filed in this docket, joint testimony consisting of 47 pages, Appendices A and B, and Henry and Junis Exhibits 1 through 13? And, Mr. Junis, I'll direct that question to you.

A. (Charles Junis) Yes. I believe the date was May 26th.

Q. You are correct. Thank you for that correction.

And, Mr. Henry, do you agree that you caused that testimony to be filed on the same date?

A. (Windley Henry) Yes, I do.

Q. And on June 22, 2020, did you cause to be filed in this docket, corrected joint testimony consisting of corrected pages 10 and 14, and Henry and Junis Corrected Exhibit 1? Mr. Junis?

A. (Charles Junis) Yes.

Q. And Mr. Henry?

A. (Windley Henry) Yes.

Q. Mr. Junis, do you have any additional corrections to that testimony?

A. (Charles Junis) I believe Mr. Henry is going to address that correction.

Q. Okay. Thank you.

A. (Windley Henry) Yes. We have one correction. On page 14, line 15, the word "nine months" should be replaced with "12." The word "nine," replace it with the word "12." That's the only correction.

Q. Mr. Henry, if you were asked the same questions today, would your answers be the same?

A. Yes, they would.

Q. And, Mr. Junis, if you were asked the same questions today, would your answers be the same?

A. (Charles Junis) Yes, they would.

MS. JOST: I move that Mr. Henry and Mr. Junis' prefiled testimony, consisting of 47 pages and Appendices A and B as corrected be copied into the record as if given orally from the stand, and that their prefiled exhibits be identified as marked and entered into evidence.

COMMISSIONER BROWN-BLAND: Motion granted.

(Public Staff Henry and Junis Exhibits 1 through 13 and Public Staff Henry and Junis Corrected Exhibit 1 were identified as they were marked when prefiled.)

(Whereupon, the prefiled direct testimony and appendices A and B of Windley Henry and Charles Junis was copied into the record as if given orally from the stand.)

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-218, SUB 526

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 Its Service Areas in North Carolina	)))))))	JOINT TESTIMONY OF WINDLEY E. HENRY AND CHARLES M. JUNIS PUBLIC STAFF – NORTH CAROLINA UTILITIES COMMISSION

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-218, SUB 526

Joint Testimony of

Windley E. Henry and Charles M. Junis

On Behalf of the Public Staff

North Carolina Utilities Commission

May 26, 2020

Q. MR. WINDLEY HENRY, PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND PRESENT POSITION.

A. My name is Windley E. Henry. My business address is 430 North Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am the Accounting Manager of the Water and Sewer/Communications Section of Accounting Division of the Public Staff – North Carolina Utilities Commission.

Q. BRIEFLY STATE YOUR EDUCATION AND EXPERIENCE.

A. My education and experience are summarized in Appendix A.

Q. ARE YOU THE SAME WINDLEY E. HENRY FILING INDIVIDUAL DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. MR. CHARLES M. JUNIS, PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND PRESENT POSITION.

A. My name is Charles M. Junis. My business address is 430 North Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am an engineer with the Water, Sewer, and Telephone Division of the Public Staff – North Carolina Utilities Commission.

Q. BRIEFLY STATE YOUR EDUCATION AND EXPERIENCE.

A. My education and experience are summarized in Appendix B.

Q. ARE YOU THE SAME CHARLES M. JUNIS FILING INDIVIDUAL DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of our testimony is to present to the Commission the Public Staff's recommendations with regard to Aqua North Carolina, Inc.'s (Aqua or the Company), requested: (1) utility plant in service, (2) deferral accounting treatment for post-test year capital projects,[1] (3) prospective deferral accounting treatment for post-rate case

[1] The Company's request for deferral accounting treatment is presented on page 28, line 15, through page 39, line 16, of the direct testimony of Company witness Edward Thill, filed in Docket No, W-218, Sub 526, on December 31, 2019.

capital projects,[2] and (4) retroactive regulatory asset treatment for the transmission fee paid to Johnston County in 2018.[3]

UTILITY PLANT IN SERVICE (UPIS)

Q. PLEASE BRIEFLY DESCRIBE YOUR INVESTIGATION OF UPIS.

A. In order to investigate the Company's plant additions to rate base, we reviewed the Company's water and wastewater utility plant in service records, including plant addition costs, unitization, in-service, and completion dates, and other supporting documentation, as far back as 2015. The supporting documentation varies with the type, duration, cost, and regulations associated with the project. The Company is required to maintain detailed transaction listings, or construction work in progress (CWIP) ledgers, which the Public Staff thoroughly reviews for a large sample of projects. In addition, the Public Staff obtains additional supporting documentation such as accounts payable invoices, contractor estimates of progress, work orders, internal engineering project closure forms, and North Carolina Department of Environmental Quality (DEQ) permits and approvals.

The Company's novel request for aggregated deferral accounting treatment has required the Public Staff to expand its investigation

[2] Id. at 36.

[3] Id. at 39.

beyond the typical period of time, which is from the last rate case through the update period – in this case from July 1, 2018, through the update period of March 31, 2020, and thereafter as appropriate to evaluate post post-test year projects.

Q. IS THERE ANY TERMINOLOGY THAT REQUIRES INTRODUCTION OR CLARIFICATION?

A. Yes. First, it is important to define the term "plant additions," which are capital assets, typically including additions, improvements, and replacements, booked to plant accounts with associate depreciation rates. A single project can consist of more than one addition to the general ledger plant accounts.

Second, the Company uses certain terms and definitions specific to its purposes. In an email to Public Staff personnel, Company witness Edward Thill provided a narrative explanation of the information related to dates used in the Company's asset management system (Power Plant) as follows:[4]

> Assets are generally considered plant in service when "used and useful" or, in other terminology, complete and in service. To that end, it is important to note that there are three separate date fields in Aqua's Power Plant asset subledger.
>
> Completion date – This field is a general indication that an asset is "useful" but is strictly informational as no system action derives from this data. Aqua personnel may use this field as a tickler to indicate

[4] Email from Company witness Edward Thill dated April 24, 2020.

> substantial completion and to alert accounting personnel to monitor final bill processing and subsequent unitization.
>
> In-service date – This field indicates the date the asset is placed in-service and being "used" for the benefit of customers. This date drives the retirement calendar (except for "blankets", to be discussed later) and terminates any AFUDC calculation.
>
> Posting or Unitization date – This is when the asset is removed from CWIP and added to UPIS, and begins depreciating. Unitization occurs after determination that an asset is both complete (useful) and in-service (used). In that Aqua has been directed by the Public Staff that projects should close only a single time, unitization is also subject to timing of vendor invoicing – that is, unitization occurs only after all vendor invoices have been processed which may be months after either (or both of) the completion or in-service dates.

In a follow-up email dated May 4, 2020, Company witness Thill summarized the date fields in the Power Plant asset subledger and provided additional clarification as follows:

> Completion date – drives nothing, just informational
>
> In-service date – drives auto-retirements (where applicable) and stops AFUDC
>
> Unitization – starts depreciation; must be complete and in-service
>
> . . . .
>
> Once transactions are recorded in the financial accounting records and accounting periods are closed, the Company is unable to change the underlying data. *For material transactions that need adjustment, entries can be made to modify the accounting on a go-forward basis but the historical records cannot be changed.* To the extent that the Public Staff and the Company

> identify transaction errors that fall below the Company's financial materiality threshold, but exceed the Public Staff's materiality threshold, it may be appropriate for the Staff to recommend adjustments in the ratemaking process.

(Emphasis added).

Ideally, the in service date will occur in the same month as the unitization date. In the W-218, Sub 274, rate case, the Public Staff recommended and the Commission ordered a review of and changes to Aqua's accounting procedures.[5] Specifically, the Commission ordered as follows:

> 8. That Aqua NC shall *adopt a consistent, accurate, and complete accounting system for its detailed plant records* that maintains its plant records in compliance with the Uniform System of Accounts. Furthermore, such accounting system should keep plant additions on a system-specific basis, as required by Order issued on January 29, 2008, in Docket No. W-218, Sub 251. Such accounting system shall be in place prior to the Company filing another general rate case for any of its operations in North Carolina. If Aqua NC files a general rate case for any of its operations based upon a test year in which the plant records have not been brought into compliance, any additional rate case costs due to the inadequate records shall not be borne by the ratepayers.
>
> 12. That Aqua shall *review its procedures for determining when projects are completed and should be closed and file its recommended changes to its procedures* within 90 days of the issuance date of this Order.

(Emphasis added).

[5] Order Granting Partial Rate Increase and Requiring Customer Notice, *Application by Application by Aqua North Carolina, Inc., Fairways Utilities, Inc., Glynnwood Water Systems, Inc., Mountain Point Utilities, Inc., Rayco Utilities, Inc., Willowbrook Utility Company, Inc., Heater Utilities, Inc., and Mobile Hill Estates, for Authority to Increase Rates,* No. W-218, Sub 274 and Docket No. W-224, Sub 15 (N.C.U.C. April 8, 2009).

According to the Quarterly Status Reports filed in Docket No. W-218, Sub 274, in order to comply with Ordering Paragraph No. 8, the Company converted to the Power Plant asset management system to record and maintain plant records. In order to comply with Ordering Paragraph No. 12, the Company responded as follows:[6]

> On a monthly basis the Accounting Department sends the Regional Managers a CWIP report for review, requesting that the Managers notify Accounting of projects that are complete and in service. Accounting allows 30 to 60 days for any trailing costs to be charged to these in-service activity numbers before closing the asset. Aqua has discussed the status of the project with the Public Staff Accounting Division, which is aware of the steps being taken. Aqua filed recommended changes to procedures in its June 30, 2009, filing.

This approach would be acceptable to the Public Staff if utilized consistently and for an overwhelming majority of its construction work in progress (CWIP) projects. However, based on its review, the Public Staff has found that this has not been the case. There are numerous projects that have been unitized by the Company in the same month, and sometimes even the same day, as being placed in service, while others are unitized months, or even years, after being placed in service. The evidence and discussion of this issue is presented in further detail later in our testimony.

[6] Second Status Report filed in Docket No. W-218, Sub 274, on September 29, 2009.

In response to a Public Staff data request, the Company provided an explanation of how the Company differentiates capital expenditures between WSIC/SSIC, Blanket/Routine Replacements, and Non-Routine, Non-WSIC/SSIC, as follows:[7]

> WSIC/SSIC eligible projects are generally well-defined and are separately approved by the Commission for recovery between rate cases. These projects are still subject to rate lag, but to a lesser degree than non-WSIC/SSIC projects. These projects were separately delineated in the discussion of deferred accounting because to the extent any interim recovery was approved under a WSIC/SSIC filing, that recovery would appropriately be deducted from a deferred accounting request. The distinction between these assets and the Other Non-WSIC/SSIC projects is only for purposes of estimating the revenue recovery to be used in the computation.
>
> Blankets/Routine Replacements consist of non-project work, often of an emergency nature, that is immediately placed into service. These expenditures are typically replacing other assets already in the Company's UPIS inventory, and retirements are simultaneously recorded (using the Handy Whitman Index). In that these assets are primarily in replacement of assets already in the asset base and therefore being recovered in current rates, recovery in deferred accounting would be duplicative so these assets have been excluded from the deferred accounting request.
>
> Other Non-WSIC/SSIC projects are simply the residual of the Company's capital spend after deducting assets in the WSIC/SSIC and Blanket categories. . .

[7] Aqua response to Public Staff Data Request No. 102-9 in Docket No. W-218, Sub 526.

The discussion above has established the setting and we will now describe in detail our review of utility plant in service and our recommended adjustments.

Q. DID YOU MAKE ANY OBSERVATIONS THAT SHOULD BE BROUGHT TO THE ATTENTION OF THE COMMISSION DURING YOUR REVIEW OF UPIS AND THE DEFERRAL REQUEST?

A. Yes. Unfortunately, the Public Staff failed to identify and make appropriate adjustments for a number of discrepancies between the in service date and the Company's unitization date for projects included in rate base during the W-218, Sub 497, rate case. The Company previously asserted that the accounting process to book capital projects typically takes 30 to 60 days, sometimes longer, as described above. Accepting this explanation, the Public Staff did not initially recommend an adjustment. As shown in **Henry and Junis Exhibit 1**, the Company unitized the projects' costs in 2018, months after the asset was placed in service in 2017, which is an unreasonable delay. The list of plant additions in the total amount of nearly $4.7 million have accumulated one less year of depreciation due to the delay in unitization. The decreased amount of accumulated depreciation has the effect of increasing rate base that earns a return for the Company. The Public Staff requests that the Commission weigh these facts appropriately as part of its decision-making in the present proceeding.

Q. DID YOU MAKE ANY OTHER OBSERVATIONS?

A. Yes. The accounting records clearly show that the Company can and sometimes does unitize plant additions in the same month as an asset is placed in service, rather than a couple of months later as indicated by the Company in the past. Despite this, as recently as June 2019 the Company's explanation for why assets were placed in service during Q4 but were not unitized by the Company until Q1 of the following year, was generally that the accounting process to book capital projects typically takes 30 to 60 days. The same explanation was given for why assets were placed in service in Q2 but not unitized by the Company until Q3.[8] These unitizations often occur at a high rate in Q1 and Q3 of each year – the second halves of the WSIC/SSIC semiannual adjustment periods – and/or the post-test year period of rate cases. The resulting reduction of accumulated depreciation and additional return on the increased balance of rate base produces a financial windfall for the Company. In addition, the Company benefits financially from unitizing plant costs as close to rate recovery as possible.

[8] Company witness Dean Gearhart sent an email to Public Staff (including Windley Henry, Charles Junis, and Bill Grantmyre) and Bob Bennink on June 26, 2019, with the First and Second Status Reports in Response to Commission Order in Docket No. W-218, Sub 274, which stated, "These timing tweaks in our current WSIC/SSIC filing are really a product of our internal procedure that we have been adhering to for 10 years now. This is the first time these adjustments have been suggested by the Public Staff in one of our WSIC/SSIC filings."

On November 1, 2019, Aqua filed an Application for Approval of Water and Sewer System Improvement Charge Rate Adjustments Pursuant to G.S. 62-133.12 in Docket No. W-218, Sub 497A. According to Paragraph 17 of the Application, the total investment spent on WSIC/SSIC eligible projects was $6,594,351 during Q2 and Q3 of 2019. As shown in **Henry and Junis Exhibit 2**, the WSIC/SSIC Application included over $4,970,183 (or 75% of the total) for 60 plant additions unitized in September 2019. Of those 60 plant additions, 44 (or 73%) plant additions totaling $3,661,937 in cost were placed in service and unitized in September 2019. In October 2019, 39 plant adjustments were unitized in the total amount of $(16,354) associated with those 60 plant additions, as shown in **Henry and Junis Exhibit 3**. We have verified that the project costs in the WSIC/SSIC Application are the same as the totals of the September 2019 unitizations. The Company did not provide this credit to plant as an update to the WSIC/SSIC Application and therefore, since January 1, 2020, the Company has been recovering the incremental depreciation expense and capital costs associated with the $16,354 through the mechanism surcharges. The Public Staff will recommend the excess monies recovered between January 1, 2020, and the date of the rate case order in the present docket be refunded as part of the annual review and EMF as of the end of the year. The foregoing analysis shows that the Company is not

consistently following its own accounting procedures to "allow[] 30 to 60 days for any trailing costs to be charged to these in-service activity numbers before closing the asset."

Q. PLEASE DESCRIBE THE ADJUSTMENTS YOU RECOMMEND TO UPIS IN THE PRESENT RATE CASE.

A. Based on the results of the Public Staff's investigation, we recommend numerous in service date and cost adjustments to UPIS and accumulated depreciation. As part of the Public Staff's review of Aqua's Application for Approval of Water and Sewer System Improvement Charge Rate Adjustments Pursuant to G.S. 62-133.12 filed on May 1, 2019, in Docket No. W-218, Sub 497A, the Public Staff removed two ANC Water filtration projects totaling $648,434 that were unitized by the Company in March 2019 but, according to the Engineer's Certification statements stamped by a professional engineer and DEQ's Final Approvals, were not completed until April 24, 2019. As a result of the completion date, the projects were not in service and used and useful during the applicable WSIC/SSIC period of Q4 2018 and Q1 2019. The Public Staff also identified 13 projects totaling nearly $1.7 million that were unitized by Aqua in Q1 2019 despite being placed in service in Q3 2018 or Q4 2018. The table below summarizes these projects with regard to the WSIC/SSIC Application.

1 Table 1

Rate Entity	In Service in Prior Year	Total Projects	Percentage of Projects
ANC Water	4	16	25%
ANC Sewer	7	16	44%
Brookwood	2	3	67%
Fairways W	-	2	0%
Fairways S	-	-	-
Total	13	37	35%

2 As shown in **Henry and Junis Exhibit 4**, the Public Staff made
3 adjustments as part of WSIC/SSIC procedure to account for the in
4 service date occurring months before the Company finally unitized
5 each of the projects. The in service date adjustment amounted to
6 $50,202 of additional accumulated depreciation, or 39% more than
7 the Company's unitizations. The Company did not include these
8 adjustments to accumulated depreciation as part of its rate case
9 application. Therefore, we recommend the Commission approve
10 these regulatory accounting adjustments, as incorporated in the
11 schedules of Public Staff witness Henry, and require Aqua to include
12 them in all future rate cases until the assets are retired.

13 When incorporating these plant additions into rate base during the
14 rate case, the timing of the in service date between Q1 2019 and Q4
15 2018 is the difference of nine months of additional accumulated
16 depreciation on the Company's books.

17 **Q. DO YOU RECOMMEND ANY ADDITIONAL ADJUSTMENTS TO**
18 **UPIS?**

A. Yes. In the post-test year period of October 2019 through March 2020, the Company unitized $20,634,060 of capital expenditures categorized as WSIC/SSIC, Blank/Routine Replacements, and Non-Routine/Non-WSIC/SSIC. We reviewed the plant records and other supporting documentation. As shown in **Henry and Junis Exhibit 5**, we adjusted the unitization date for 44 plant additions in the total amount of $1,381,871. For the majority of the plant additions listed, the Public Staff corrected the date to be the in service date inputted by the Company and/or a reasonable amount of time after the trailing costs had been sufficiently captured. End of year closings were considered to require the same level of expediency as employed by the Company for its unitizations in September 2019 and March 2020, a majority of which were same month closings. All of the adjustments result in the assets accumulating additional depreciation either in the pending rate case or in future rate cases.

In addition, we made four project specific reductions to plant for excessive accrual of allowance for funds used during construction (AFUDC). The most recent accounts payable transactions were in February 2019 for the “Field Tablets – 2019”, April 2018 for the “Bridgepoint #8 Instl AquaGuard”, September 2018 for the “RC New Generator Beachwood 02-196”, and July 2017 for the “Instl AquaGard Coachmans Trl #3.”

Q. PLEASE BRIEFLY SUMMARIZE THE PUBLIC STAFF'S ADJUSTMENTS TO UPIS.

A. The Public Staff recommends the Commission approve the following adjustments to utility plant in service as shown in the schedules of Public Staff witness Henry:

1. Corrections to in service dates of WSIC/SSIC projects that were not appropriately unitized by the Company in Q1 2019;
2. Corrections to in service dates of plant additions that were not appropriately unitized by the Company in Q1 2020; and
3. Reductions to plant addition costs.

On May 22, 2020, the Company provided additional documentation related to the Colvard Farms WWTP Sprayfield Amendment project. The project was unitized in March 2020 in the total amount of $878,177, including costs dating back to March 2016 and $106,482 of AFUDC. The Public Staff is still in the process of reviewing the documentation, and does not recommend an adjustment at this time.

The Company also has a number of projects completed in April 2020 or anticipated to be completed by the end of May 2020. The Public Staff will address its review of all of these post post-test year plant additions, which occurred after the agreed upon update period through March 2020, in supplemental testimony.

Q. DO YOU HAVE ANY OTHER RECOMMENDATIONS REGARDING UPIS?

A. Yes. The inconsistent UPIS practices described above are concerning to the Public Staff as they can result in financial windfalls to the detriment of ratepayers. To address this issue, the Public Staff recommends that the Commission order the Company to review its procedures for determining when projects are completed, in service, and booked and file the Company's findings of its internal practices and any plans to change the procedures within 90 days of the Commission's final order in this proceeding.

In addition, the adjustments for excess capacity are discussed in the testimony of witness Charles M. Junis and incorporated in the schedules of witness Windley Henry.

DEFERRAL ACCOUNTING TREATMENT

Q. HAS THE COMMISSION APPROVED DEFERRAL ACCOUNTING TREATMENT BEFORE?

A. Yes. However, it is a special ratemaking treatment that the Commission has allowed sparingly and only based upon specific criteria.

In its Order Approving Deferral Accounting with Conditions issued on March 31, 2009, in Docket No. E-7, Sub 874 (DEC Sub 874 Order), the Commission stated on page 24:

> [T]he Commission has historically treated deferral accounting as a tool to be allowed only as an exception to the general rule, and its use has been allowed sparingly. That is due, in part, to the fact that deferral accounting, typically, provides for the future recovery of costs for utility services provided to ratepayers in the past; and . . . the longer the deferral period, the greater the likelihood that the ratepayers who are ultimately required to pay rates including the deferred charges, which are related to resources consumed by the utility in providing services in earlier periods, may not be the same ratepayers who received the services. The Commission has also been reluctant to allow deferral accounting because it, typically, equates to single-issue ratemaking for the period of deferral, contrary to the well-established, general ratemaking principle that all items of revenue and costs germane to the ratemaking and cost-recovery process should be examined in their totality in determining the appropriateness of the utility's existing rates and charges.

In its Order Approving in Part and Denying in Part Request for Deferral Accounting issued on April 3, 2013, in Docket No. E-7, Sub 1029, the Commission stated as follows on pages 12-13:

> In determining whether to allow deferral requests, the Commission has consistently and appropriately based its decision on whether, absent deferral, the costs in question would have a material impact on the company's financial condition, and in particular, the company's achieved level of earnings.

As the examples above illustrate, the Commission's receptivity to deferral requests is not unlimited or without regard for traditional ratemaking principles. Rather, the Commission has required "a clear and convincing showing that the costs in question were of an unusual

and/or extraordinary nature and that, absent deferral, would have a material impact on the Company's financial condition."[9]

In determining whether to grant a utility's deferral request, the Commission has based its decision largely on the impact the costs at issue would have on currently achieved earnings of the utility. In the DEC Sub 874 Order, the Commission described the test it applies in making this determination as follows:

> The impact on earnings, typically, has been measured and assessed in terms of ROE, considered in conjunction with (1) the return on equity (ROE) realized and (2) the company's currently authorized ROE. Also . . . current economic conditions; the Company's need for new investment capital; and the impact that the Commission decision will have on future availability and cost of such capital are also relevant to the appropriate resolution of matters of this nature. Additionally, whether the company has requested or is contemplating requesting a general rate increase and the timing, or proposed timing, of the filing of such a request is also pertinent.

DEC Sub 874 Order at 26.

Most recently in the water and wastewater industry, in Docket No. W-354, Subs 364 and 365, Carolina Water Service, Inc. of North Carolina (CWSNC) requested deferral accounting treatment for post-in-service depreciation expense and financing costs (carrying costs) related to the Connestee Falls wastewater treatment plant (WWTP) project in Buncombe County, the Nags Head WWTP project in Dare

[9] DEC Sub 874 Order at 25.

County, the Fairfield Mountain AMR meter installation project in Transylvania County, and the Connestee Falls AMR meter installation project, also in Buncombe County. [10] CWSNC and the Public Staff stipulated to the Company's deferral of incremental post-in-service depreciation expense and financing costs of the two WWTP projects and to the amount of the costs to be included in the rate case. Finding of Fact No. 36 of the Commission's Order Granting Partial Rate Increase and Requiring Customer Notice states[11]:

> 36. The project costs for each of the two WWTP projects, considered both collectively and singularly, are unusual or extraordinary in that they represent major capital investments in the Company's infrastructure; they are non-routine projects which are of considerable complexity and major significance; and they are necessary to CWSNC's provision of safe, adequate, reliable, and affordable utility service in this state. The WWTP costs are of a magnitude that would have an adverse material impact on the Company's financial condition if they are not afforded deferral accounting treatment.

Ordering Paragraph No. 6 states:

> 6. That CWSNC's Petition to defer post-in-service costs associated with the two WWTPs is approved; provided, however, that the Company shall be, and hereby is, required to cease deferring said costs concurrent with the date the Company is authorized to begin reflecting the costs associated with the WWTPs in rates.

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[10] Docket Nos. W-354, Sub 364 and Sub 365.

[11] Order Granting Partial Rate Increase and Requiring Customer Notice issued on March 31, 2020, in Docket Nos. W-354, Sub 363, Sub 364, and Sub 365.

CWSNC and the Public Staff litigated before the Commission the Company's request for deferral accounting treatment of two AMR installation projects. The Public Staff contended that CWSNC failed to make a clear, complete, and convincing showing, in view of the entire record, that the costs of the AMR meters were of an unusual or extraordinary nature and, absent deferral, would have a material impact on the Company's financial condition. The Commission agreed with the Public Staff, stating in Finding of Fact No. 41:

> 41. The two AMR meter installation projects in the Fairfield Mountain and Connestee Falls service areas are not unusual or extraordinary, and thus the incremental post-in-service depreciation expense and carrying costs related to the two projects are not appropriate for deferral accounting treatment.

Based on its findings and conclusions, the Commission denied CWSNC's Petition to defer post-in-service costs related to the Fairfield Mountain and Connestee Falls service areas.

Q. PLEASE SUMMARIZE THE DEFERRAL ACCOUNTING TREATMENT THAT AQUA IS REQUESTING.

A. The Company is requesting authorization to defer carrying costs and depreciation on "246 projects identified for completion during the six months comprising the presumed post-test year period at a cost of $13.8 million, which is an average per project cost of

approximately $56,000."[12] The Company noted that it had "excluded from this deferral request approximately $7.0 million in anticipated post-test year capital expenditures that the Company has deemed to be routine replacements."[13] In response to a Public Staff data request, the Company identified 487 projects completed during the post-test year period at a cost of $15.3 million, which is an average per project cost of $31,488.[14] The Company proposes "to defer depreciation and accrue carrying costs for qualifying capital expenditures for the time beginning with the individual in-service dates through implementation of new base rates," and the "deferred balance would be recorded as a regulatory asset, included in rate base and amortized over five (5) years in this rate case."[15]

On May 21, 2020, the Company filed Thill Revised Exhibit 5 which replaces estimates with actual post-test year plant addition costs and summarizes the calculations of the requested deferral amount. Unlike the original, the revised exhibit does not include Table 4, which is the calculation of the asserted revenue deficiency. As of noon on the day of the Public Staff's filing deadline, the native Excel

[12] Page 31, lines 14-17, Direct Testimony of Company witness Edward Thill filed in Docket No. W-218, Sub 526, on December 31, 2019.

[13] Id. at 34, lines 5-8.

[14] Aqua responses to Public Staff Data Request Nos. 41 and 54 in Docket No. W-218, Sub 526.

[15] Page 35, Direct Testimony of Company witness Edward Thill filed in Docket No. W-218, Sub 526, on December 31, 2019.

file with working formulas and supporting data had not been provided to the Public Staff. This file is material to the Public Staff's review of the Company's revised requested deferral amount.

The Company also "requests prospective authorization to defer depreciation and carrying costs on post rate case capital expenditures, other than routine replacements, until included in rates in the Company's next rate case."[16]

Q. WHAT SAFEGUARDS TO PROTECT CUSTOMERS DOES THE COMPANY CONTEND ARE INCLUDED IN ITS PROPOSAL FOR DEFERRAL ACCOUNTING?

A. On pages 32-34, of his direct testimony, Company witness Thill asserts the following customer safeguards:

1. The projects will be in-service prior to the Commission's rate order and "will be fully available for review and validation by the Public Staff prior to inclusion in rates."
2. There is no concern about "single-issue ratemaking" due to the request being part of a general rate case.
3. Ratepayers are not disadvantaged by "full and timely recovery by Aqua of its legitimate, audited, reasonable and prudently-incurred deferred costs in the context of this rate case."

[16] Id. at 36, lines 17-20.

4. "Aqua has excluded from this deferral request approximately $7.0 million in anticipated post-test year capital expenditures that the Company has deemed to be routine replacements."

Q. DO YOU AGREE THAT THESE SAFEGUARDS EXIST?

A. Not entirely. We agree that the request has been appropriately made as part of, or in anticipation of, a general rate case and that the Company has incrementally reduced the total amount of costs for which deferral is requested by excluding certain projects. However, we take issue with witness Thill's assertion that the projects that are included in the Company's deferral request will be "fully available for review and validation by the Public Staff prior to inclusion in rates." As detailed in its Motion to Compel filed on April 22, 2020, the Public Staff's investigation of the Company's deferral request was impaired and delayed by over a month because it did not timely receive complete responses to two of its data requests.

In addition, because the Company has implemented a very narrow interpretation of what projects constitute routine replacements, the Public Staff does not agree that the Company's exclusion from its deferral request of some projects on this basis serves as a substantial safeguard. The categorization of projects/costs is further discussed later in our testimony.

Q. DO AQUA'S POST-TEST YEAR COSTS INDIVIDUALLY MEET THE REQUIREMENTS HISTORICALLY IMPOSED BY THE COMMISSION THAT THE COSTS IN QUESTION ARE OF AN "UNUSUAL AND/OR EXTRAORDINARY NATURE" AND "WOULD HAVE A MATERIAL IMPACT ON THE COMPANY'S FINANCIAL CONDITION"?

A. No. In fact, the Company has admitted that, on an individual basis, none of the costs included in the Company's request for deferral accounting treatment are "unusual" or "extraordinary." Furthermore, the Company has admitted that, on an individual basis, none of the costs included in the Company's request for deferral accounting treatment are of a magnitude that would result in a "material" impact on the Company's financial position. Aqua's admissions were provided in response to Public Staff Data Request No. 84, which is **Henry and Junis Exhibit 6**.

Q. GIVEN THE COMPANY'S ADMISSION, WHY DOES THE COMPANY CONTEND ITS DEFERRAL REQUEST SHOULD BE APPROVED?

A. The Company's request is premised on the novel argument that the projects and related costs for which it seeks deferral accounting treatment should be considered not on an individual basis, but in the aggregate. Comparing the Company's facilities to those of the state's electric and gas utilities, Aqua witness Thill states, "The sheer

magnitude of the independent facilities that make up the Company's operational footprint necessitates that the Company's capital spending be divided into hundreds of smaller projects rather than a few large ones."[17] We believe this contention is false and based on an overly simplified comparison. For example, while the electric industry has a limited number of electric generating plants, those plant sites are a complex system of smaller capital assets serving different purposes, such as steam generation, fuel storage, environmental controls, waste management, and safety, in support of providing sufficient and reliable service. In addition, the Company's water distribution and wastewater collection systems consisting of pipes, valves, and pump stations are equivalent to transmission and distribution power lines, transformers, and substations.

Q. PLEASE DESCRIBE THE PUBLIC STAFF'S APPROACH IN EVALUATING THE COMPANY'S REQUEST FOR SPECIAL RATEMAKING TREATMENT OF ITS POST-TEST YEAR CAPITAL PROJECT COSTS IN THE FORM OF AN ACCOUNTING DEFERRAL IN THIS CASE.

A. Consistent with the direction provided by the Commission in its prior decisions on requests for deferral accounting treatment, the Public

[17] Id. at 31, lines 10-13.

Staff assessed the Company's deferral request in the present case by examining whether the Company made a clear and convincing showing that the costs in question are of an unusual and/or extraordinary nature and would have a material impact on the Company's financial condition absent deferral. As stated above, the Company has admitted that its deferral request does not meet this test when the costs in question are considered on an individual basis. Therefore, the Public Staff has evaluated the Company's deferral request based on its aggregated capital expenditures in response to the novel argument advanced by the Company.

First, the engineer reviewed the aggregated projects and capital costs characterized by the Company as being "non-routine" to determine whether they were "unusual" or "extraordinary" in nature and outside the scope of Aqua's normal course of business. Second, the accountant assessed whether or not the magnitude and "material impact" of the aggregated costs justified deferral, including the impact on earnings, current economic conditions, the Company's need for new investment capital, and the impact that the Commission decision will have on future availability and cost of such capital.

The Public Staff's evaluation of the Company's deferral request based on the aggregate of the projects and costs at issue should not be interpreted as endorsement of the Company's novel argument, but instead as a thorough investigation of the Company's proposal

to defer approximately 72%, of its post-test year capital costs[18] as well as similar capital expenditures between the conclusion of this proceeding and the next general rate case. The profile of plant addition costs is further illustrated by the table below.[19]

Table 2

	Blanket/Routine Replacements	**Non-routine, Non-WSIC/SSIC**	**WSIC/SSIC**	**Grand Total**
Project Count (>0)	**3,153**	**377**	**67**	**3,597**
Over $100k	1	9	20	29
$50k-$100k	3	19	11	33
$10k-$50k	83	138	27	248
$1k-10K	1,101	182	9	1,292
Under $1k	1,965	29	0	1,994
Deferral Requested	No	Yes	Yes	
Total Additions Oct19-Mar20	**$ 5.7 M**	**$ 7.6 M**	**$ 7.3 M**	**$ 20.6 M**

Q. PLEASE DESCRIBE THE COMPANY'S RECENT CAPITAL INVESTMENT HISTORY IN NORTH CAROLINA.

A. The Company has made the following statements regarding its capital spending in testimony:

[18] Thill Direct Exhibit 5 categorizes post-test year additions into (1) WSIC/SSIC eligible projects, (2) Non-WSIC/SSIC projects, and (3) Routine Replacements. The Company seeks deferral for categories (1) WSIC/SSIC eligible projects and (2) Non-WSIC/SSIC projects. Therefore, for projects unitized during the period of October 2019 – March 2020, the costs of (1) + (2) / [(1) + (2) + (3)] = ~72%.

[19] Aqua response to Public Staff Data Request No. 82 in Docket No. W-218, Sub 526.

The direct Testimony of Company witness Shannon Becker states on pages 9-10:

- "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."

Company witness Edward Thill states on pages 33 and 36, respectively, of his direct testimony:

- "[A]n era of sharply increased spending in the jurisdiction (whether on a few large projects or a combination of many smaller ones)."
- "[T]he Company expects to continue to invest capital at significantly heightened levels."

Henry and Junis Exhibit 7 shows, however, that the Company's capital spending was consistently $12-14 million per year from 2011 through 2014, that it incrementally increased in 2015 and again in 2016, and that beginning in 2017 it reached a level of $36-40 million per year, which the Company plans to maintain at least through 2021. The graph presented in the Revised Becker Direct Exhibit 3 (filed on May 21, 2020) does not portray plant additions and costs for ratemaking purposes but rather, actual capital spend per the capital budget, which we will discuss further below.

Q. WHAT WAS THE SIGNIFICANCE OF HOUSE BILL 710 DURING THIS TIME PERIOD?

A. On June 12, 2013, North Carolina Session Law 2013-106 (House Bill 710) was signed into law, having previously been ratified by the North Carolina General Assembly. Titled An Act to Permit Water Utilities to Adjust Rates for Changes in Costs Based on Third-Party Rates and to Authorize the Utilities Commission to Approve Rate Adjustment Mechanism for Water and Sewer Utilities to Recover Costs for Water and Sewer System Improvements, the law enacted N.C. Gen. Stat. § 62-133.12.[20] On May 2, 2014, the Commission issued its Order Granting Partial Rate Increase, Approving Rate Adjustment Mechanism, and Requiring Customer Notice, in Docket No. W-218, Sub 363 (W-218, Sub 363, Order), which, among other things, approved the rate adjustment mechanism as being in the public interest. The Commission's Evidence and Conclusions for Findings of Fact Nos. 39 – 49 (WSIC/SSIC Mechanism) contains a number of noteworthy and applicable sections as follows:

> Moreover, witness Roberts maintained that *the WSIC/SSIC mechanism incents Aqua for earlier and more robust investment in infrastructure for system and water quality improvements*. Such mechanism would allow the Company to allocate its funds to more investment in North Carolina based on an opportunity to recover some of that investment on a more timely basis. p 70

[20] On June 6, 2014, the Commission issued its Order Adopting Rules to Implement G.S. 62-133.12 that made effective Commission Rules R7-39 and R10-26.

> Further, witness Kopas testified that when and if eligible projects are constructed, placed into service, and proposed for inclusion in a WSIC or SSIC, those projects are, at that time, *subject to review by both the Public Staff and the Commission as to the reasonableness of their costs and eligibility*. He commented that under the proposed rules in the WSIC/SSIC Rulemaking such review would be an integral step necessary to support a Commission order approving such cost recovery. In addition, he submitted that *WSIC and SSIC projects would be subject to the full panoply of Commission review in the next general rate case proceeding* -- just as with every other project that a utility puts in service and for which it requests cost recovery. He maintained that the *Commission retains the ability, as part of its broad overall regulatory authority, to make disallowances, order refunds with interest, and/or modify or eliminate the mechanism entirely if it concludes the mechanism is no longer in the public interest*. p 72

> The Commission believes that the primary purpose of G.S. 62-133.12 was to *encourage and accelerate investment* in needed water and sewer infrastructure by means of a mechanism which will alleviate the effects of regulatory lag by allowing for earlier recovery of some portion, not to exceed 5% of approved service revenues, of the incremental depreciation and capital costs associated with eligible investments made between general rate case proceedings. p 76

> The Commission also does not agree with the Attorney General's assertion that system improvements recovered through the WSIC/SSIC mechanism will have reduced review and scrutiny. . . .Witness Fernald testified that due to the detailed examination which would occur with respect to the *specific plant additions reviewed between rate case proceedings* in regard to the WSIC/SSIC mechanism, those same plant additions would likely not require as much review in a general rate case proceeding, but would nonetheless be *subject to further review*. pp 79-80

Based on the Commission's Order and the record, it is reasonable to conclude the that (1) the Company was managing the timing of

and/or was deferring capital projects to sync with rate cases, (2) the Company was expecting to increase capital spending and would be incentivized to do so by the WSIC/SSIC mechanism, (3) the WSIC/SSIC mechanism would alleviate the effects of regulatory lag, (4) the Public Staff and Commission would have the opportunity to review WSIC/SSIC projects within the WSIC/SSIC procedure and then again in the next general rate case,[21] and (5) customer protections were a foundational pillar of the WSIC/SSIC being in the public interest.[22]

Q. HAS THE WSIC/SSIC MECHANISM ADDRESSED THE COMPANY'S CONCERNS REGARDING ADEQUATE AND TIMELY COST RECOVERY?

A. According to the Company, it has not. On pages 6, 14, and 15, respectively, of his direct testimony, Company witness Becker states, the Company "requires adequate and timely cost recovery," "The WSIC/SSIC tool. . . . is not enough," and "restrictions on eligible

[21] The Public Staff filed a brief and presented oral arguments before the North Carolina Supreme Court in Docket No. 347A14 defending the WSIC/SSIC Mechanism. On page 13 of its Brief of Intervenor-Appellee, the Public Staff stated, "As discussed above, the utility's investment in eligible water and sewer system improvements is subject to Commission review for reasonableness and prudence not only when the utility seeks approval of WSIC/SSIC surcharges, but also in general rate case proceedings. (R pp 513-15) Therefore, the review and scrutiny of the Company's system improvement investments will be at least doubled, rather than reduced."

[22] "In summary, N.C. Gen. Stat. § 62-133.12, the Commission's Rate Case Order, the Commission approved WSIC/SSIC procedures in Appendices C and D of the Rate Case Order, and Commission Rules R7-39 and R10-26 contain a multitude of customer protections which provide substantial support for the Commission's public interest finding." Id. at 15.

projects allowed to be recovered within the current WSIC/SSIC program and its 5% revenue cap limit the mechanism's effectiveness."

In response to a Public Staff data request asking for a definition and description of the terms "adequate" and "timely" as used in the context of cost recovery, the Company stated, "The lag between investment in and recovery of and on all of Aqua's capital investment is the impetus for the Company's claim that recovery is inadequate and untimely, and thus deleterious to Aqua's ability to earn its authorized return."[23]

In its WSIC/SSIC Application,[24] the Company proposed updated, cumulative WSIC and SSIC surcharge percentages as follows:

Table 3

Rate Entity	Surcharge Percentage
Aqua Water	3.38%
Brookwood/LaGrange Water	4.90%
Fairways and Beau Rivage Water	0.01%
Aqua Sewer	1.58%
Fairways and Beau Rivage Sewer	0.19%

[23] Aqua response to Public Staff Data Request No. 99-3 in Docket No. W-218, Sub 526.

[24] Aqua filed its Application for Approval of Water and Sewer System Improvement Charge Rate Adjustments Pursuant to N.C. Gen. Stat. § 62-133.12 on April 30, 2020, in Docket No. W-218, Sub 497A. The Company subsequently withdrew its WSIC/SSIC Application on May 8, 2020.

Based on the table above and paragraphs 23 and 28 of the WSIC/SSIC Application, the Company has not reached the 5% cap of the total annual service revenues.

Q. DO YOU HAVE ANY CONCERNS WITH HOW THE COMPANY HAS REPRESENTED REGULATORY LAG?

A. Yes. In response to a Public Staff data request, the Company provided a revision to the passage on page 14, lines 16-19, of Company witness Becker's testimony that would read as follows:[25]

> 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 seventeen months that it would take to begin recovering the twenty-one months of non-WSIC/SSIC project activity included in this filing, using a historical test year.

In response to a subpart of the same Public Staff data request asking what amount of rate lag Company witness Becker contends is acceptable, the Company stated, "As noted in Aqua's response to [PS DR 99] Q3 above, lag erodes the utility's ability to earn an authorized ROE and minimizing such lag as much as feasibly possible using the legislative and Commission tools available is deemed acceptable." Similarly, on page 34 of his direct testimony, Company witness Thill states, "While the WSIC and SSIC

[25] Aqua response to Public Staff Data Request No. 99-5 in Docket No. W-218, Sub 526.

mechanisms do provide a meaningful level of rate lag relief between rate cases, the limitations of the cap and on eligible items, combined with the lag that exists even within those mechanisms, still leave a material hole in the Company's ability to earn its authorized rate of return." The abundance of Company testimony and other statements regarding capital spending, lag in rate recovery, the WSIC/SSIC mechanism deficiencies, and the extensive deferral accounting treatment requests lead the Public Staff to question whether there is a ratemaking procedure that will completely satisfy the Company.

Regarding Company witness Becker's calculations of rate lag, the Public Staff does not believe they accurately represent the actual time period between unitization and recovery in rates because they incorrectly assume plant additions and costs were evenly distributed over the time period. Based on the WSIC/SSIC eligible plant additions, including costs and unitization dates, as categorized and provided by the Company,[26] we have calculated a weighted average lag of 3.48 months between the unitization month of eligible project costs and anticipated recovery through the WSIC/SSIC mechanism beginning on July 1, 2020. 3.48 months represents approximately

[26] Aqua response to Public Staff Data Request No. 82 in Docket No. W-218, Sub 526. This includes 105 plant additions totaling $7,334,820 unitized in Q4 2019 and Q1 2020 (October 2019 through March 2020). This is the same amount sought in the Company's WSIC/SSIC Application.

42% less lag time than the 6 months asserted by Company witness Becker.

Furthermore, by filtering the same data set for plant addition costs categorized as "Non-routine, Non-WSIC/SSIC" by the Company,[27] we have calculated a weighted average lag of 11.25 months, which represents approximately 34% less lag time than the approximately 17 months asserted by Company witness Becker, assuming rates would go into effect October 1, 2020. This is to be expected considering the Company filed a rate case just over one year after the conclusion of its last rate case and this calculation does not include any post post-test year plant additions (unitized after March 31, 2020) that would further reduce the weighted average lag time. The weighted averages show that the Company's scheduling of projects and timing of unitization has effectively minimized lag.

Q. PLEASE BRIEFLY DESCRIBE THE COSTS OF AQUA'S PLANT ADDITIONS OVER THE PAST SEVERAL YEARS.

A. As shown in Thill Direct Exhibit 5, the Company has sorted its plant additions into three categories: (1) WSIC/SSIC eligible projects, (2) Non-WSIC/SSIC projects, and (3) Routine Replacements. **Henry**

[27] Aqua response to Public Staff Data Request No. 82 in Docket No. W-218, Sub 526. This includes 1,947 plant additions totaling $16,790,837 unitized from July 2018 through March 2020.

and Junis Exhibit 8 provides a narrative description of the categories provided by the Company.[28] The Public Staff has evaluated the plant additions unitized during the period from January 1, 2015, through March 31, 2020.[29] **Henry and Junis Exhibits 9** and **10** show the plant addition costs and the number of plant additions by rate entity and category, respectively. While this data set is imperfect, it is the best available and most comprehensive record of the Company's plant additions for the selected time period.[30] The Public Staff chose this time period because it falls after the Commission's issuance on May 2, 2014, of the W-218, Sub 363, Order, which found the WSIC/SSIC to be in the public interest and approved the mechanism.

Q. PLEASE BRIEFLY DESCRIBE OBSERVATIONS FROM YOUR REVIEW OF THE PLANT ADDITIONS COSTS OVER THE PAST SEVERAL YEARS.

A. **Henry and Junis Exhibits 9** and **10** make more evident the increase in Aqua's plant additions since the approval of the WSIC/SSIC mechanism. Over $49 million (or 31% of the total plant additions)

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[28] Aqua response to Public Staff Data Request No. 102-9 in Docket No. W-218, Sub 526.

[29] Aqua response to Public Staff Data Request No. 82 in Docket No. W-218, Sub 526.

[30] While not necessary for this high-level evaluation of the aggregate of Aqua's plant additions, we further address the issue of in-service dates and unitization (or posting) dates in our individual testimonies in this proceeding.

was invested in WSIC/SSIC eligible projects for which the Company could receive accelerated rate recovery between rate cases. Other noteworthy observations made by the Public Staff based on **Henry and Junis Exhibits 9** and **10** are as follows:

- Blanket/Routine Replacements steadily increased by over $2 million annually from 2015 through 2018. Since then, they appear to have plateaued in the range of $11-12 million and have been fairly consistently distributed among the rate entities.
- Non-routine, Non-WISC/SSIC spending steadily increased by 30% annually from 2015 through 2017, ballooned into the W-218, Sub 497, rate case, and then appear to have returned to the previous upward trajectory in 2019.
- The WSIC was heavily utilized between rate cases and in the ANC Water rate division, likely due to water filtration and treatment projects.
- The SSIC was consistently utilized in the range of $986k to $2.230 million annually.
- WSIC/SSIC projects and spending have outpaced Non-routine, non-WSIC/SSIC plant additions costs in 2015, 2016, 2019, and 2020, and overall are a 44.5% / 54.5% split when compared with each other.

Company witness Becker states in his direct testimony that, "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."[31] This evidence shows that WSIC/SSIC projects and spending have consistently exceeded non-WSIC/SSIC spending.

The observations described above prompted us to evaluate the quarterly plant additions shown in **Henry and Junis Exhibit 11**. The exhibit shows that the scheduling and timing of unitization of projects has had the effect that the start of depreciation is closely synched with the point at which cost recovery begins. This is particularly true of WSIC/SSIC eligible plant additions, which, as **Henry and Junis Exhibit 11** illustrates, occur almost exclusively in the second of the two quarters of every WSIC/SSIC application period. For example, after the W-218, Sub 497, rate case that included Q2 2018 plant additions, the Company did not file an application around November 1, 2018, for a surcharge covering Q3 2018 projects totaling $9,682. The Company then unitized $28,778 in Q4 2018 and $6,125,962 in Q1 2019, before filing an application on May 1, 2019, for WSIC/SSIC recovery effective July 1, 2019.

[31] Page 14, lines 20-23, Direct Testimony of Company witness Shannon Becker filed in Docket No. W-218, Sub 526, on December 31, 2019.

Henry and Junis Exhibits 9, **10**, and **11** not only demonstrate the effect of the Company's scheduling and timing of the unitization of projects on depreciation – they also show that the Company's expenditures in Q4 2019 and Q1 2020 are not unusual or extraordinary in magnitude or nature, due in part to the Company's ability to recover through the WSIC/SSIC mechanism nearly half of the capital expenditures sought for deferral. For example, the approximately $7.6 million (Q4 2019 and Q1 2020 combined) in non-routine, non-WSIC/SSIC plant additions is nearly the same amount as the $7.5 million (Q4 2018 and Q1 2019 combined) from the previous year.

Q. PLEASE BRIEFLY DESCRIBE THE TYPES OF PLANT ADDITIONS THAT HAVE OCCURRED OVER THE PAST SEVERAL YEARS.

A. **Henry and Junis Exhibits 12** and **13** show the plant addition costs by plant account (similar assets grouped for depreciation) and year for water and wastewater operations, respectively. We selected the seven largest plant accounts for both water and wastewater operations based on total plant additions costs.[32] This is another

[32] For wastewater, we included an eighth plant account, 389000 – Other Plant & Misc Equipment, because the $2,120,000 (total amount paid to Johnston County for wastewater treatment capacity and transmission fees) in plant account 351100 – Organization has been appropriately reduced to $1,335,000 and transferred to plant account 389000 – Other Plant & Misc Equipment, which includes the subsequent capacity

subset of Aqua's plant additions that does not appear to be unusual and/or extraordinary in nature during 2019 and 2020.

For example, investments in plant account 334400 – Meters & Meter Installations would be WSIC eligible and would therefore receive accelerated recovery. The Company has provided insufficient evidence that the projects and their associated costs are unusual or extraordinary so as to warrant deferral accounting. The need to replace meters on a planned schedule is an anticipated need of the business, and the timing and manner of implementing such replacements is entirely within the control of the Company.

Q. PLEASE BRIEFLY DESCRIBE THE COMPANY'S PLANT ADDITIONS AND COSTS DURING THE POST TEST YEAR PERIOD FROM OCTOBER 2019 THROUGH MARCH 2020.

A. As discussed above, the nature and magnitude of plant additions or projects and their associated costs during the period from October 2019 through March 2020 (Q4 2019 and Q1 2020) are neither unusual nor extraordinary. Said another way, considered individually or in aggregate, the projects are not major non-routine, infrequent, non-regularly occurring, unforeseen investments of considerable complexity and significance for Aqua. **Henry and Junis Exhibit 7** is

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purchase of $330,244.80. It is our understanding that this discrepancy in the data set is due to a limitation in the Company's accounting system.

a graph that demonstrates how the Company has spent and plans to spend capital (Becker Exh 3 and Exh 2), consistently in the neighborhood of $40 million annually starting in 2017 and continuing through at least 2021, and when those expenditures have been unitized for ratemaking purposes.

Q. ARE THESE INVESTMENTS NEW TO THE COMPANY?

A. No. In general, the Company continues to spend capital on projects such as pipes, pumps, and treatment systems. Since the last rate case, there has not been a substantial change in the Company's capital investment prompted by the passing of legislation or adoption of regulations that were transformative for the industry. No new technology has been developed that is a cure all for aging infrastructure or water quality issues. The capital spending between plant accounts can vary from year to year based on age and/or deterioration. However, overall sustained and strategic investment is necessary and has been shown to be consistent in recent years, and the WSIC /SSIC mechanism addresses lag concerns for nearly half of this investment.

To reiterate, consideration of costs for deferral on an aggregated basis deemphasizes the nature of the capital expenditures and could even be characterized as an attempt to neutralize a key component of the Commission's longstanding criteria for deferral. In addition,

there is a no overarching "unusual and/or extraordinary" requirement or initiative naturally linking Aqua's capital expenditures.

Q. DO YOU TAKE ISSUE WITH ANY OF THE PLANT ADDITION COSTS FOR WHICH AQUA HAS REQUESTED RECOVERY IN THIS CASE?

A. Yes. The Company has "excluded from this deferral request approximately $7.0 million in anticipated post-test year capital expenditures that it deems routine replacements."[33] As stated above, the Public Staff believes the Company has implemented a very narrow interpretation of what projects are routine replacements. While the Public Staff does not believe it is appropriate to implement project-specific adjustments to the Company's deferral request at this time, the Public Staff reserves the right to file supplemental testimony regarding the revised deferral request detailed in Thill Revised Exhibit 5[34] and address any post post-test year plant additions that the Company seeks deferral accounting treatment for.

[33] Page 34, lines 5-8, Direct Testimony of Company witness Edward Thill filed in Docket No. W-218, Sub 526, on December 31, 2019.

[34] As stated on pages 22-23 above, on May 21, 2020, the Company filed Thill Revised Exhibit 5 which replaces estimates with actual post-test year plant addition costs and summarizes the calculations of the requested deferral amount. Unlike the original, the revised exhibit does not include Table 4, which is the calculation of the asserted revenue deficiency. As of noon on the day of the Public Staff's filing deadline, the native Excel file with working formulas and supporting data had not been provided to the Public Staff. This file is material to the Public Staff's review of the Company's revised requested deferral amount.

Q. IF THE COMMISSION CONSIDERS THE PLANT ADDITIONS IN AGGREGATE, WHAT IS YOUR RECOMMENDATION REGARDING THE COMPANY'S REQUESTS FOR DEFERRAL ACCOUNTING TREATMENT?

A. The Public Staff recommends that the Commission deny Aqua's requests for deferral accounting treatment based on the absence of "a clear and convincing showing that the costs in question were of an unusual and/or extraordinary nature" whether considered individually or in aggregate. Having demonstrated that the Company failed to satisfy the requirement that it make a clear and convincing showing that its plant additions and the related costs are unusual or extraordinary so as to justify deferral accounting treatment, the Public Staff does not reach the issue of whether the costs sought to be deferred would have a material impact on the Company's financial condition or stability.

JOHNSTON COUNTY TRANSMISSION FEE

Q. DID THE COMMISSION MAKE A DETERMINATION REGARDING THE TRANSMISSION FEE CHARGED BY JOHNSTON COUNTY AND PAID BY AQUA IN THE PREVIOUS RATE CASE IN DOCKET NO. W-218, SUB 497?

A. Yes. In its order issued in the Company's last rate case, the Commission stated that it "determines to treat the $785,000

transmission fee as an expense, it further concludes, in its discretion, that this expense should not be recognized entirely in one cost of service year, but instead should be amortized and recovered over six years with no unamortized balance in rate base."[35]

Q. WHAT IS THE COMPANY'S PROPOSED ACCOUNTING TREATMENT FOR THE TRANSMISSION FEE?

A. The Company requests that the transmission fee be retroactively accounted for as a regulatory asset. The regulatory asset would have the unamortized balance included in rate base, and earn a return. In addition, the Company requests the return be recovered retroactively to December 18, 2018, which is the date of the Commission's Order in the previous rate case determining that the transmission fee is an expense to be amortized over six years.

Q. WHY DOES THE COMPANY BELIEVE THE COMMISSION SHOULD RECONSIDER THIS MATTER?

A. On page 40 of his direct testimony filed on December 31, 2019, Aqua witness Edward Thill states regarding the Commission's determination, "[t]hat treatment was argued by neither the Company nor the Public Staff, so the Company did not have an opportunity within the case to respond." While the Company did not propose the

[35] Order Approving Partial Settlement Agreement and Stipulation, Granting Partial Rate Increase, and Requiring Customer Notice, Docket No. W-218, Sub 497 at 85.

transmission fee be recovered in rates as an expense, the Company vigorously contended that the transmission fee of $3.14 per gpd was separate and in addition to the capacity fee contemplated in the Amended Purchase Agreement.

Q. WHAT IS THE PUBLIC STAFF'S RECOMMENDATION REGARDING THE JOHNSTON COUNTY TRANSMISSION FEE?

A. The Public Staff recommends the Commission deny the Company's request that the Commission overturn its decision and retroactively ratemake to the detriment of ratepayers. The customers should not pay a higher cost in rates for a return on an expenditure determined to be an expense by the Commission. The Company fully litigated the issues associated with the payment of the wastewater capacity fee and transmission fee to Johnston County, and to the extent the Company took issue with the Commission's decision on this issue, the Company should have filed a motion for reconsideration or appealed from the decision. The Public Staff further notes that the Company began to recover the expense as of the effective date of rates on December 18, 2018, and, if considered rate base, the transmission fee would not have been used and useful just the same as the wastewater capacity fee because the interconnection was not complete and in service. Said another way, it could be argued that the Company received accelerated recovery of the transmission fee.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

APPENDIX A

QUALIFICATIONS AND EXPERIENCE

WINDLEY E. HENRY

I graduated from the University of North Carolina at Wilmington with a Bachelor of Science degree in Accountancy. Prior to joining the Public Staff, I was employed by the Seymour Johnson Federal Credit Union. My duties there involved supervision of the accounting department and preparing financial reports. I joined the Public Staff as a Staff Accountant on July 16, 1990. Since joining the Public Staff, I have presented testimony and exhibits in numerous cases before this Commission involving water, sewer, and natural gas utilities. I am a Certified Public Accountant licensed in the State of North Carolina.

APPENDIX B

QUALIFICATIONS AND EXPERIENCE

CHARLES M. JUNIS

I graduated from North Carolina State University in 2011, earning a Bachelor of Science Degree in Civil Engineering. I have nine years of engineering experience, and since joining the Public Staff in April 2013, have worked on utility rate case proceedings, new franchise and transfer applications, emergency operations, customer complaints, general rate cases, and other aspects of utility regulation. Prior to joining the Public Staff, I worked for Farnsworth Group, an engineering and architectural consulting firm. I am a licensed Professional Engineer in North Carolina.

Q. Mr. Henry, have you and Mr. Junis prepared a summary of your testimony?

A. (Windley Henry) Yes, we have.

Q. And, Mr. Junis, would you please read that summary?

A. (Charles Junis) Yes. The purpose of our testimony is to present to the Commission the Public Staff's recommendations with regard to Aqua North Carolina, Inc.'s, Aqua or the Company, requested: One, utility plant in Service; two, deferral accounting treatment for post-test-year capital projects and prospective deferral accounting treatment for post-rate case capital projects; and three, retroactive regulatory asset treatment for the transmission fee paid to Johnston County in 2018.

One, utility Plant in Service. In order to investigate the Company's plant additions to rate base, we reviewed the Company's water and wastewater utility plant-in-service records, including plant additions, unitization, in-service, and completion dates, and other supporting documentation as far back as 2015. The supporting documentation varies with the type, duration, cost, and regulations associated with the project. The Company is required to maintain detailed

transaction listings for construction work in progress, CWIP, ledgers, which the Public Staff thoroughly reviews for a large sample of projects. In additional, the Public Staff obtains supporting documentation such as accounts payable invoices, contract estimates of progress, work orders, internal engineering project closure forms, and North Carolina Department of Environmental Quality, DEQ, permits and approvals.

The Company's novel request for aggregated deferral accounting treatment made it necessary for the Public Staff to expand its investigation beyond the typical period of time, which is from the last rate case through the update period. In this case, from July 1, 2018 through the update period of March 31, 2020, and thereafter as appropriate to evaluate post post-test-year projects.

The Company's stated procedure from the Sub 274 rate case of allowing, quote, 30 to 60 days for any trailing costs to be charged to these in-service activity numbers before closing the asset, close quote, would have been acceptable to the Public Staff if utilized consistently and for an overwhelming majority of its construction work in progress projects. However, based on its review, the Public Staff found

that this has not been the case. Numerous projects were unitized by the Company in the same month they were placed in service, or even the same day, while others were unitized months or even years after being placed in service. The inconsistent utility plant in service, or UPIS, practices are concerning to the Public Staff as they can result in a reduction of accumulated depreciation, and additional return on the increased balance of rate base producing a financial windfall for the Company to the detriment of ratepayers.

The Public Staff believes that unitization should occur within 30 to 60 days of the in-service date, and that depreciation should always begin as of the in-service date. The Public Staff understands there may be exceptions to when the project unitization occurs, but depreciation should always begin when an asset is placed in service, without exception. The Public Staff strongly believes the procedure should be that depreciation begins and accrual of allowance for funds used during construction, AFUDC, ends on the in-service date. To address this issue, the Public Staff recommends that the Commission order the Company to review its procedures for determining when projects

are completed, in service, and booked, and file the Company's findings on its internal practices, and any plans to change the procedures, within 90 days of the Commission's final order in this proceeding.

Two, Deferral Accounting Treatment. As part of its application, the Company requested Commission approval to defer depreciation and accrue carrying costs for hundreds of capital expenditures for the time beginning with the individual in-service dates through implementation of new base rates, and the deferred balance be recorded as a regulatory asset, included in rate base and amortized over five years in this rate case. In addition, the Company requested prospective authorization to defer depreciation and carrying costs on post-rate case capital expenditures, other than routine replacements, until included in rates in the Company's next rate case. The Public Staff recommended that the Commission deny Aqua's requests for deferral accounting treatment based on the absence of, quote, a clear and convincing showing that the costs in question were of an unusual and/or extraordinary nature, close quote, whether considered individually or in aggregate. Having demonstrated that the Company failed to satisfy the requirement that it make a clear and convincing

showing that its plant additions and the related costs are unusual or extraordinary so as to justify deferral accounting treatment, the Public Staff did not reach the issue of whether the costs sought to be deferred would have a material impact on the Company's financial condition or stability.

As part of the partial settlement agreement, the Company withdrew its proposals for deferral accounting treatment and accepted the Public Staff's proposed adjustment to remove the costs related to deferral accounting treatment on post-test year plant additions.

Three, Johnston County Transmission Fee. In its order issued in the Company's last rate case, the Commission stated that it, quote, determines to treat the $785,000 transmission fee as an expense. It further concludes in its discretion that this expense should not be recognized entirely in one cost-of-service year, but instead should be amortized and recovered over six years with no unamortized balance in rate base, close quote. As part of its application, the Company requested that the transmission fee be retroactively accounted for as a regulatory asset. Under the Company's proposal, the

regulatory asset would have the unamortized balance included in rate base and earn a return. In addition, the Company requested the return be recovered retroactively to December 18, 2018, which is the date of the Commission's order in the previous rate case.

As part of rebuttal testimony of Company witness Thill, the Company withdrew its request for the contended revenue deficit related to the retroactive recovery to the Sub 497 order date. Additionally, as part of the partial settlement agreement, the Company accepted the Public Staff's proposed adjustments to remove the Johnston County unamortized transmission charge and revenue deficit.

In addition to the foregoing, today we will provide on the record for the Partial Settlement Agreement and Stipulation reached by Aqua and the Public Staff and filed in this docket on July 1, 2020.

This completes our summary.

Q. Thank you.

MS. JOST: And before we make Mr. Henry and Mr. Junis available for cross examination, I believe the Commission had granted us leave to ask a few additional direct examination questions regarding the partial settlement agreement and

stipulation reached by Aqua and the Public Staff.

COMMISSIONER BROWN-BLAND: We will grant you that at this time. Go right ahead.

Q. All right. Mr. Henry, have Aqua and the Public Staff entered into a partial settlement agreement filed in this docket on July 1, 2020? Mr. Henry, I believe you're on mute.

A. (Windley Henry) Yes.

Q. Thank you. And, Mr. Henry, were you involved in the discussions that led to that settlement?

A. Yes, I was.

Q. Mr. Junis, were you also involved in those settlement discussions?

A. (Charles Junis) Yes.

Q. Mr. Henry, can you describe for us how Aqua and the Public Staff went about pursuing the settlement discussions in this case?

A. (Windley Henry) First we met several times to come to a common understanding of the adjustments that the Public Staff proposed, and the math that we used in coming up with our revenue reconciliation. Then we moved into substantive negotiations by virtual meetings and through correspondence over several weeks before reaching the final partial settlement agreement.

Q. Thank you. Mr. Junis, are there some issues that were not settled by Aqua and the Public Staff?

A. (Charles Junis) Yes. There is a utility plant-in-service issue, which is not the dollars that were settled, but the issue of the discrepancy between the in-service date and the Company's practice of beginning depreciation as of the unitization date. And then there is also the pilot program, rate design, and the water quality reporting requirements.

Q. Thank you. Mr. Henry, do you believe that the partial settlement agreement between the Public Staff and Aqua is just, and reasonable, and otherwise compliant with North Carolina law?

A. (Windley Henry) Yes. It results in benefits to customers through cost reduction stipulated to by the parties, and it avoids additional rate case expense through legal fees that would be incurred as a result of going to a full-blown hearing. And it provides a greater certainty as to the outcome of the rate case.

Q. Thank you.

MS. JOST: The witnesses are now available for cross examination.

COMMISSIONER BROWN-BLAND: All right. So cross examination from the Attorney General?

MS. TOWNSEND: No. No, cross from the Attorney General.

COMMISSIONER BROWN-BLAND: All right. From the Company?

MR. BENNINK: Yes, I have a few questions.

COMMISSIONER BROWN-BLAND: All right, Mr. Bennink.

CROSS EXAMINATION BY MR. BENNINK:

Q. I want to ask just one question concerning the Johnston County issue, which has -- the Johnston County transmission fee issue, which has been settled. And I'll ask you to refer to your testimony on page 46, beginning on lines -- on line 13. And in that instance -- I'll start on line 11. I'll read that. It says:

> "The Company fully litigated the issues associated with the payment of the wastewater capacity fee and transmission fee to Johnston County. And to the extent the Company took issue with the Commission's decision on this issue, the Company should have filed a motion for reconsideration or appealed the decision."

Do you still stand by that statement? And I'll allow either witness to answer.

A. (Charles Junis) Yes.

Q. And why do you stand by that statement?

A. I mean, it's pretty common practice, if either party or multiple parties in a rate case disagree with the Commission's order, that they would then file a motion for reconsideration or appeal the decision in a timely fashion after that decision.

Q. Did the Public Staff, in effect, ask for reconsideration of any issues in this case that were decided by the Commission in the Sub 497 case?

A. I'm sure there is some level. Do you have any specific examples you have in mind?

Q. Well, I think there was a sewer system -- at least one was a sewer system adjustment factor.

A. Are you talking about the excess capacity? Or I'm not --

Q. No. And I don't have it in front of me right now, but there was a sewer system -- some kind of factor to adjust for expenses, I believe.

A. Yes. So that's part of my individual testimony, but it is the annualization and consumption factors that impact both the billing determinants, and

also some of the variable expenses tied to that service.

Q. And in this instance -- I'm sorry, I didn't mean to interrupt you.

A. That's all right. There is material new information that we offered in this case. Being that there is considerable metered customer data for those sewer customers, the Commission's prior order pointed out this flaw when it decided against us that we didn't have a lot of data to support implementing that consumption factor. Now we have over half of the ANC wastewater customers and nearly all of the Fairways wastewater customers. We have their meter data, so I think we can apply, then, those consumption factors going from the test year level of consumption to the accepted three-year average.

Q. The point is that -- does the Public Staff generally follow the process of either asking for reconsideration on the spot or appealing decisions, or do you bring issues back before the Commission in the next rate case as a general rule?

A. I think both happen. In this case, there was material new information acquired since that last rate case, so it made sense that it was brought up in this

rate case.

And another example, just to continue my answer, would be the previous DEC and DEP rate cases that are still subject to the state Supreme Court's consideration. That's a spot where we actually appealed that decision.

Q. Going back to your summary, and we'll get to the UPIS issue now. You say that use of the 30 to 60-day period for unitization would have been acceptable to the Public Staff if unitized consistently and for an overwhelming majority of construction work in progress projects, correct?

A. That is a paraphrase of our testimony, yes.

Q. Let's -- let's differentiate between in-service date and unitization date.

Can you give just your brief summary of what both those terms mean?

A. Yeah. I mean, first, I would like to point out that these were clearly defined by the Company and we included those definitions within our testimony. That would be starting on page 5 and going on to page 6, because we thought it was important that these be clarified. But, in general, the in-service date is when an asset is used and useful. It is providing

service. It has been installed, constructed, and it's doing its function. So now it would start to depreciate. While unitization is the accounting practice of collecting the costs and booking them.

A. (Windley Henry) Also, the unitization -- I mean, the in-service date stops AFUDC calculations as well.

Q. You're particularly critical of the Company's unitization practices; are you not?

A. (Charles Junis) Yes.

Q. And I want to -- and there are issues of unitization, and then you say in your summary that the Public Staff strongly believes the procedure should be that depreciation begins and the accrual of allowance for funds used during construction ends on the in-service date.

Where in your testimony do you specifically make the statement that depreciation should always begin to accrue on the in-service date?

A. Just give me one second. I believe the sentence starts "ideally."

Q. Not in your summary.

A. I'm talking about my testimony. You asked where in our testimony, correct?

Q. Yes.

A. (Witness peruses document.)

So that is on page 7, line 7. It states: "Ideally, the in-service date will occur in the same month as the unitization date."

And then I will add, it has come to our knowledge that -- at the time we wrote this testimony, we did not have a full understanding, at least Mr. Henry and I did not, of the capabilities of Power Plant. It has been brought to our attention by Public Staff witness Michelle Boswell that the Power Plant asset management system is utilized by Duke Energy Carolinas, Duke Energy Progress, Piedmont, and PSNC prior to its acquisition by Dominion.

This Power Plant asset management system has the capability to book assets utilized by these Commission-regulated utilities as completed or nonclassified or not classified costs for projects upon which completion but not all invoices and costs have been accounted for.

So with this, that partially addresses the idea of double-bookings, and it starts depreciation. Because what happens is you have this capability to book this completed asset, so basically it's in

service, but you haven't collected all the paperwork. So whatever costs you have at that time, you would book it. And that completed not classified cost would stop accruing AFUDC, which is important for customers, and it begins depreciating at a general depreciation rate of the related plant.

So, for example, a wastewater treatment plant would be booked at the overall wastewater treatment plant depreciation rate, recognizing that there are sub-buckets when you actually unitize that asset. Those costs continue to be accounted for during a designated period of time or until it is believed that all the costs have been captured. This would typically be three to six months, it could be as short as, say, the 30 to 60 days referred to as Aqua in the past.

After this time is passed and you've collected all those costs, the project is unitized. Which, at that time, you have all the costs, you now have some accumulated depreciation, which is the important part that -- why we raised this concern about the difference between in-service and unitization date, and those costs and accumulated depreciation is then booked in the appropriate plant accounts or depreciation buckets. So now you divvie up that

wastewater treatment plant cost into structures and improvements, or pumps and motors, or all the different components or plant accounts.

This process addresses accumulated depreciation between the in-service date and the unitization date. There's a function within Power Plant that currently Commission-regulated utilities utilize. So that is why our summary maybe goes outside of this one sentence in our testimony on page 7.

Q. I mean, your -- the testimony, itself, does not say specifically what you've said in your summary, is that depreciation should start immediately with the in-service date.

A. We said ideally the in-service date will occur in the same month as the unitization date. Now, with this greater understanding that this is a capability and functionality, that it's feasible, this is why our position has developed. Just the same as the Company's position developed in accepting our recommendation to review their practices and report on them.

Q. But under the position you've stated in your -- the summary of your testimony, with depreciation beginning immediately upon the in-service

date, then that lessens the importance of the 60 -- 30 to 60 days for unitization; does it not? Do you then care how long it takes to unitize the plant?

A. Less so. You still want it to happen in a reasonable amount of time, that way the books are kind of set. I mean, the Company has a concern there, for their financial books to be finalized. Granted you already have this completed, not classified account ledger or entry.

Q. But you've built a case from the beginning in terms of challenging unitization and that process, and that seems to be different from what we're seeing now in terms of your testimony. The unitization date is not as important as the fact that you now say specifically the recovery -- or accrual of depreciation should begin immediately with in-service date.

A. No. Our position is still maintained, because as of right now, the Company waits. Their unitization dates are occurring after the in-service date for a number of these projects, and some of which are occurring the following year. And the implication of that is you lose a year of depreciation. And accumulated depreciation lowers rate base, thereby lowering the return and cost to customers.

And so our position is still maintained that the in-service date is the important date here. That is when AFUDC should stop, and depreciation should begin.

Q. Now, the Company's practice has generally been to use the unitization date; is that correct?

A. The Company --

A. (Windley Henry) Yes, that's correct, Bob.

A. (Charles Junis) And I would add that the unitization date has been the beginning of depreciation, which, in our eyes, on a number of these projects, is a delay of depreciation and has a financial impact to the benefit of the Company and the detriment of customers.

Q. And now I want to move on to the depreciation piece.

Isn't it true that the only time this situation arises where the Public Staff would contest the -- these dates and the accrual of depreciation is when the plant was in service for the end of one calendar year, but unitization was not completed until sometime after the first day of the subsequent calendar year?

A. (Windley Henry) That's true, because you are

missing out on a full year of accumulated depreciation if you unitize it in the latter year versus the year -- the former year in which it went into service.

A. (Charles Junis) I would just add -- Mr. Bennink, if you don't mind, I would just add that that is when it is most important, because there is a financial impact to the direct detriment to ratepayers. The other times when it occurs within the same year, that is still a misrepresentation of the Company's books. That if you wait to unitize a project that was -- until September that was in service in February, well, for that difference of time, it was not represented that you had this asset on the books. And from what we've seen, an important point is lag. You know, the Company makes a very big -- or points out they have a very big concern with lag.

And what we have shown in our testimony is that the lag that they represented, like the six-month average lag on WSIC and SSIC is not actually representative of the dollars when they book and unitize it. That, in fact, that average is closer to 3.25 months. The bare minimum within the WSIC/SSIC is three months, so they have effectively decreased lag nearly by half.

And then Mr. Becker goes on to state, and he corrects himself after we had asked a number of data requests on this matter, but he goes from a 20-month average lag on other utility plant that's not WSIC/SSIC eligible, and then he drops it down to 17. Well, that is just assuming time as the constant. But when you look at when those dollars are booked and unitized, in fact, the average is 11.25 months.

And do you know the time it has been since their last rate case? Well, their last rate case, the order came out in December of 2018, they then filed at the end of the following December. Approximately 12 months or very close to 11.25 months. So they have effectively shrunk lag, and it is up to the Company when they file rate cases to shorten that lag even further. That is within their management and discretion. That is not regulatory lag, that is lag that the Company controls.

Q. Mr. Junis, the question I have is the fact that under the six-month convention for accruing depreciation, if you have a project which is both placed in service and unitized in the same calendar year, as I understand it, the practice is you accrue six months' depreciation during that calendar year; is

that correct?

A. (Windley Henry) Yes. They use the half-year convention, so no matter what point in time that that asset is booked, they capture a half year of depreciation for that particular asset in the year in which it was placed in service.

Q. And so in that instance, the customers get the full benefit of the half-year convention of depreciation, correct, Mr. Henry?

A. The accumulated depreciation associated with that particular item.

Q. That's right.

A. Would reduce rate base.

Q. Yes. And the problem only occurs if you have a project which is completed and in service, let's say, at the end of -- sometime in December of 2019, but was not unitized until January -- let's say until January of 2020, within the 30 to 60-day period for unitization.

In that instance, isn't it correct the Public Staff maintains that the in-service date controls and you accrue six months of depreciation for 2019, the Company's position is that they unitize that project within the applicable period within a reasonable time,

and depreciation begins to accrue in 2020, it's six months of depreciation; Mr. Henry, is that a correct statement?

A. I couldn't quite follow your statement, so I was a little confused about what you were stating, so if you could repeat it.

Q. I'll try it again. We have a hypothetical situation. Let's make this one hypothetical. Project is completed in service on December 31, 2019. Unitization occurs on January 15th of 2020. In that instance, the Company would unitize -- would begin to accrue, under its proposal and under its practice, depreciation in January of 2020; is that a correct understanding?

A. That's my understanding of when they unitize their assets.

Q. And they would accrue six months of depreciation for 2020?

A. That is correct.

Q. The Public Staff's position is no, that plant was in place and in operation as of the end of the year 2019, and you must begin to accrue depreciation in December?

A. Correct. A half year of depreciation in

December instead of January of 2020.

Q. That's right. So in that instance -- and the only point I'm trying to make is that this really only arises in an instance where you have a plant in service for the end of one year and unitization occurs during the next year; is that a fair statement?

A. That is a fair statement. I do agree with that.

A. (Charles Junis) I would just clarify. It doesn't have to be at the end of the year. In some of these cases it's actually multiple years later that the asset is being unitized. So I think that is important.

Also, in terms of the consistency of our testimony, if the Company accelerates unitization when it matters to them, like recovery in a WSIC/SSIC -- so a project that gets done in September, they all of a sudden unitize it that same month, they get WSIC recovery come January 1. Well, if they had used their same process of 30 to 60 days and not unitized those projects until October and November, well, now you're waiting another period of time until the next WSIC/SSIC. That's another six months.

And so they are picking and choosing when they unitize on an expedited fashion and when they take

their time and let the business slowly roll in. So that is a problem here with consistency. So those same-year closures are still important from a consistent practice aspect.

Q. What -- to you, what is a consistent practice? I mean, does it have to be 95 percent? What is a consistent practice?

A. So this is actually a -- you lead to a very important point. Blanket and routine replacements happen consistently. They almost automatically get replaced. And that's not where our issue is. The issue is with those planned projects, those bigger dealer projects, because they have more control over those, but with a bigger project and a longer construction time frame, you also run into more hiccups to delay. So to say that they are somehow just so well managed that all of these in-service dates and all these unitizations just happened to happen in the month they wanted, I don't think is a fair representation. And that's the problem here, is for those projects, the unit- -- the in-service date is actually months or years before the unitization date.

Q. Now, on page 15 of your testimony, beginning at line 1 and going down through that paragraph, you

say that, in the post-test year period of October 2019 through March of 2020, the Company unitized approximately $20.6 million of capital expenditures during that period; that's correct, right?

A. Yes.

Q. And then you go on to say, beginning at line 5, that the Public Staff adjusted the unitization date for 44 plant additions in the total amount of approximately $1.4 million on there.

When you say you adjusted the unitization date, what do you mean by that?

A. So we are changing the unitization date, because that's what the Company uses to start depreciation, to what most oftentimes was the Company's designated in-service date. We didn't want to get into a fight about what day we picked, so we pretty consistently used their identified in-service date unless we noticed a significant discrepancy that we thought that in-service date wasn't representative of when that asset actually went into service.

So the key there is depreciation. And because those items -- because those plant additions occurred in the post-test year, if we shifted it from 2020 to 2019 in the latter half of 2019, it's still a

post-test year addition and treated the same. I believe Mr. Henry will corroborate that. The problem is, next rate case, if the Company's books continue to show a unitization date and start of depreciation in 2020, then we lose a year of accumulated depreciation because that asset should have been in service in 2019.

So that's why we point out these 44 projects. And these 44 projects now have to be tracked. Should be tracked by the Company, but certainly the Public Staff will make a point to verify that these in-service dates or unitization dates by the Company are correct. Just the same as what we did with our adjustments to the WSIC/SSIC. The Company did not include those corrections to the in-service dates or unitization dates in their application in this rate case, and so we had to make an accounting adjustment there that the Company has agreed to.

Q. So since -- I'm sorry, Mr. Henry, were you going to say something? Sorry.

A. (Windley Henry) Yes. And the reason that we didn't make any adjustments for those post-test-year additions is that we put them in rate base and we pulled in a full year of depreciation expense as well as a full year of accumulated depreciation to get a

representative level of the depreciation -- an accumulated depreciation that the Company would incur going forward. But in the next general rate case, we need to make an adjustment to correct the Company's books for these unitization and in-service errors.

Q. And so would you agree that this is a good illustration of what we've previously talked about in terms of the fact that the issue you're raising only -- basically only occurs when you have a project that you consider to be in service in one calendar year, but not unitized to the following calendar year?

A. No. These are post-test-year additions, that's totally different. That can occur anytime of the year, or anytime after the test year.

Q. I'm sorry to interrupt you. But you specifically say that this post-test-year period went from October 2019 through March of 2020, so it bridges two calendar years.

A. Correct. But these are post-test-year additions. Okay. We didn't make any type of an adjustment for them in this rate case, other than we included a full year of depreciation expense and accumulated depreciation in the case. In this rate case, we will make that type of an adjustment for these

costs.

Q. That is a depreciation adjustment kind of like what we've been talking about, correct?

A. It will be done in the next general rate case, yes.

A. (Charles Junis) Mr. Bennink, I would just add that this is evidence counter to the Company's criticism of the dollar impacts. When we suggest a financial windfall, this is part of that equation. While not quantified as a dollar amount in this rate case because they are post-test-year additions, they do have a dollar impact in the next general rate case when a full year of depreciation will be accounted for by the Public Staff with this adjustment.

Q. Now, to illustrate the -- at least give some relevance to the significance of this, would it be a correct statement to say, if you took the two investments -- for the 44 plants, you say the total amount of that investment was about $1.4 million, divided by the total investment in post-test-year additions of 20.6, to me that -- I calculate a percentage of 6.7 percent of the investment was subject to your questioning here.

A. Well, you should not include the blanket and

1 routine replacements when calculating that percentage,
2 because again, those occurred a very different
3 accounting practice. Those are already in rate base,
4 typically, because they are a replacement, and they
5 happen basically in the same month, because it's not a
6 drawn-out project that has costs spread over months or
7 years. A replacement basically happens within days or
8 the month.
9 You know, if you go -- if you say, okay, this
10 pump is broken, we're going to replace it, well, you
11 already had a pump in rate base, so it's already in the
12 current rates. You're just replacing it and restarting
13 depreciation. So I don't think you can use the
14 $20 million as the denominator.
15 Q. The information that I have, and I will see
16 if would you agree with this, is that there were 685
17 projects that did not include blankets during the
18 post-test-year period. Does that sound like a
19 reasonable number to you?
20 A. I'm just checking our testimony, because I
21 think we have that number at some point. Subject to
22 check, I'll accept that.
23 Q. And out of those 685 non-blanket projects,
24 you're questioning 44?

A. I do not think the 600 was representative of the non-blanket -- now that I understand where your question is going.

Q. Well, how about this. I've got a number also of 469 that were non-WSIC/SSIC and non-blankets.

A. All right. Like you said, subject to check I'll accept the number.

Q. And of those 469, you're questioning 44?

A. Right. Because you also need to recognize that the WSIC/SSIC includes blankets and replaced during routine replacements. The eligible projects are not just big projects. In fact, that's one of the Company's criticisms of the current eligibility of the WSIC/SSIC, that it doesn't include a wastewater treatment plant or some of these bigger. It includes pump replacements. It includes meter replacements. So, you know, that's still not representative of cutting out the routine and blanket.

Q. That's all I have. Thank you.

COMMISSIONER BROWN-BLAND: All right. Is there redirect? Ms. Jost, you're on mute. Still on mute. There you go.

MS. JOST: How about that? Okay.

REDIRECT EXAMINATION BY MS. JOST:

Q. Mr. Junis, Mr. Bennink asked you at the very beginning of his cross-examination about a statement on page 46 of the joint testimony to the effect that the Company should have filed a motion for reconsideration or appealed from the Commission's decision in the Sub 497 docket on the issues associated with the payment of the wastewater capacity fee and transmission fee to Johnston County. Do you recall that question?

A. (Charles Junis) I do.

Q. And I think his question was, has the Public Staff ever requested reconsideration or -- from a decision of the Commission in a subsequent rate case. And I believe he gave -- he gave an example that I believe related to --

A. It's the annualization and consumption factor.

Q. Thank you. And you indicated that, with respect to that issue, there was some new and material that had arisen since the last rate case; is that correct?

A. Correct.

Q. Are you aware of any new or material information that has arisen with respect to the Johnston County transmission fee issue since the last

rate case?

A. No.

Q. All right. Thank you. That's all I have.

COMMISSIONER BROWN-BLAND: All right. Are there questions from the Commission? And I just remind the commissioners that this is the panel, and the panel is also available on the stipulation. All right. Questions from the commissioners? Chair Mitchell?

CHAIR MITCHELL: Thank you, Commissioner Brown-Bland.

EXAMINATION BY CHAIR MITCHELL:

Q. I have a question for the panel that was developed by our staff, and I'm going to ask it of y'all. Whoever is in a better position to answer it, please do. It's for the clean-up from the previous rate case as well, so I'll give you that little preview. And I would like the Company to note that we're going to ask the same questions of witness Thill when he is back up for his rebuttal testimony. All right.

So on July 26th of last year in Docket Number W-218, Sub 497, Aqua filed the second affidavit of Edward Thill, which stated, among other things, that

Aqua and the Public Staff had reached agreement regarding the future accounting treatment for additional payments to Johnston County beyond the June 2018 payment that was in the amount of $2.12 million. In particular, Mr. Thill states that the Company and the Public Staff jointly support the following future accounting treatment of Johnston County transmission and capacity fees. The full value of developer payments, including both T&D and capacity fees will be reported by Aqua as amortizing CIAC in accordance with past practice, and the full value of future capacity purchases from Johnston County, including both T&D and capacity fees, will be recorded by Aqua as depreciable plant in service.

Further, Mr. Thill states that Aqua's June 2019 purchase of 51,440 gallons per day of additional capacity from Johnston County at a total cost of $330,000 -- $330,245,000 will be accounted for in accordance with the accounting treatment described above.

First question for the panel. Is this still the agreement between the Public Staff and the Company for the accounting treatment of the June 2019 purchase and for future purchases from Johnston County for

wastewater capacity, which includes -- including both the T&D and capacity fees?

A. (Charles Junis) So I'll let Mr. Henry confirm, but that is yes. It is my understanding that Johnston County has now clearly combined those two pieces. There's no longer the break-apart between the T&D and the wastewater capacity. And then they have made a special plant account specific to these capacity purchases and have moved both the $1.3 million portion from the last rate case and this new purchase of $330,000 into that plant account.

Q. Okay. All right. Next question is, is that how the June 2019 capacity purchase is reflected in this rate case?

A. Yes.

A. (Windley Henry) Yes.

Q. Thank you. And last question, but I think I understand the answer at this point. Did the parties request the Commission approve this agreed upon accounting treatment in this rate case and for future purchases of capacity from Johnston County?

A. (Charles Junis) I would say yes, you know, subject to if there's a material change in the facts. You know, Johnston County changes their capacity fee

1 considerably again and breaks it apart or, you know,
2 who knows what they can come up with.
3 Q. Okay. Anything to add, Mr. Henry, to
4 Mr. Junis' response?
5 A. (Windley Henry) Not at this moment, no.
6 Q. Okay. All right. That's all I have. Thank
7 you.
8 COMMISSIONER BROWN-BLAND: All right.
9 Commissioner Clodfelter?
10 COMMISSIONER CLODFELTER: Thank you.
11 EXAMINATION BY COMMISSIONER CLODFELTER:
12 Q. Gentlemen, I have a question about the
13 settlement stipulation in this case. In the Public
14 Staff's original prefiled testimony, there was a
15 proposed excess capacity adjustment for the three
16 wastewater treatment plants that were also the subject
17 of an excess capacity adjustment in Sub 497. And that
18 proposed adjustment has been withdrawn, if I understand
19 the settlement stipulation correctly, and I'm curious
20 about what led to that result.
21 And in particular, I'm curious as to whether
22 the Public Staff has accepted the Company's position
23 with respect to the methodology for calculating whether
24 or not there is excess capacity with respect to those

plants. That's really why I ask the question is, is this -- what's the reason you withdrew your position?

A. (Charles Junis) So I will say that this stipulation clearly says that we reserve the right to take a different position in future rate cases.

Q. I understand. But why --

A. It's not --

Q. I understand. But why in this case did you withdraw the position?

A. This is a byproduct of give-and-take within a settlement.

Q. Okay. And I should not --

A. This was a give, and there was take that was also tied to it.

Q. And therefore I should not conclude -- from your answer I should therefore not conclude that the Public Staff has now agreed with the Company's methodology for calculating excess capacity?

A. That is -- that is accurate, yes.

Q. Okay. Let me move to -- thank you. I understand how it works. Let me move to another set of issues now. And it sort of goes back to this issue that most of your testimony on cross-examination addressed. And I want to focus on the AFUDC piece.

Is the Public Staff satisfied that with respect to the projects that are at issue in this case, that the Company properly stopped accruing AFUDC on the in-service date and did not continue to accrue it to the unitization date?

A. So based on our review, with the exception of some of the adjustments that are laid out in our Exhibit 5, I believe we are. Mr. Henry?

A. (Windley Henry) We made some of adjustments for AFUDC for some long-lived projects that we thought should have stopped collecting AFUDC on the service date. So there are some adjustments that we did make.

Q. There are some?

A. Yes.

Q. Are you -- are you generally satisfied with the Company's methodology for calculating and accruing AFUDC?

A. Yes. Yes.

Q. Aside from this issue about the cutoff date?

A. Correct. That's correct.

Q. Okay. You have reviewed the Company's methodology and you are comfortable with how the Company calculates --

(WebEx sound failure.)

THE WITNESS: Yes.

Q. -- AFUDC?

A. Yes, I have. And yes, we are satisfied with it.

(Reporter interruption due to microphone cutting off.)

COMMISSIONER CLODFELTER: Well, I think he gave the answer to it, so I'll take his answer.

Q. But the question really was, have the Public Staff satisfied with the methodology that is being used by the Company to accrue and calculate AFUDC?

A. Yes, we are.

Q. Do you know -- because I -- this is the first time issue has come up since I've been on the Commission.

Do you know if the Company's methodology for accruing and calculating AFUDC has ever been presented to and approved by the Commission in any prior dockets?

A. I'm not aware of approval by the Commission in any dockets. No, I'm not.

Q. Not aware of it?

A. No, I'm not.

Q. Okay. Let me go back to be sure I understood another piece of the testimony. And I think,

Mr. Junis, you were giving this testimony. Remind me again because it slipped my mind, the name of the software tool that is used to collect the costs and then to unitize that you say is also used by the Duke affiliates and by Piedmont and by PSNC, the name of that tool?

A. (Charles Junis) That is the Power Plant management system.

Q. Okay. Well -- and it's your understanding that the Company, Aqua North Carolina has that tool available?

A. They have that software, and we believe that that tool would be available to them.

Q. And they use it?

A. They use Power Plant. I am -- we have no evidence that they've used the function or capability of the completed, not-classified approach. The other regulated utilities do. We have never seen Aqua do that. It is our understanding that they were made aware, back in the Sub 274 rate case time frame when they were transitioning to Power Plant, that Ms. Boswell actually went to their Cary offices at one point and this was brought up.

Q. Well, if they have the capability to use the

completed but not classified functionality in the Power Plant program, and they use that on a consistent basis, they would be able -- if I understand your testimony, they would be able to start depreciation and cut off AFUDC uniformly on the in-service date regardless of when all invoices were finally collected and regardless of when unitization occurred; is that your understanding of how that element of the Power Plant software works?

A. Yes, sir. And even when you initially put it into that completed not classified, you can continually incrementally put costs in until you reach that final date of unitization.

Q. Thank you. That's all I have for the panel. Thank you.

COMMISSIONER BROWN-BLAND: All right.

Chair Mitchell, and then Commissioner Duffley.

EXAMINATION BY CHAIR MITCHELL:

Q. Thanks. I have one additional question for the panel. It's on the settlement agreement. It pertains to the purchase water adjustment. I'm looking at page 14, paragraph HHH.

Could you-all just describe for us sort of where the parties are, in terms of coming to some sort

of consensus approach here? Because it's not clear to us that you-all are working towards an approach that can be implemented before the next rate case, and I just want to make sure that I understand exactly what the status of at least this issue is.

A. (Charles Junis) So for the purposes of this rate case, we are utilizing the Public Staff's position filed in Ms. Garden's testimony. As -- on a go-forward basis, as it states here, the parties are going to work together and in good faith consider the methodology at least alluded to by Mr. Pearce and Mr. Kunkel in terms of possibly a leakage per mile or leakage per connection as a measure, as opposed to the water loss. We'll have to see, you know, working through that give-and-take negotiation and working together collaboratively, what do you set as that benchmark. It's not real clear exactly what that will look like or what that will be, but we're certainly going to consider pulling that from that AWWA water audit methodology.

Q. Okay. And just one follow-up, Mr. Junis. So you-all are going to work -- you-all are working off of the work that was done for this rate case, though?

A. Yes.

Q. Okay.

A. And I think the hope is that we would then have -- whatever that threshold or benchmark is, we would have that agreed upon and possibly reported to the Commission prior to the next rate case, or at least for implementation in the next rate case.

Q. Okay. Thank you. That clears it up for me. Thank you. I have nothing further.

COMMISSIONER BROWN-BLAND:

Commissioner Duffley?

COMMISSIONER DUFFLEY: Thank you.

EXAMINATION BY COMMISSIONER DUFFLEY:

Q. So my questions are going to relate to your delay of unitization arguments and concerns. And I'd just like to get a handle of the materiality of this issue with respect to the revenue requirement.

I mean, what are we talking about, your argument and its impact to the revenue requirement?

A. (Windley Henry) In this particular rate case, there was -- other than the adjustment that we made for the WSIC and SSIC, there are no revenue impacts in this rate case. It will be in the next general rate case, and we will have to come up with an amount that we should reduce rate base by because of

the difference between the in-service date and the unitization date.

Q. Okay. Thank you. And why is there no impact? Is it because it's less than 1 percent? Or when you say no impact, what do you mean?

A. Because we -- most of these items are post-test-year additions, and with the post-test-year additions, we put in an entire year of depreciation expense and matching over accumulated depreciation as well. That's done for ratemaking purposes. But for book purposes, we need to correct those calculations that they made on their books to recognize that depreciation should have started on the in-service date.

COMMISSIONER BROWN-BLAND: Mr. Junis?

MR. JUNIS: (Charles Junis) Yeah, if you don't mind me adding to the previous question about the materiality. We also recognize that we missed some last rate case, and that's our Exhibit 1 where we point out there was $4.7 million that we missed in terms of project cost that should have had an additional year of depreciation. We didn't think, given that that was decided in the last rate case, that we could reach back and adjust

that in this rate case. But, you know -- so that is -- that placed, I guess, the materiality that, you know, for this rate case we were only looking at a short period of time, from July 1, 2018, to now March of 2020. It's a relatively short period of time of capital investment.

Q. Okay. Thank you for that. And then I'd like -- as I understand it, the concern is the accumulated depreciation. When you lose that year of depreciation, the accumulated depreciation will be less, and that the rate base, you argue, is overstated. And so my next question goes to that concept. Is with -- and just help me understand.

So let's use a hypothetical that you have an asset with a 10-year service life, and you lose that year of depreciation. So you're obtaining all of that accumulated depreciation in 9 years versus 10 years. So would not that accumulated depreciation be more in those other nine years? My question is does -- is it accurate -- is it all a wash and your concern is the front-loading? Or will the accumulated -- are you actually -- when you say you lose that year, are you losing a year? If you could explain that a bit further.

A. (Charles Junis) Mr. Henry, do you want to go first here?

A. (Windley Henry) You're not losing a year. It's not being booked properly to accumulated depreciation. Eventually, you will get the entire cost as accumulated depreciation over time, but for now, we're not getting that full year at the front end versus getting it at the end of the asset's life.

Q. So you do obtain all of the depreciation, that's not the issue, it's just that the rate base is higher in that first year?

A. Correct.

Q. But hypothetically, if -- you know, depending on where their rate of return goes, you know, it could hurt the Company or help the Company, correct, depending on what the rate base is or rate of return is when that depreciation -- when you're determining rate base? Do you see what I'm saying?

A. (Charles Junis) I just want to add that the issue also is that that front-end depreciation would not have been recovered in rates. That would be a byproduct of lag. And so now you're essentially giving yourself a deferral when you delay that unitization date. So you're waiting to start that 10-year time

frame to depreciate that asset, and now all of a sudden you are able to recover that depreciation from customers and that additional return on the higher rate base balance.

Q. So let me follow up with that. So that's what I'm trying to get to. Taking our hypothetical of the 10-year depreciation, that's the life of the asset, you're going to do a straight line, 10 years. So when you don't -- when you lose that first year, are you saying when the depreciation begins, you're not going to recover that depreciation over 9 years, you're going to push it out another year, so it will be actually 10 years beginning a year later?

A. Correct. So because the unitization occurs essentially a year later, the life of that depreciation basically extends a year.

Q. Okay. You answered my question.

A. (Windley Henry) And if you're in for a rate case in the year in which it was unitized, you don't get that rate base -- the amount of rate base reduction that should occur in that first year.

Q. Right. Correct. Thank you. Mr. Junis was -- answered the point I was getting to. Okay. Thank you. I don't think I have anything further.

COMMISSIONER BROWN-BLAND: All right. Commissioner McKissick, do you have a short one? I'm right at the point of our lunch break. Will it take you a minute? Do you need to pick it up after lunch?

COMMISSIONER MCKISSICK: If it's better to pick it up after lunch, that's fine. It may take a few minutes. But if you would like to take lunch, that's fine.

COMMISSIONER BROWN-BLAND: Let's do that. We're going to break for lunch and come back on the record at 1:20. And we'll pick up still on Commissioner's questions with the panel. Thank you.

(At this time, a recess was taken from 12:19 p.m. to 1:22 p.m.)

(The hearing was adjourned at 12:19 p.m. and set to reconvene at 1:20 p.m. on Thursday, July 9, 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