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PLACE: Dobbs Building, Raleigh, North Carolina

DATE: Tuesday, October 16, 2018

TIME: 10:00 a.m. - 1:00 p.m.

DOCKET NO.: W-354, Sub 360

BEFORE: Chairman Edward S. Finley, Jr., Presiding

Commissioner ToNola D. Brown-Bland

Commissioner Jerry C. Dockham

Commissioner James G. Patterson

Commissioner Lyons Gray

Commissioner Daniel G. Clodfelter

Commissioner Charlotte A. Mitchell

IN THE MATTER OF:

Application by

Carolina Water Service, Inc. of North Carolina,

4944 Parkway Plaza Boulevard, Suite 375,

Charlotte, North Carolina 28217

for Authority to Adjust and Increase Rates

for Water and Sewer Utility Service in

All of Its Service Areas in North Carolina, Except

Corolla Light and Monteray Shores Service Area

VOLUME: 7

1 A P P E A R A N C E S:

2 FOR CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA:

3 Jo Anne Sanford, Esq.

4 Sanford Law Office, PLLC

5 Post Office Box 28085

6 Raleigh, North Carolina 27611-8085

7

8 Robert H. Bennink, Jr., Esq.

9 Bennink Law Office

10 130 Murphy Drive

11 Cary, North Carolina 27513

12

13 FOR COROLLA LIGHT COMMUNITY ASSOCIATION, INC.:

14 Brady Allen, Esq.

15 Allen Law Offices, PLLC

16 1514 Glenwood Avenue, Suite 200

17 Raleigh, North Carolina 27604

18

19 FOR THE USING AND CONSUMING PUBLIC:

20 Margaret A. Force, Esq.

21 Assistant Attorney General

22 North Carolina Department of Justice

23 Post Office Box 629

24 Raleigh, North Carolina 27602

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A P P E A R A N C E S Cont'd:
FOR THE USING AND CONSUMING PUBLIC:
Gina C. Holt, Esq.
William E. Grantmyre, Esq.
John D. Little, Esq.
Public Staff - North Carolina Utilities Commission
4326 Mail Service Center
Raleigh, North Carolina 27699-4300

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1 P R O C E E D I N G S :

2 CHAIRMAN FINLEY: Come to order, please.

3 Good morning, ladies and gentlemen. Let's go on
4 the record. My name is Edward Finley, and with me
5 this morning are Commissioners

6 ToNola D. Brown-Bland, Jerry C. Dockham,
7 James, G. Patterson, Lyons Gray,
8 Daniel G. Clodfelter, and Charlotte A. Mitchell.

9 The Commission now calls for hearing at
10 this time for the purpose of taking expert witness
11 testimony in docket number W-354, Sub 360 in the
12 matter of the application of Carolina Water
13 Service, Inc. of North Carolina for authority to
14 increase its water and sewer utility rates in
15 subdivisions of North Carolina, except the Corolla
16 Light and Monteray Shores service areas.

17 On April 27, 2018, the Company filed an
18 application with the Commission seeking authority
19 to increase its rates for water, sewer, and utility
20 service for its service areas in the state
21 effective May 27, 2018. The Company is proposing
22 an increase in its rates for the four rate
23 divisions approved in the last general rate case.
24 And it's also proposing uniform water and sewer

1 rates for the Elk River development.

2 In addition, the Company is requesting
3 authority to implement a consumption band water and
4 wastewater rate adjustment mechanism within each of
5 the Company's rate divisions.

6 On May 22, 2018, the Commission issued
7 its order establishing general rate cases,
8 suspending rates, scheduling hearings, and
9 requiring customer notice. Pursuant to this order,
10 the Commission declares this proceeding to be a
11 general rate case pursuant to G.S. 62-137, and it
12 suspended the proposed new rates for up to 270
13 days. Additionally, the order scheduled the
14 application for evidentiary hearing for expert
15 witnesses at this time and in this place.

16 On May 30, 2018, the Company filed an
17 ongoing three-year WSIC/SSIC plan.

18 On September 4, 2018, in support of its
19 application, the Company filed the direct testimony
20 of witnesses Clark, Linneman and D'Ascendis.

21 The Corolla Light Community Association
22 filed a petition to intervene on
23 September 28, 2018, that was granted by the
24 commission order dated October 10, 2018. We also

1 recognize the intervention and participation in
2 this case by both the Public Staff of the
3 North Carolina Utilities Commission and the Office
4 of the Attorney General of the state.

5 On October 3, 2018, the Public Staff
6 filed the testimony and exhibits of witnesses
7 Casselberry, Johnson, Feasel, and Hinton. The
8 testimony of Witness Boswell was filed on
9 October 4, 2018. And on October 5, the Public
10 Staff filed the supplemental testimony of witness
11 Johnson.

12 On October 11, 2018, the Public Staff
13 filed the supplemental testimony of witness
14 Casselberry.

15 On October 12, 2018, the Public Staff
16 filed the supplemental testimony of witnesses
17 Boswell, Henry, and Hinton, and the second
18 supplemental testimony of witness Johnson.

19 On October 12, 2018, the applicant filed
20 the rebuttal testimony of witnesses DeStefano,
21 Mendenhall, and D'Ascendis.

22 Numerous customer statements of position
23 have been filed in the docket.

24 The public hearing in this matter, for

1 purposes of taking nonexpert witness testimony, was
2 held in New Bern, Wilmington, Charlotte, Boone,
3 Asheville, and Raleigh.

4 Pursuant to the State Ethics Act, I want
5 to remind all members of the Commission of their
6 duty to avoid conflicts of interest and inquire if
7 any member of the Commission has any known conflict
8 of interest regarding matters coming before the
9 Commission this morning.

10 (No response.)

11 CHAIRMAN FINLEY: Let the record reflect
12 that there are no conflicts of interest, so we will
13 proceed by calling on the parties to announce their
14 appearances, beginning with the Company.

15 MS. SANFORD: Good morning. Thank you,
16 Chairman Finley, members of the Commission. I'm
17 Jo Anne Sanford with Sanford Law Office
18 representing Carolina Water Service of
19 North Carolina this morning. With me at counsel
20 table is Bob Bennink, co-counsel; Matthew Klein,
21 who is the state president for Carolina Water; and
22 I would like to make an introduction this morning
23 of someone who is new to Carolina Water and new to
24 North Carolina. Dante DeStefano is -- walked in

1 the door and into this rate case with the Company,
2 having previously been with American Water. So he
3 is new to the Company and new to the Commission.
4 Thank you.

5 MR. ALLEN: Good morning, Mr. Chairman,
6 Commissioners. My name is Brady Allen. I'm with
7 the Allen Law Offices, PLLC, and I represent the
8 Corolla Light Community Association who are
9 intervenors in this matter.

10 MS. FORCE: Good morning. My name is
11 Margaret Force, Assistant Attorney General with the
12 Attorney General's Office representing using and
13 consuming public.

14 MS. HOLT: Good morning. I'm Gina Holt
15 with the Public Staff here on behalf of the using
16 and consuming public, and appearing with me today
17 is Public Staff attorney, William Grantmyre, and
18 Public Staff attorney, John Little.

19 CHAIRMAN FINLEY: All right. Any
20 preliminary matters that we need to address before
21 we begin?

22 (No response.)

23 CHAIRMAN FINLEY: All right. Carolina
24 Water.

1 MR. BENNINK: Mr. Chairman, Carolina
2 Water Service calls Dylan D'Ascendis to the witness
3 stand, please.

4 MR. GRANTMYRE: Mr. Chairman, one
5 procedural matter. I think it's what we're doing
6 on this is Mr. D'Ascendis will do direct testimony,
7 then Mr. Hinton will testify, and then
8 Mr. D'Ascendis will do his rebuttal testimony.

9 MR. BENNINK: That's correct.

10 CHAIRMAN FINLEY: Very well.

11 DYLAN D'ASCENDIS,
12 having first been duly sworn, was examined
13 and testified as follows:

14 DIRECT EXAMINATION BY MR. BENNINK:

15 Q. Mr. D'Ascendis, would you state your name and
16 business record -- business address for the record,
17 please?

18 A. Sure. My name is Dylan W. D'Ascendis. I'm a
19 director at Scott Madden, Inc., and my business address
20 is 4000 Atrium Way in Mount Laurel, New Jersey 08054.

21 Q. And are you appearing today to testify on
22 behalf of Carolina Water Service Incorporated of
23 North Carolina?

24 A. I am.

1 Q. Did you prefile testimony in this docket --
2 direct testimony of 47 pages along with a cover sheet
3 and a table of contents and Appendix A, which are your
4 professional qualifications?

5 A. Yes.

6 Q. And did you also prefile Exhibits DWD-1 and
7 DWD-8 [sic]?

8 A. Yes.

9 Q. If you were asked the same questions that
10 appear in your prefiled testimony today, would your
11 answers be the same?

12 A. They would.

13 Q. And do you have any additions or corrections
14 to make to the testimony?

15 A. I don't.

16 Q. All right.

17 MR. BENNINK: Mr. Chairman, the Company
18 would ask that Mr. D'Ascendis' prefiled direct
19 testimony be copied into the record as if given
20 orally from the stand.

21 CHAIRMAN FINLEY: Mr. D'Ascendis' direct
22 prefiled testimony of 47 pages of October 12, 2018,
23 is copied into the record as if given orally from
24 the stand, and his Exhibits 1 and 8 [sic] are

1 marked for identification as if premarked in the
2 filing.

3 (D'Ascendis Direct Exhibit Number 1,
4 Schedules DWD-1 through DWD-8 was marked
5 for identification.)

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

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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-354, SUB 360

In the Matter of
Application by Carolina Water Service, Inc. of North Carolina
for Authority to Adjust and Increase Rates for
Water and Sewer Utility Service in All of Its Service Areas in
North Carolina, Except Corolla Light and Monteray Shores Service
Area

Pre-filed Direct Testimony

Of

DYLAN D'ASCENDIS, CRRA, CVA

On Behalf Of
CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA

September 4, 2018

FILED
SEP 05 REC'D
Clerk's Office
N.C. Utilities Commission

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1 I. **INTRODUCTION**

2 A. **Witness Identification**

3 Q. **Please state your name and business address.**

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

6 Q. **By whom are you employed and in what capacity?**

7 A. I am a Director at ScottMadden, Inc.

8 B. **Background and Qualifications**

9 Q. **Please summarize your professional experience and educational
10 background.**

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

1 **II. PURPOSE OF TESTIMONY**

2 **Q. What is the purpose of your testimony in this proceeding?**

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

7 **Q. Have you prepared an exhibit in support of your recommendation?**

8 A. Yes. I have prepared D'Ascendis Exhibit No. 1 which consists of Schedules
9 DWD-1 through DWD-8.

10 **Q. What is your recommended cost of capital for CWSNC?**

11 A. I recommend the North Carolina Utilities Commission ("NCUC" or the
12 "Commission") authorize the Company the opportunity to earn an overall
13 rate of return between 8.91% and 9.12% based on a test year ending
14 December 31, 2017. The ratemaking capital structure consists of 47.11%
15 long-term debt at an embedded debt cost rate of 6.00%, and 52.89%
16 common equity at my recommended range of common equity cost rates
17 between 11.50% and 11.90%. The overall rate of return is summarized on
18 page 1 of Schedule DWD-1 and in Table 1 below:

19 **Table 1: Summary of Overall Rate of Return**

<u>Type of Capital</u>	<u>Ratios</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>
Long-Term Debt	47.11%	6.00%	2.83%
Common Equity	<u>52.89%</u>	11.50% - 11.90%	<u>6.08% - 6.29%</u>
Total	100.00%		8.91% - 9.12%

1 III. **SUMMARY**

2 Q. Please summarize your recommended range of common equity cost
3 rates.

4 A. My recommended range of common equity cost rates between 11.50% and
5 11.90% is summarized on page 2 of Schedule DWD-1. I have assessed
6 the market-based common equity cost rates of companies of relatively
7 similar, but not necessarily identical, risk to CWSNC. Using companies of
8 relatively comparable risk as proxies is consistent with the principles of fair
9 rate of return established in the *Hope*¹ and *Bluefield*² cases. No proxy
10 group can be identical in risk to any single company, so there must be an
11 evaluation of relative risk between the company and the proxy group to see
12 if it is appropriate to make adjustments to the proxy group's indicated rate
13 of return.

14 My recommendation results from the application of several cost of
15 common equity models, specifically the Discounted Cash Flow ("DCF")
16 model, the Risk Premium Model ("RPM"), and the Capital Asset Pricing
17 Model ("CAPM"), to the market data of a proxy group of six water companies
18 ("Utility Proxy Group") whose selection criteria will be discussed below. In
19 addition, I also applied the DCF, RPM, and CAPM to a proxy group of
20 domestic, non-price regulated companies comparable in total risk to the six
21 water companies ("Non-Price Regulated Proxy Group").

1 *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

2 *Bluefield Water Works Improvement Co. v. Public Serv. Comm'n*, 262 U.S. 679 (1922).

1 The results derived from each are as follows:

2 **Table 2: Summary of Common Equity Cost Rate**

	Utility Proxy Group
3 Discounted Cash Flow Model	9.10%
4 Risk Premium Model	12.12
5 Capital Asset Pricing Model	11.31
6 Cost of Equity Models Applied to	
7 Comparable Risk, Non-Price	
8 Regulated Companies	<u>12.63</u>
9 Indicated Common Equity	
10 Cost Rate Before Adjustment	11.50%
11 Size Adjustment	<u>0.40</u>
12 Recommended Range of Common Equity	
13 Cost Rates After Adjustment	<u>11.50% - 11.90%</u>

16 After analyzing the indicated common equity cost rates derived by
 17 these models, I conclude that a common equity cost rate of 11.50% for the
 18 Company is indicated before any Company-specific adjustments. The
 19 indicated common equity cost rate was then adjusted upward by 0.40% to
 20 reflect CWSNC's smaller relative size as compared with the members of the
 21 Utility Proxy Group, resulting in a size-adjusted indicated common equity
 22 cost rate of 11.90%. My recommended range is defined by the indicated
 23 common equity cost rate before adjustment (11.50%) and the size-adjusted
 24 common equity cost rate (11.90%).

1 IV. GENERAL PRINCIPLES

2 Q. What general principles have you considered in arriving at your
3 recommended range of common equity cost rates between 11.50%
4 and 11.90%?

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

1 **A. Business Risk**

2 **Q. Please define business risk and explain why it is important to the**
3 **determination of a fair rate of return.**

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

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

14 **Q. What business risks do the water and wastewater industries face in**
15 **general?**

16 **A. Water and wastewater utilities have an ever-increasing responsibility to be**
17 **stewards of the environment from which supplies are drawn in order to**
18 **preserve and protect essential natural resources of the United States. This**
19 **increased environmental stewardship is a direct result of compliance with**
20 **the Safe Water Drinking Act and response to continuous monitoring by the**
21 **Environmental Protection Agency ("EPA") and state and local governments**
22 **of the water supply for potential contaminants and their resultant**
23 **regulations. This, plus aging infrastructure, necessitate additional capital**

1 investment in the distribution and treatment of water, exacerbating the
2 pressure on free cash flows arising from increased capital expenditures for
3 infrastructure repair and replacement. The significant amount of capital
4 investment and, hence, high capital intensity, is a major risk factor for the
5 water and wastewater utility industry.

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

8 Following several decades of neglect, the nation's
9 water infrastructure was left in terrible condition.
10 Pipeline systems were antiquated and waste facilities
11 needed to be upgraded and expanded to handle
12 greater demand. The neglect was not purposeful. It
13 was mostly caused by regulators not wanting to raise
14 customers (i.e. voters) water bills, and utilities not
15 wanting to make sizable investments, in which there
16 was uncertainty regarding the what [sic] level of return
17 they would be granted. Fortunately, the two sides got
18 together and realized that massive amounts of funds
19 would be required to modernize the domestic water
20 delivery systems. Though they are playing catch up,
21 most believe the industry and regulators have done a
22 decent job of addressing the issue. Fixing the water
23 infrastructure will still take many years, but the
24 commitment has been made to resolve the problem.

25 Perhaps the most important reason behind the strong
26 operation performance turned in by the group is due to
27 the overall national regulatory climate. State
28 authorities realized that the past history of keeping
29 water rates too low came at a high cost. Most public
30 utility commissions understood that they would have to
31 work in partnership with the industry to make sure that
32 the burdensome construction programs were
33 undertaken. Since regulators literally legislate what a
34 utility is allowed to earn on its investment, their
35 importance cannot be overstated.³

³ *Value Line Investment Survey*, January 12, 2018.

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

8 Substantial capital expenditures, as noted by *Value Line*, will require
9 significant financing. The three sources of financing typically used are debt,
10 equity (common and preferred), and cash flow. All three are intricately
11 linked to the opportunity to earn a sufficient rate of return as well as the
12 ability to achieve that return. Consistent with *Hope* and *Bluefield*, the return
13 must be sufficient to maintain credit quality as well as enable the attraction
14 of necessary new capital, be it debt or equity capital. If unable to raise debt
15 or equity capital, the utility must turn to either retained earnings or free cash
16 flow,⁴ both of which are directly linked to earning a sufficient rate of return.
17 The level of free cash flow represents a company's ability to meet the needs
18 of its debt and equity holders. If either retained earnings or free cash flow
19 is inadequate, it will be nearly impossible for the utility to attract the needed
20 capital for new infrastructure investment to ensure quality service to its
21 customers. An insufficient rate of return can be financially devastating for
22 utilities and a public safety issue for their customers.

⁴ Free Cash Flow = Operating Cash Flow (funds from operations) minus Capital Expenditures.

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

7 **B. Financial Risk**

8 **Q. Please define financial risk and explain why it is important to the**
9 **determination of a fair rate of return.**

10 **A.** Financial risk is the additional risk created by the introduction of debt and
11 preferred stock into the capital structure. The higher the proportion of debt
12 and preferred stock in the capital structure, the higher the financial risk (*i.e.*
13 likelihood of default). Therefore, consistent with the basic financial principle
14 of risk and return, investors demand a higher common equity return as
15 compensation for bearing higher default risk.

16 **Q. Can bond and credit ratings be a proxy for the combined business and**
17 **financial risks (*i.e.*, investment risk of an enterprise)?**

18 **A.** Yes, similar bond ratings/issuer credit ratings reflect, and are representative
19 of, similar combined business and financial risks (*i.e.*, total risk) faced by
20 bond investors.⁵ Although specific business or financial risks may differ

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

1 between companies, the same bond/credit rating indicates that the
2 combined risks are roughly similar, albeit not necessarily equal, as the
3 purpose of the bond/credit rating process is to assess credit quality or credit
4 risk and not common equity risk.

5 **Q. That being said, do rating agencies reflect company size in their bond
6 ratings?**

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

10 **V. CAPITAL STRUCTURE**

11 **Q. What capital structure ratios do you recommend be employed in
12 developing an overall fair rate of return appropriate for the Company?**

13 **A.** I recommend the use of a ratemaking capital structure consisting of 47.11%
14 long-term debt and 52.89% common equity as shown on page 1 of
15 Schedule DWD-1. This capital structure is based on a test year capital
16 structure for CWSNC, ending December 31, 2017.

17 **Q. How does your proposed ratemaking common equity ratio of 52.89%
18 for CWSNC compare with the total equity ratios maintained by the
19 companies in your Utility Proxy Group?**

20 **A.** My proposed ratemaking common equity ratio of 52.89% for CWSNC is
21 reasonable and consistent with the range of total equity ratios maintained,
22 on average, by the companies in the Utility Proxy Group on which I base

1 my recommended common equity cost rate. As shown on page 2 of
2 Schedule DWD-2, the common equity ratios of the Utility Proxy Group range
3 from 44.12% to 62.25%, with a midpoint of 53.19% and an average of
4 54.61% in 2017. The equity ratio, on average, maintained by the Utility
5 Proxy Group is higher than the equity ratio requested by the Company.

6 In my opinion, a capital structure consisting of 47.11% long-term debt
7 and 52.89% total equity is appropriate for ratemaking purposes for CWSNC
8 in the current proceeding because it is comparable, but conservative, to the
9 average capital structure ratios (based on total permanent capital)
10 maintained by the water companies in the Utility Proxy Group on whose
11 market data I base my recommended common equity cost rate.

12 **Q. What cost rate for long-term debt is most appropriate for use in a cost**
13 **of capital determination for CWSNC?**

14 **A.** A long-term debt cost rate of 6.00% is reasonable and appropriate as it is
15 based on a test year of the Company's long-term debt outstanding ending
16 December 31, 2017.

17 **VI. CWSNC AND THE UTILITY PROXY GROUP**

18 **Q. Are you familiar with the operations of CWSNC?**

19 **A.** Yes. CWSNC's is headquartered in Charlotte, North Carolina, and its
20 operations span the state from Bear Paw to Corolla. CWSNC serves
21 approximately 35,000 water customers and 15,000 sewer customers.
22 CWSNC is not publicly-traded.

1 Q. Please explain how you chose your proxy group of six water
2 companies.

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

5 (i) They are included in the Water Utility Group of *Value Line's Standard*
6 *Edition* (January 12, 2018);

7 (ii) They have 70% or greater of 2017 total operating income and 70%
8 or greater of 2017 total assets attributable to regulated water
9 operations;

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

14 (iv) They have not cut or omitted their common dividends during the five
15 years ending 2017 or through the time of the preparation of this
16 testimony;

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

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

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

1 The following six companies met these criteria: American States
2 Water Co., American Water Works Co., Inc., Aqua America, Inc., California
3 Water Service Group, Middlesex Water Co., and York Water Co.

4 **Q. Please describe schedule DWD-2, page 1.**

5 **A.** Page 1 of Schedule DWD-2 contains comparative capitalization and
6 financial statistics for the six water companies identified above for the years
7 2013 to 2017.

8 During the five-year period ending 2017, the historically achieved
9 average earnings rate on book common equity for the group averaged
10 10.68%. The average common equity ratio based on total permanent
11 capital (excluding short-term debt) was 54.56%, and the average dividend
12 payout ratio was 58.60%.

13 Total debt to earnings before interest, taxes, depreciation, and
14 amortization ("EBITDA") for the years 2013 to 2017 ranges between 3.51
15 and 3.56, with an average of 3.45. Funds from operations to total debt
16 range from 22.50% to 26.48%, with an average of 24.38%.

17 **VII. COMMON EQUITY COST RATE MODELS**

18 **Q. Are your cost of common equity models market-based models?**

19 **A.** Yes. The DCF model is market-based because market prices are used in
20 developing the dividend yield component of the model. The RPM is market-
21 based because the bond ratings and expected bond yields used in the
22 application of the RPM reflect the market's assessment of bond/credit risk.
23 In addition, the use of beta coefficients (β) to determine the equity risk

1 premium reflects the market's assessment of market/systematic risk, since
2 beta coefficients are derived from regression analyses of market prices.
3 The Predictive Risk Premium Model ("PRPM") uses monthly market returns
4 in addition to expectations of the risk-free rate. The CAPM is market-based
5 for many of the same reasons that the RPM is market-based (*i.e.*, the use
6 of expected bond yields and betas). Selection of the comparable risk non-
7 price regulated companies is market-based because it is based on statistics
8 which result from regression analyses of market prices and reflect the
9 market's assessment of total risk.

10 **A. Discounted Cash Flow Model**

11 **Q. What is the theoretical basis of the DCF model?**

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

21 **Q. Which version of the DCF model do you use?**

22 **A.** I use the single-stage constant growth DCF model.

1 Q. Please describe the dividend yield you used in your application of the
2 DCF model.

3 A. The unadjusted dividend yields are based on the proxy companies'
4 dividends as of March 29, 2018, divided by the average of closing market
5 prices for the 60 trading days ending March 29, 2018.⁶

6 Q. Please explain your adjustment to the dividend yield.

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

11 DCF theory calls for the use of the full growth rate, or D_1 , in
12 calculating the dividend yield component of the model. Since the various
13 companies in the Utility Proxy Group increase their quarterly dividend at
14 various times during the year, a reasonable assumption is to reflect one-
15 half the annual dividend growth rate in the dividend yield component, or
16 $D_{1/2}$. Because the dividend should be representative of the next twelve-
17 month period, my adjustment is a conservative approach that does not
18 overstate the dividend yield. Therefore, the actual average dividend yields
19 in Column 1 on page 1 of Schedule DWD-3 have been adjusted upward to
20 reflect one-half the average projected growth rate shown in Column 6.

⁶ See Schedule DWD-3, page 1; column 1.

1 Q. Please explain the basis of the growth rates you apply to the Utility
2 Proxy Group in your DCF model.

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

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

17 Q. Please summarize the DCF model results.

18 A. As shown on page 1 of Schedule DWD-3, the mean result of the application
19 of the single-stage DCF model is 9.12%, the median result is 9.07%, and
20 the average of the two is 9.10% for the Utility Proxy Group. In arriving at a
21 conclusion for the DCF-indicated common equity cost rate for the Utility
22 Proxy Group, I have relied on an average of the mean and the median
23 results of the DCF. This approach takes into consideration all the proxy

1 companies' results, while mitigating the high and low outliers of those
2 individual results.

3 **B. The Risk Premium Model**

4 **Q. Please describe the theoretical basis of the RPM.**

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

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

1 Q. Please explain how you derived your indicated cost of common equity
2 based on the RPM.

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

6 Q. Please explain the PRPM.

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

15 The PRPM estimates the risk / return relationship directly, as the
16 predicted equity risk premium is generated by the prediction of volatility or
17 risk. The PRPM is not based on an estimate of investor behavior, but rather
18 on the evaluation of the results of that behavior (*i.e.*, the variance of
19 historical equity risk premiums).

⁷ Autoregressive conditional heteroscedasticity. See "A New Approach for Estimating the Equity Risk Premium for Public Utilities", Pauline M. Ahern, Frank J. Hanley and Richard A. Michelfelder, Ph.D. The Journal of Regulatory Economics (December 2011), 40:261-278.

⁸ www.nobelprize.org.

1 The inputs to the model are the historical returns on the common
2 shares of each company in the Utility Proxy Group minus the historical
3 monthly yield on long-term U.S. Treasury securities through March 2018.
4 Using a generalized form of ARCH, known as GARCH, I calculate each
5 Utility Proxy Group company's projected equity risk premium using Eviews®
6 statistical software. When the GARCH Model is applied to the historical
7 return data, it produces a predicted GARCH variance series⁹ and a GARCH
8 coefficient¹⁰. Multiplying the predicted monthly variance by the GARCH
9 coefficient and annualizing it¹¹ produces the predicted annual equity risk
10 premium. I then add the forecasted 30-year U.S. Treasury Bond yield,
11 3.69%¹², to each company's PRPM-derived equity risk premium to arrive at
12 an indicated cost of common equity. The 30- year Treasury yield is a
13 consensus forecast derived from the Blue Chip Financial Forecasts ("Blue
14 Chip")¹³. The mean PRPM indicated common equity cost rate for the Utility
15 Proxy Group is 13.52%, the median is 13.33%, and the average of the two
16 is 13.43%. Consistent with my reliance on the average of the median and
17 mean results of the DCF, I will rely on the average of the mean and median
18 results of the Utility Proxy Group PRPM to calculate a cost of common
19 equity rate of 13.43%.

⁹ Illustrated on Columns 1 and 2 of page 2 of Schedule DWD-4.

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

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

¹² See column 6 of page 2 of Schedule DWD-4.

¹³ Blue Chip Financial Forecasts, December 1, 2017 at p. 14 and April 1, 2018 at p. 2.

1 Q. **Please explain the total market approach RPM.**

2 A. The total market approach RPM adds a prospective public utility bond yield
3 to an average of 1) an equity risk premium that is derived from a beta-
4 adjusted total market equity risk premium, and 2) an equity risk premium
5 based on the S&P Utilities Index.

6 Q. **Please explain the basis of the expected bond yield of 5.00%**
7 **applicable to the Utility Proxy Group.**

8 A. The first step in the total market approach RPM analysis is to determine the
9 expected bond yield. Because both ratemaking and the cost of capital,
10 including common equity cost rate, are prospective in nature, a prospective
11 yield on similarly-rated long-term debt is essential. I rely on a consensus
12 forecast of about 50 economists of the expected yield on Aaa-rated
13 corporate bonds for the six calendar quarters ending with the third calendar
14 quarter of 2019 and the long-term projections for 2019 to 2023, and 2024
15 to 2028 from Blue Chip. As shown on Line No. 1 of page 3 of Schedule
16 DWD-4, the average expected yield on Moody's Aaa-rated corporate bonds
17 is 4.66%. In order to derive an expected yield on A2 rated-public utility
18 bonds, I make an upward adjustment of 0.28%, which represents a recent
19 spread between Aaa corporate bonds and A2-rated public utility bonds, in
20 order to adjust the expected Aaa corporate bond yield to an equivalent
21 Moody's A2-rated public utility bond.¹⁴ Adding that recent 0.28% spread to

¹⁴ As shown on Line No. 2 and explained in note 2 of page 3 of Schedule DWD-4.

1 the expected Aaa corporate bond yield of 4.66% results in an expected A2
2 public utility bond of 4.94%.

3 Since the Utility Proxy Group's average Moody's long-term issuer
4 rating is A2/A3, another adjustment to the expected A2 public utility bond
5 yield is needed to reflect the difference in bond ratings. An upward
6 adjustment of 0.06%, which represents one-sixth of a recent spread
7 between A2 and A3 public utility bond yields, is necessary to make the A2
8 prospective bond yield applicable to an A2/A3 public utility bond.¹⁵ Adding
9 the 0.06% to the 4.94% prospective A2 public utility bond yield results in a
10 5.00% expected bond yield for the Utility Proxy Group.

11 **Q. Please explain how the beta-derived equity risk premium is**
12 **determined.**

13 **A.** The components of the beta derived risk premium model are 1) an expected
14 market equity risk premium over corporate bonds, and 2) the beta
15 coefficient. The derivation of the beta-derived equity risk premium that I
16 apply to the Utility Proxy Group is shown on lines 1 through 11 of page 8 of
17 Schedule DWD-4. The total beta-derived equity risk premium I apply is
18 based on an average of: 1) Historical data-based equity risk premiums; 2)
19 *Value Line*-based equity risk premiums; and 3) Bloomberg-based equity risk
20 premium. Each of these is described in turn.

¹⁵ As shown on Line No. 4 and explained in note 3 on page 3 of Schedule DWD-4.

1 Q. How did you derive a market equity risk premium based on long-term
2 historical data?

3 A. To derive a historical market equity risk premium, I used the most recent
4 holding period returns for the large company common stocks from the 2017
5 Stocks, Bonds, Bills, and Inflation ("SBBI") Yearbook ("SBBI – 2017")¹⁶ less
6 the average historical yield on Moody's Aaa/Aa-rated corporate bonds for
7 the period 1928 to 2016. The use of holding period returns over a very long
8 period of time is appropriate because it is consistent with the long-term
9 investment horizon presumed by investing in a going concern, *i.e.*, a
10 company expected to operate in perpetuity.

11 SBBI's long-term arithmetic mean monthly total return rate on large
12 company common stocks was 11.69% and the long-term arithmetic mean
13 monthly yield on Moody's Aaa/Aa-rated corporate bonds was 6.13%.¹⁷ As
14 shown on line 1 of page 8 of Schedule DWD-4, subtracting the mean
15 monthly bond yield from the total return on large company stocks results in
16 a long-term historical equity risk premium of 5.56%.

17 I used the arithmetic mean monthly total return rates for the large
18 company stocks and yields (income returns) for the Moody's Aaa/Aa
19 corporate bonds, because they are appropriate for the purpose of
20 estimating the cost of capital as noted in SBBI – 2017.¹⁸ The use of the
21 arithmetic mean return rates and yields is appropriate because historical

¹⁶ SBBI Appendix A Tables: Morningstar Stocks, Bonds, Bills, & Inflation 1926-2016.

¹⁷ As explained in note 1 on page 9 of Schedule DWD-4.

¹⁸ SBBI – 2017, at 10-22.

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

8 **Q. Please explain the derivation of the regression-based market equity**
9 **risk premium.**

10 **A.** To derive the regression analysis-derived market equity risk premium of
11 7.31%, shown on line 2 of page 8 of Schedule DWD-4, I used the same
12 monthly annualized total returns on large company common stocks relative
13 to the monthly annualized yields on Moody's Aaa/Aa corporate bonds as
14 mentioned above. The relationship between interest rates and the market
15 equity risk premium was modeled using the observed monthly market equity
16 risk premium as the dependent variable, and the monthly yield on Moody's
17 Aaa/Aa corporate bonds as the independent variable. I used a linear
18 Ordinary Least Squares ("OLS") regression, in which the market equity risk
19 premium is expressed as a function of the Moody's Aaa/Aa corporate bonds
20 yield:

$$21 \quad RP = \alpha + \beta (R_{Aaa/Aa})$$

1 Q. **Please explain the derivation of a PRPM equity risk premium.**

2 A. I used the same PRPM approach described previously to develop another
3 equity risk premium estimate. The inputs to the model are the historical
4 monthly returns on large company common stocks minus the monthly yields
5 on Aaa/Aa corporate bonds during the period from January 1928 through
6 March 2018.¹⁹ Using the previously discussed generalized form of ARCH,
7 known as GARCH, the projected equity risk premium is determined using
8 Eviews[®] statistical software. The resulting PRPM predicted market equity
9 risk premium is 6.66%.²⁰

10 The average historical data-based equity risk premium is 6.51%,
11 which is shown on line 4 of page 8 of Schedule DWD-4.

12 Q. **Please explain the derivation of a projected equity risk premium based
13 on *Value Line* data for your RPM analysis.**

14 A. As noted previously, because both ratemaking and the cost of capital are
15 prospective, a prospective market equity risk premium is needed. The
16 derivation of the forecasted or prospective market equity risk premium can
17 be found in note 4 on page 8 of Schedule DWD-4. Consistent with my
18 calculation of the dividend yield component in my DCF analysis, this
19 prospective market equity risk premium is derived from an average of the
20 three- to five-year median market price appreciation potential by *Value Line*
21 for the thirteen weeks ending March 30, 2018, plus an average of the

¹⁹ Data from January 1926-December 2016 is from SBBI – 2017. Data from January – March 2018 is from Bloomberg Professional Services.

²⁰ Shown on Line No. 3 on page 8 of Schedule DWD-4.

1 median estimated dividend yield for the common stocks of the 1,700 firms
2 covered in *Value Line's* Standard Edition.²¹

3 The average median expected price appreciation is 33%, which
4 translates to a 7.39% annual appreciation, and, when added to the average
5 of *Value Line's* median expected dividend yields of 1.95%, equates to a
6 forecasted annual total return rate on the market of 9.34%. The forecasted
7 Aaa bond yield of 4.66% is deducted from the total market return of 9.34%,
8 resulting in an equity risk premium of 4.68%, shown on page 8, line 5 of
9 Schedule DWD-4.

10 **Q. Please explain the derivation of an equity risk premium based on the**
11 **S&P 500 companies.**

12 **A.** Using data from *Value Line*, I calculate an expected total return on the S&P
13 500 using expected dividend yields and long-term growth estimates as a
14 proxy for capital appreciation. The expected total return for the S&P 500 is
15 15.73%. Subtracting the prospective yield on Aaa Corporate bonds of
16 4.66% results in an 11.07% projected equity risk premium.

17 The average *Value Line*-based Equity risk premium is 7.87%, which
18 is shown on Line No. 7 on page 8 of Schedule DWD-4.

²¹ As explained in detail in page 2, note 1 of Schedule DWD-5.

1 Q. Please explain the derivation of an equity risk premium based on
2 Bloomberg data.

3 A. Using data from Bloomberg Professional Services, I calculate an expected
4 total return on the S&P 500 using expected dividend yields and long-term
5 growth estimates as a proxy for capital appreciation, identical to the method
6 described above. The expected total return for the S&P 500 is 14.59%.
7 Subtracting the prospective yield on Aaa Corporate bonds of 4.66% results
8 in a 9.93% projected equity risk premium.

9 Q. What is your conclusion of a beta-derived equity risk premium for use
10 in your RPM analysis?

11 A. I give equal weight to equity risk premiums based on each source, historical,
12 *Value Line*, and Bloomberg, in arriving at my conclusion of 8.10%.²²

13 After calculating the average market equity risk premium of 8.10%, I
14 adjust it by beta to account for the risk of the Utility Proxy Group. As
15 discussed below, the beta coefficient is a meaningful measure of
16 prospective relative risk to the market as a whole and is a logical means by
17 which to allocate a company's, or proxy group's, share of the market's total
18 equity risk premium relative to corporate bond yields. As shown on page 1
19 of Schedule DWD-5, the average of the mean and median beta coefficient
20 for the Utility Proxy Group is 0.82. Multiplying the beta coefficient of the
21 Utility Proxy Group of 0.82 by the market equity risk premium of 8.10%

²² 8.10% = (6.51% + 7.87% + 9.93%)/3. See Line No. 9 on page 8 of Schedule DWD-4.

1 results in a beta-adjusted equity risk premium of 6.64% for the Utility Proxy
2 Group.

3 **Q. How did you derive the equity risk premium based on the S&P Utility**
4 **Index and Moody's A-rated public utility bonds?**

5 A. I estimated three equity risk premiums based on S&P Utility Index holding
6 returns, and two equity risk premiums based on the expected returns of the
7 S&P Utilities Index, using *Value Line* and Bloomberg data, respectively.
8 Turning first to the S&P Utility Index holding period returns, I derived a long-
9 term monthly arithmetic mean equity risk premium between the S&P Utility
10 Index total returns of 10.63% and monthly A-rated public utility bond yields
11 of 6.59% from 1928 to 2017 to arrive at an equity risk premium of 4.04%.²³
12 I then used the same historical data to derive an equity risk premium of
13 5.61% based on a regression of the monthly equity risk premiums. The final
14 S&P Utility Index holding period equity risk premium involved applying the
15 PRPM using the historical monthly equity risk premiums from January 1928
16 to March 2018 to arrive at a PRPM-derived equity risk premium of 4.18%
17 for the S&P Utility Index. The average of the three S&P Utilities Index
18 holding return equity risk premiums is 4.61%.

19 I then derived expected total returns on the S&P Utilities Index of
20 9.80% and 10.31% using data from *Value Line* and Bloomberg Professional
21 Services, respectively, and subtracted the prospective A2-rated public utility

²³ As shown on Line No. 1 on page 12 of Schedule DWD-4.

1 bond yield (4.94%²⁴), which results in risk premiums of 4.86% and 5.37%,
2 respectively. As with the market equity risk premiums, I averaged the risk
3 premium based on each source (*i.e.*, Historical, *Value Line*, and Bloomberg)
4 to arrive at my utility-specific equity risk premium of 4.95%.²⁵

5 **Q. What is your conclusion of an equity risk premium for use in your total**
6 **market approach RPM analysis?**

7 A. The equity risk premium I apply to the Utility Proxy Group is 5.80%, which
8 is the average of the beta-derived and the S&P utility equity risk premiums
9 of 6.64% and 4.95%, respectively.²⁶

10 **Q. What is the indicated RPM common equity cost rate based on the total**
11 **market approach?**

12 A. As shown on Line No. 7 of Schedule DWD-4, page 3, I calculate a common
13 equity cost rate of 10.80% for the Utility Proxy Group based on the total
14 market approach of the RPM.

15 **Q. What are the results of your application of the PRPM and the total**
16 **market approach RPM?**

17 A. As shown on page 1 of Schedule DWD-4, the indicated RPM-derived
18 common equity cost rate is 12.12%, which gives equal weight to the PRPM
19 (13.43%) and the adjusted market approach results (10.80%).

²⁴ Derived on Line No. 3 of page 3 of Schedule DWD-4.

²⁵ $4.95\% = (4.41\% + 4.86\% + 5.37\%) / 3$.

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

1 **C. The Capital Asset Pricing Model**

2 Q. **Please explain the theoretical basis of the CAPM.**

3 A. CAPM theory defines risk as the co-variability of a security's returns with
4 the market's returns as measured by the beta coefficient (β). A beta
5 coefficient less than 1.0 indicates lower variability than the market as a
6 whole, while a beta coefficient greater than 1.0 indicates greater variability
7 than the market.

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

18 $R_s = R_f + \beta(R_m - R_f)$

19 Where: R_s = Return rate on the common stock

20 R_f = Risk-free rate of return

21 R_m = Return rate on the market as a whole

22 β = Adjusted beta coefficient (volatility of the
23 security relative to the market as a whole)

1 Numerous tests of the CAPM have measured the extent to which
2 security returns and beta coefficients are related as predicted by the CAPM,
3 confirming its validity. The empirical CAPM ("ECAPM") reflects the reality
4 that while the results of these tests support the notion that the beta
5 coefficient is related to security returns, the empirical Security Market Line
6 ("SML") described by the CAPM formula is not as steeply sloped as the
7 predicted SML.²⁷ In view of theory and practical research, I have applied
8 both the traditional CAPM and the ECAPM to the companies in the Utility
9 Proxy Group and averaged the results.

10 **Q. What beta coefficients did you use in your CAPM analysis?**

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

19 **Q. Please describe your selection of a risk-free rate of return.**

20 **A.** As shown in column 5 on page 1 of Schedule DWD-5, the risk-free rate
21 adopted for both applications of the CAPM is 3.69%. This risk-free rate of

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

1 3.69% is based on the average of the *Blue Chip* consensus forecast of the
2 expected yields on 30-year U.S. Treasury bonds for the six quarters ending
3 with the third calendar quarter of 2019 and long-term projections for the
4 years 2019 to 2023 and 2024 to 2028.

5 **Q. Why is the yield on long-term U.S. Treasury Bonds appropriate for use**
6 **as the risk-free rate?**

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

14 **Q. Please explain the estimation of the expected risk premium for the**
15 **market used in your CAPM analyses.**

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

- 19 (i) Historical data-based market risk premiums;
- 20 (ii) *Value Line* data-based market risk premiums; and
- 21 (iii) Bloomberg data-based market risk premium.

22 The long-term income return on U.S. Government Securities of
23 5.17% was deducted from the SBBI-2017 monthly historical total market

1 return of 11.97%, which results in an historical market equity risk premium
2 of 6.80%.²⁸ I applied a linear OLS regression to the monthly annualized
3 historical returns on the S&P 500 relative to historical yields on long-term
4 U.S. Government Securities from SBBI-2017. That regression analysis
5 yielded a market equity risk premium of 8.49%. The PRPM market equity
6 risk premium is 7.55%, and is derived using the PRPM relative to the yields
7 on long-term U.S. Treasury securities from January 1926 through March
8 2018. The average of the historical data-based market risk premiums is
9 7.61%.

10 The *Value Line*-derived forecasted total market equity risk premium
11 is derived by deducting the forecasted risk-free rate of 3.69%, discussed
12 above, from the *Value Line* projected total annual market return of 9.34%,
13 resulting in a forecasted total market equity risk premium of 5.65%. The
14 S&P 500 projected market equity risk premium using *Value Line* data is
15 derived by subtracting the projected risk-free rate of 3.69% from the
16 projected total return of the S&P 500 of 15.73%. The resulting market equity
17 risk premium is 12.04%. The average *Value Line* market risk premium is
18 8.84%.

19 The S&P 500 projected market equity risk premium using Bloomberg
20 data is derived by subtracting the projected risk-free rate of 3.69% from the
21 projected total return of the S&P 500 of 14.59%. The resulting market equity
22 risk premium is 10.90%.

²⁸ SBBI – 2017, at Appendix A-1 (1) through A-1 (3) and Appendix A-7 (19) through A-7 (21).

1 These three sources (historical, *Value Line*, and Bloomberg), when
2 averaged, result in an average total market equity risk premium of 9.12%.²⁹

3 Q. **What are the results of your application of the traditional and empirical
4 CAPM to the Utility Proxy Group?**

5 A. As shown on page 1 of Schedule DWD-5, the mean result of my
6 CAPM/ECAPM analyses is 11.25%, the median is 11.37%, and the average
7 of the two is 11.31%. Consistent with my reliance on the average of mean
8 and median DCF results discussed above, the indicated common equity
9 cost rate using the CAPM/ECAPM is 11.31%.

10 D. **Common Equity Cost Rates for a Proxy Group of Domestic,
11 Non-Price Regulated Companies Based on the DCF, RPM, and
12 CAPM**

13 Q. **Why do you also consider a proxy group of domestic, non-price
14 regulated companies?**

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

²⁹ 9.12% = (7.61% + 8.84% + 10.90%)/3.

1 empirically results in a proxy group which is comparable in total risk to the
2 Utility Proxy Group.

3 **Q. How did you select unregulated companies that are comparable in**
4 **total risk to the regulated public Utility Proxy Group?**

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

- 14 (i) They must be covered by *Value Line Investment Survey* (Standard
15 Edition);
- 16 (ii) They must be domestic, non-price regulated companies, *i.e.*, non-
17 utilities;
- 18 (iii) Their beta coefficients must lie within plus or minus two standard
19 deviations of the average unadjusted beta of the Utility Proxy Group;
20 and
- 21 (iv) The residual standard errors of the *Value Line* regressions which
22 gave rise to the unadjusted beta coefficients must lie within plus or

1 minus two standard deviations of the average residual standard error
2 of the Utility Proxy Group.

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

9 **Q. Have you prepared a schedule which shows the data from which you**
10 **selected the seventeen domestic, non-price regulated companies that**
11 **are comparable in total risk to the Utility Proxy Group?**

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

14 **Q. Did you calculate common equity cost rates using the DCF, RPM, and**
15 **CAPM for the Non-Price Regulated Proxy Group?**

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

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

1 the Non-Price Regulated Proxy Group comparable in total risk to the Utility
2 Proxy Group, is 14.15%.

3 Pages 3 through 5 contain the data and calculations that support the
4 12.46% RPM cost rate. As shown on Line No. 1 of page 3 of Schedule
5 DWD-7, the consensus prospective yield on Moody's Baa rated corporate
6 bonds for the six quarters ending in the third quarter of 2019, and for the
7 years 2019 to 2023 and 2024 to 2028, is 5.41%.³⁰

8 When the beta-adjusted risk premium of 7.05%³¹ relative to the Non-
9 Price Regulated Proxy Group is added to the prospective Baa2 rated
10 corporate bond yield of 5.41%, the indicated RPM cost rate is 12.46%.

11 Page 6 contains the inputs and calculations that support my indicated
12 CAPM/ECAPM cost rate of 11.78%.

13 **Q. How is the cost rate of common equity based on the Non-Price**
14 **Regulated Proxy Group comparable in total risk to the Utility Proxy**
15 **Group?**

16 **A.** As shown on page 1 of Schedule DWD-7, the results of the DCF, RPM, and
17 CAPM applied to the Non-Price Regulated Proxy Group comparable in total
18 risk to the Utility Proxy Group are 14.15%, 12.46%, and 11.78%,
19 respectively. The average of the mean and median of these models is
20 12.63%, which I use as the indicated common equity cost rate for the Non-
21 Price Regulated Proxy Group.

³⁰ *Blue Chip Financial Forecasts*, December 1, 2017, at p. 14 and April 1, 2018, at p. 2.
³¹ Derived on page 5 of Schedule DWD-7.

1 **VIII. CONCLUSION OF COMMON EQUITY COST RATE BEFORE**
2 **ADJUSTMENT**

3 **Q. What is the indicated common equity cost rate before adjustment?**

4 **A.** Based on the results of the application of multiple cost of common equity
5 models to the Utility Proxy Group and the Non-Price Regulated Proxy
6 Group, the indicated cost of equity before adjustments is 11.50%. I use
7 multiple cost of common equity models as primary tools in arriving at my
8 recommended common equity cost rate, because no single model is so
9 inherently precise that it can be relied on solely to the exclusion of other
10 theoretically sound models. The use of multiple models adds reliability to
11 the estimation of the common equity cost rate, and the prudence of using
12 multiple cost of common equity models is supported in both the financial
13 literature and regulatory precedent.

14 Based on these common equity cost rate results, I conclude that a
15 common equity cost rate of 11.50% is reasonable and appropriate for the
16 Company before any adjustment is made for relative risk between the
17 Company and the Utility Proxy Group. The 11.50% indicated ROE is the
18 approximate average of the mean and median results produced by my
19 application of the models as explained above.

1 **IX. ADJUSTMENTS TO THE COMMON EQUITY COST RATE**

2 **A. Size Adjustment**

3 **Q. Is there a way to quantify a relative risk adjustment due to CWSNC's**
4 **small size relative to the proxy group?**

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

9 **Table 5: Size as Measured by Market Capitalization for the Company**
10 **and the Utility Proxy Group**

	<u>Market Capitalization*</u> (\$ Millions)	<u>Times Greater than the Company</u>
15 CWSNC	\$182.481	
17 Utility Proxy Group	\$4,240.418	23.2x

19 *From page 1 of Schedule DWD-8.

21 The Company's estimated market capitalization was at \$182.481
22 million as of March 29, 2018, compared with the market capitalization of the
23 average water company in the Utility Proxy Group of \$4.240 billion as of
24 March 29, 2018. The Utility Proxy Group's market capitalization is
25 23.2 times the size of CWSNC's estimated market capitalization.

26 **Q. Please explain why size has a bearing on business risk.**

27 **A.** Company size is a significant element of business risk for which investors
28 expect to be compensated through higher returns. Generally, smaller
29 companies are less able to cope with significant events that affect sales,

1 revenues, and earnings. For example, smaller companies face more risk
2 exposure to business cycles and economic conditions, both nationally and
3 locally. Additionally, the loss of revenues from a few larger customers would
4 have a greater effect on a small company than on a much larger company
5 with a larger, more diverse, customer base.

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

12 As a result, it is necessary to upwardly adjust the indicated common
13 equity cost rate of 11.50% to reflect CWSNC's greater risk due to its smaller
14 relative size. The determination is based on the size premiums for portfolios
15 of New York Stock Exchange ("NYSE"), American Stock Exchange
16 ("AMEX"), and NASDAQ listed companies ranked by deciles for the 1926
17 to 2016 period. The average size premium for the Utility Proxy Group with
18 a market capitalization of \$4.240 billion falls in the 4th decile, while
19 CWSNC's market capitalization of \$182.481 million puts the Company in
20 the 10th decile. The size premium spread between the 4th decile and the
21 10th decile is 4.61%. Even though a 4.61% upward size adjustment is
22 indicated, I apply a size premium of 0.40% to CWSNC's indicated common
23 equity cost rate.

1 Q. **What is the indicated cost of common equity after your adjustment for**
 2 **size?**

3 A. After applying the 0.40% size adjustment to the indicated cost of common
 4 equity of 11.50%, a size-adjusted cost of common equity of 11.90% results.

5 X. **ECONOMIC CONDITIONS IN NORTH CAROLINA**

6 Q. **Did you consider the economic conditions in North Carolina in arriving**
 7 **at your recommended cost of common equity?**

8 A. Yes, I did. As the Commission has stated, it "...is and must always be
 9 mindful of the North Carolina Supreme Court's command that the
 10 Commission's task is to set rates as low as possible consistent with the
 11 dictates of the United States and North Carolina Constitutions."³² In that
 12 regard, the cost of common equity should be neither excessive nor
 13 confiscatory; it should be the minimum amount needed to meet the *Hope*
 14 and *Bluefield* Comparable Risk, Capital Attraction, and Financial Integrity
 15 standards.

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

20 ... adjusting investors' required costs based on factors
 21 upon which investors do not base their willingness to
 22 invest is an unsupportable theory or concept. The

³² State of North Carolina Utilities Commission, Docket No. E-7, Sub 1026, Order Granting General Rate Increase, Sept. 24, 2013 at 24; see also DEC Remand Order at 40 ("the Commission in every case seeks to comply with the North Carolina Supreme Court's mandate that the Commission establish rates as low as possible within Constitutional limits.").

1 proper way to take into account customer ability to pay
 2 is in the Commission's exercise of fixing rates as low
 3 as reasonably possible without violating constitutional
 4 proscriptions against confiscation of property. This is in
 5 accord with the "end result" test of Hope. This the
 6 Commission has done.³³

7 The Supreme Court agreed, and upheld the Commission's Order on
 8 Remand.³⁴ The Supreme Court also made clear, however, that "in retail
 9 electric service rate cases the Commission must make findings of fact
 10 regarding the impact of changing economic conditions on customers when
 11 determining the proper ROE for a public utility."³⁵ The Commission made
 12 such additional findings of fact in its Order on Remand.³⁶ In light of the
 13 Cooper I decision, I present measures of economic conditions in the State
 14 and in the nation for the Commission to consider.

15 **Q. What specific measures of economic conditions have you reviewed?**

16 **A.** I have reviewed the following:

- 17 (i) Unemployment rates from the United States, North Carolina, and the
 18 counties comprising CWSNC's service territory;
- 19 (ii) The growth in Gross National Product ("GDP") in both the United
 20 States and North Carolina;

³³ State of North Carolina Utilities Commission, Docket No. E-7, Sub 989, Order on Remand, October 23, 2013, at 34 - 35; see also DEC Remand Order at 26 (stating that the Commission is not required to "isolate and quantify the effect of changing economic conditions on consumers in order to determine the appropriate rate of return on equity").

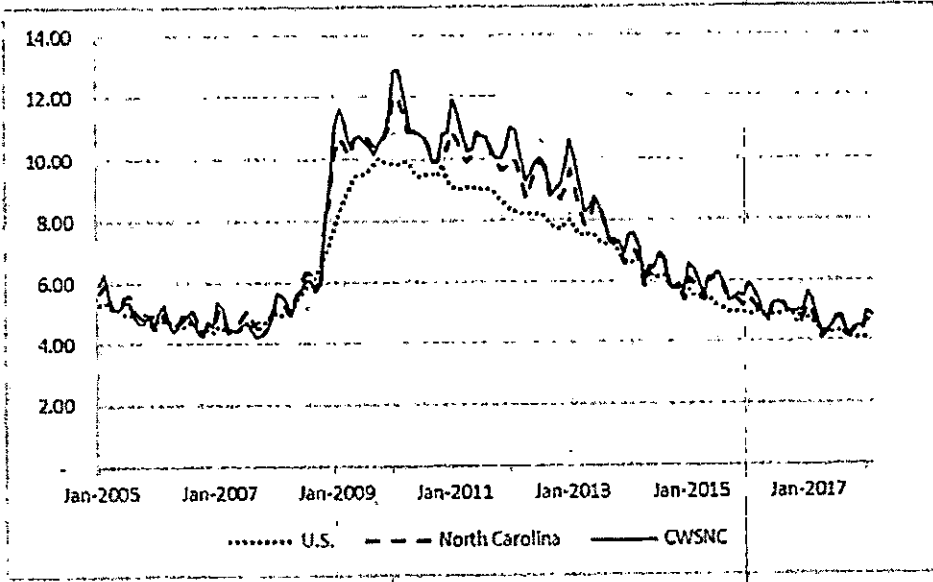
³⁴ State ex rel. Utils. Comm'n v. Cooper, 366 N.C. 484, 739 S.E.2d 541 (2013) (Cooper I).
³⁵ State of North Carolina ex rel. Utilities Commission v. Cooper, 758 S.E.2d 635, 642 (2014) ("Cooper II").

³⁶ State of North Carolina Utilities Commission, Docket No. E-22, Sub 479, Order on Remand, July 23, 2015, at 4-10.

- 1 (iii) Median household income in the United States and in North Carolina;
- 2 and
- 3 (iv) National income and consumption trends.

4 Turning first to the rate of unemployment, as noted above it has fallen
 5 substantially in North Carolina and the U.S. since late 2009 and early 2010,
 6 when the rates peaked at 10.00% and 12.00%, respectively. Although the
 7 unemployment rate in North Carolina rather exceeded the national rate
 8 during and after the 2008/2009 financial crisis, by the latter portion of 2013,
 9 the two were largely consistent. By February 2018, the unemployment rate
 10 had fallen to less than one-half of those peak levels: 4.10% nationally; and
 11 4.60% in North Carolina. (see Chart 1, below).

12 **Chart 1: Unemployment Rate: U.S. North Carolina, and CWSNC**



13
 14 Since the conclusion of the Company's last rate filing in November
 15 2017, the unemployment rate in North Carolina has risen slightly from

1 4.50% to 4.60%. That 0.10% increase is slightly higher than the U.S.
2 unemployment rate which has stayed flat at 4.10%. Still, over the entire
3 period of 2005 through 2017, the correlation between North Carolina's
4 unemployment rate and the national rate was approximately 98%.

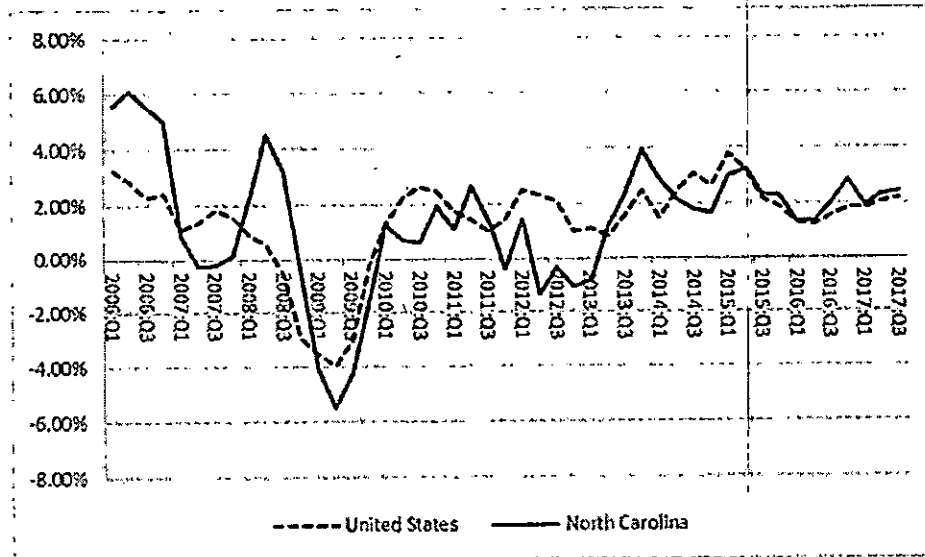
5 I was also able to review (seasonally unadjusted) unemployment
6 rates in the counties served by CWSNC. At its peak, which occurred in late
7 2009 into early 2010, the unemployment rate in those counties reached
8 12.58% (58 basis points higher than the State-wide average); by February
9 2018 it had fallen to 4.87% (27 basis points higher than the State-wide
10 average). Since the conclusion of the Company's last rate filing in
11 November 2017, the counties' unemployment has also risen slightly, from
12 4.50% to 4.87%. From 2005 through 2017, the correlation in unemployment
13 rates between the counties served by CWSNC, and the U.S. and North
14 Carolina, respectively, were approximately 97% and 99%, respectively. In
15 summary, although it remains higher than the national and state-wide
16 averages, county-level unemployment has fallen considerably since its
17 peak in early 2010. More broadly, economic growth at the national level is
18 projected to generate 11.5 million new jobs from 2016-2026 (i.e., 7.37%
19 growth over that period).³⁷

20 Looking to real Gross Domestic Product growth, there also has been
21 a relatively strong correlation between North Carolina and the national
22 economy (approximately 69%). Since the financial crisis, the national rate

³⁷ U.S. Bureau of Labor Statistics, *Employment Projections: 2016-2026 Summary*, October 24, 2017.

1 of growth at times (during portions of 2010 and 2012) outpaced North
 2 Carolina. Since the second quarter of 2015, however, the State has
 3 consistently exceeded the national growth rate.

4 **Chart 2: Real Gross Domestic Product Growth Rate³⁸**



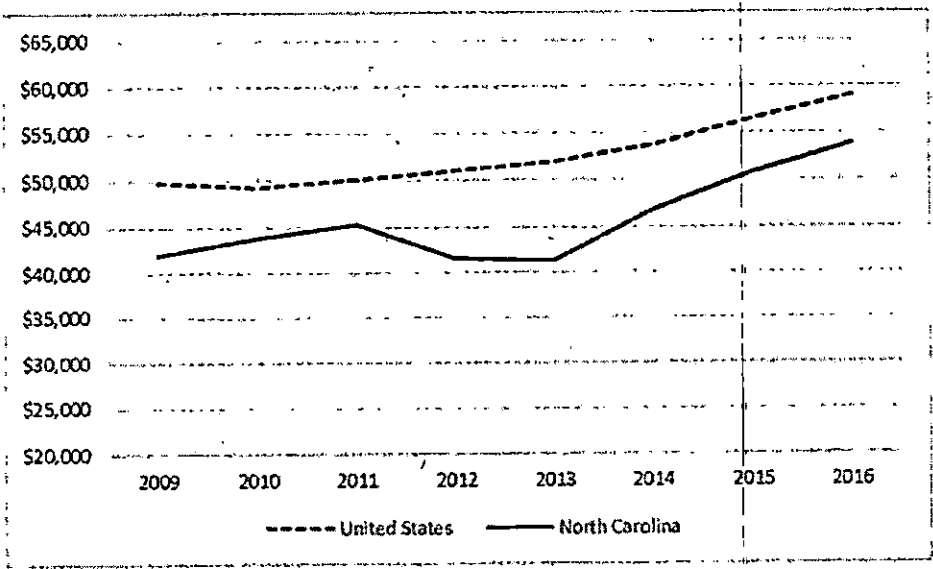
5

6 As to median household income, the correlation between North
 7 Carolina and the U.S. is relatively strong (approximately 88% from 2005
 8 through 2016). Since 2009 (that is, the years subsequent to the financial
 9 crisis), median household income in North Carolina has grown at a faster
 10 annual rate than the national median income (3.62% vs. 2.47%; see Chart
 11 3, below). To put household income in perspective, the Missouri Economic
 12 Research and Information Center reports that in the first quarter of 2018,

³⁸ Source: Bureau of Economic Analysis.

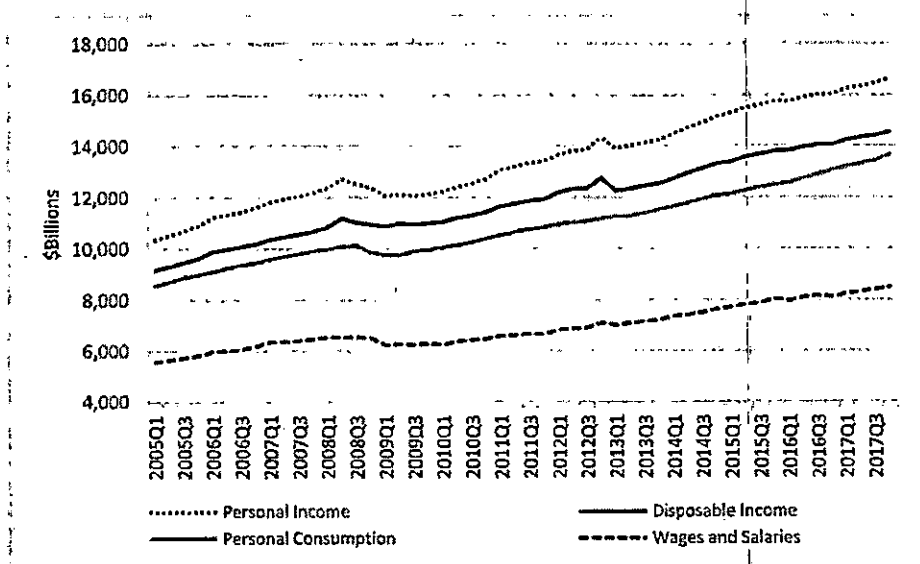
1 North Carolina had the 20th lowest cost of living index among the 50 states
2 and the District of Columbia.³⁹

3 **Chart 3: Median Household Income**



4
5 Similarly, as shown on Chart 4, below, since 2009, total personal
6 income, disposable income, personal consumption, and wages and salaries
7 have generally been on an increasing trend at the national level.

³⁹ Source: https://www.missourieconomy.org/indicators/cost_of_living/ Accessed 8/3/2018.

Chart 4: USA Income and Consumption

2

3 **Q. Please summarize your analyses and conclusions.**

4 **A.** In its Order on Remand in Docket No. E-22, Sub 479, the Commission
 5 observed that economic conditions in North Carolina were highly correlated
 6 with national conditions, such that they were reflected in the analyses used
 7 to determine the cost of common equity.⁴⁰ As discussed below, those
 8 relationships still hold: Economic conditions in North Carolina continue to
 9 improve from the recession following the 2008/2009 financial crisis, and
 10 they continue to be strongly correlated to conditions in the U.S., generally.
 11 In particular, unemployment, at both the State and county level, continues
 12 to fall and remains highly correlated with national rates of unemployment;
 13 real Gross Domestic Product recently has grown faster in North Carolina
 14 than the national rate of growth, although the two remain fairly well

⁴⁰ State of North Carolina Utilities Commission, Docket No. E-22, Sub 479, Order on Remand, July 23, 2015, at 39.

1 correlated; and median household income also has grown faster in North
2 Carolina than the rest of the Country, and remains strongly correlated with
3 national levels. In sum, the correlations between State-wide measures of
4 economic conditions noted by the Commission in Docket No. E-22, Sub 479
5 remain in place and as such, they continue to be reflected in the models
6 and data used to estimate the cost of common equity.

7 **XI. CONCLUSION OF COMMON EQUITY COST RATE**

8 **Q. What is your recommended cost of common equity for CWSNC?**

9 A. Given the indicated cost of common equity of 11.50%, and the size-adjusted
10 cost of common equity of 11.90%, I conclude that an appropriate range of
11 cost of common equity cost rates for the Company is between 11.50% and
12 11.90%.

13 **Q. In your opinion, is your proposed range of cost of common equity cost**
14 **rates between 11.50% and 11.90% fair and reasonable to CWSNC, its**
15 **shareholders, and its customers, considering the above economic**
16 **conditions?**

17 A. Yes, it is.

18 **Q. Does this conclude your direct testimony?**

19 A. Yes, it does.



Appendix A
Professional Qualifications of
Dylan W. D'Ascendis, CRRA, CVA

Summary

Dylan is an experienced consultant and a Certified Rate of Return Analyst (CRRA) and Certified Valuation Analyst (CVA). He has served as a consultant for investor-owned and municipal utilities and authorities for 9 years. Dylan has extensive experience in rate of return analyses, class cost of service, rate design, and valuation for regulated public utilities. He has testified as an expert witness in the subjects of rate of return, cost of service, rate design, and valuation before 13 regulatory commissions in the U.S. and an American Arbitration Association panel.

He also maintains the benchmark index against which the Hennessy Gas Utility Mutual Fund performance is measured. He serves on the Rates and Regulatory Committee of the National Association of Water Companies (NAWC).

Areas of Specialization

- | | | |
|---|--|--|
| <input type="checkbox"/> Regulation and Rates | <input type="checkbox"/> Capital Market Risk | <input type="checkbox"/> Rate of Return |
| <input type="checkbox"/> Utilities | <input type="checkbox"/> Financial Modeling | <input type="checkbox"/> Cost of Service |
| <input type="checkbox"/> Mutual Fund Benchmarking | <input type="checkbox"/> Valuation | <input type="checkbox"/> Rate Design |
| <input type="checkbox"/> Capital Market Risk | <input type="checkbox"/> Regulatory Strategy and Rate Case Support | |

Recent Expert Testimony Submission/Apearances

Jurisdiction	Topic
<input type="checkbox"/> Regulatory Commission of Alaska	Return on Common Equity & Capital Structure
<input type="checkbox"/> New Jersey Board of Public Utilities	Cost of Service, Rate Design
<input type="checkbox"/> Pennsylvania Public Utility Commission	Return on Common Equity
<input type="checkbox"/> South Carolina Public Service Commission	Return on Common Equity
<input type="checkbox"/> American Arbitration Association	Valuation

Recent Assignments

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

Recent Publications and Speeches

- Co-Author of: "The Impact of Decoupling on the Cost of Capital of Public Utilities", co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. (Forthcoming)
- "Past is Prologue: Future Test Year", Presentation before the National Association of Water Companies 2017 Southeast Water Infrastructure Summit, May 2, 2017, Savannah, GA.
- Co-author of: "Comparative Evaluation of the Predictive Risk Premium Model™, the Discounted Cash Flow Model and the Capital Asset Pricing Model", co-authored with Richard A. Michelfelder, Ph.D., Rutgers University, Pauline M. Ahern, and Frank J. Hanley, The Electricity Journal, May, 2013.
- "Decoupling: Impact on the Risk and Cost of Common Equity of Public Utility Stocks", before the Society of Utility and Regulatory Financial Analysts: 45th Financial Forum, April 17-18, 2013, Indianapolis, IN.



Appendix A
Professional Qualifications of
Dylan W. D'Ascendis, CRRA, CVA

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Regulatory Commission of Alaska				
Alaska Power Company	07/16	Alaska Power Company	Docket No. TA857-2	Rate of Return
Colorado Public Utilities Commission				
Summit Utilities, Inc.	04/18	Colorado Natural Gas Company	Docket No. 18AL-0305G	Return on Equity
Atmos Energy Corporation	06/17	Atmos Energy Corporation	Docket No. 17AL-0429G	Return on Equity
Delaware Public Service Commission				
Tidewater Utilities, Inc.	11/13	Tidewater Utilities, Inc.	Docket No. 13-466	Capital Structure
Hawaii Public Utilities Commission				
Kaupulehu Water Company	02/18	Kaupulehu Water Company	Docket No. __	Rate of Return
Aqua Engineers, LLC	05/17	Puhi Sewer & Water Company	Docket No. 2017-0118	Cost of Service / Rate Design
Hawaii Resources, Inc.	09/16	Lale Water Company	Docket No. 2016-0229	Cost of Service / Rate Design
Illinois Commerce Commission				
Utility Services of Illinois, Inc.	11/17	Utility Services of Illinois, Inc.	Docket No. 17-1106	Cost of Service / Rate Design
Aqua Illinois, Inc.	04/17	Aqua Illinois, Inc.	Docket No. 17-0259	Rate of Return
Utility Services of Illinois, Inc.	04/15	Utility Services of Illinois, Inc.	Docket No. 14-0741	Rate of Return
Indiana Utility Regulatory Commission				
Aqua Indiana, Inc.	03/16	Aqua Indiana, Inc. Aboite Wastewater Division	Docket No. 44752	Rate of Return
Twin Lakes, Utilities, Inc.	08/13	Twin Lakes, Utilities, Inc.	Docket No. 44388	Rate of Return
Louisiana Public Service Commission				
Louisiana Water Service, Inc.	06/13	Louisiana Water Service, Inc.	Docket No. U-32848	Rate of Return
Massachusetts Department of Public Utilities				
Liberty Utilities	07/15	Liberty Utilities d/b/a New England Natural Gas Company	Docket No. 15-75	Rate of Return
Mississippi Public Service Commission				
Atmos Energy	07/18	Atmos Energy	Docket No. 2015-UN-049	Capital Structure
Missouri Public Service Commission				
Indian Hills Utility Operating Company, Inc.	10/17	Indian Hills Utility Operating Company, Inc.	Case No. SR-2017-0259	Rate of Return
Raccoon Creek Utility Operating Company, Inc.	09/16	Raccoon Creek Utility Operating Company, Inc.	Docket No. SR-2016-0202	Rate of Return
New Jersey Board of Public Utilities				
Middlesex Water Company	10/17	Middlesex Water Company	Docket No. WR1710xxxx	Rate of Return
Middlesex Water Company	03/15	Middlesex Water Company	Docket No. WR15030391	Rate of Return



Appendix A
Professional Qualifications of
Dylan W. D'Ascendis, CRRR, CVA

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
The Atlantic City Sewerage Company	10/14	The Atlantic City Sewerage Company	Docket No. WR14101263	Cost of Service / Rate Design
Middlesex Water Company	11/13	Middlesex Water Company	Docket No. WR1311059	Capital Structure
Public Utilities Commission of Ohio				
Aqua Ohio, Inc.	05/16	Aqua Ohio, Inc.	Docket No. 16-0907-WW-AIR	Rate of Return
Pennsylvania Public Utility Commission				
SUEZ Water Pennsylvania Inc.	04/18	SUEZ Water Pennsylvania Inc.	Docket No. R-2018-000834	Rate of Return
Columbia Water Company	09/17	Columbia Water Company	Docket No. R-2017-2598203	Rate of Return
Veolia Energy Philadelphia, Inc.	06/17	Veolia Energy Philadelphia, Inc.	Docket No. R-2017-2593142	Rate of Return
Emporium Water Company	07/14	Emporium Water Company	Docket No. R-2014-2402324	Rate of Return
Columbia Water Company	07/13	Columbia Water Company	Docket No. R-2013-2360798	Rate of Return
Penn Estates Utilities, Inc.	12/11	Penn Estates, Utilities, Inc.	Docket No. R-2011-2255159	Capital Structure / Long-Term Debt Cost Rate
South Carolina Public Service Commission				
Carolina Water Service, Inc.	02/18	Carolina Water Service, Inc.	Docket No. 2017-292-WS	Rate of Return
Carolina Water Service, Inc.	06/15	Carolina Water Service, Inc.	Docket No. 2015-199-WS	Rate of Return
Carolina Water Service, Inc.	11/13	Carolina Water Service, Inc.	Docket No. 2013-275-WS	Rate of Return
United Utility Companies, Inc.	09/13	United Utility Companies, Inc.	Docket No. 2013-199-WS	Rate of Return
Utility Services of South Carolina, Inc.	09/13	Utility Services of South Carolina, Inc.,	Docket No. 2013-201-WS	Rate of Return
Tega Cay Water Services, Inc.	11/12	Tega Cay Water Services, Inc.	Docket No. 2012-177-WS	Capital Structure
Virginia State Corporation Commission				
WGL Holdings, Inc.	7/18	Washington Gas Light Company	PUR-2018-00080	Rate of Return
Atmos Energy Corporation	5/18	Atmos Energy Corporation	PUR-2018-00014	Rate of Return
Aqua Virginia, Inc.	7/17	Aqua Virginia, Inc.	PUR-2017-00082	Rate of Return
Massanutten Public Service Corp.	08/14	Massanutten Public Service Corp.	PUE-2014-00035	Rate of Return / Rate Design

1 MR. BENNINK: Thank you. The witness is
2 available --

3 BY MR. BENNINK:

4 Q. First of all, do you have a summary to give
5 of your testimony, sir?

6 A. I do.

7 Q. Proceed.

8 A. My name is Dylan D'Ascendis, and I offer
9 expert testimony on behalf of investor-owned utilities
10 on issues involving rate of return, ROE, or class --
11 and class cost of service. I have testified in over 35
12 proceedings in front of 15 regulatory jurisdictions. I
13 am a graduate of the University of Pennsylvania where I
14 received a bachelor of arts degree in economic history.
15 I also hold a master's of business administration from
16 Rutgers University with a concentration in finance and
17 international business. I'm a certified rate of return
18 analyst and a certified valuation analyst.

19 My direct testimony recommends that the
20 Commission authorize the Company an opportunity to earn
21 an overall rate of return between 8.91 percent and
22 9.12 percent. This is based on CWSNC's test year
23 capital structure which consists of 47.11 percent debt
24 at an embedded cost rate of 6 percent, and a 52.89

1 percent common equity ratio at my recommended range of
2 common equity cost rates, which is between 11.50
3 percent and 11.90 percent.

4 I derive my range of common equity cost rates
5 by applying market-base common equity models, such as
6 the discounted cash flow, or DCF; the capital asset
7 pricing model, or CAPM; and the risk premium model, or
8 RPM, to a proxy group of publicly traded water
9 utilities and a proxy group of nonregulated companies
10 similar in total risk to the water proxy group.

11 Applying multiple market-based common equity
12 models, the Company's comparable in risk to the
13 regulated utilities consistent with the principals of
14 fair rate of return established in the Hope and
15 Bluefield U.S. Supreme Court cases. This is especially
16 important regarding the corresponding risk standard
17 which mandates an authorized return on common equity
18 per utility should be commensurate with returns on
19 investments and other enterprising -- enterprises
20 having corresponding risk. However, no proxy group of
21 companies can be identical in risk to any single
22 company, including CWSNC. Therefore, adjustments need
23 to be made to the market results of proxy group to
24 reflect any type of risk differences between CWSNC and

1 the proxy group companies.

2 After reviewing the results of the models, I
3 concluded that the indicated ROE based on the proxy
4 group is 11.50 before any adjustment for relative risk
5 between CWS and the proxy group.

6 To determine if there was any risk between --
7 any relative risk due to size, I relied on a study by
8 Ibbotson Associates, which estimated market
9 capitalization as a measure of company size, which
10 translates into a premium over CAPM cost rates. As
11 shown on Schedule DWD-8, the risk premium in excess of
12 CAPM results is 461 basis points over CAPM results. In
13 order to be conservative, I recommended a
14 40-basis-point size adjustment. And applying that
15 40-basis-point size adjustment results in an indicated
16 ROE of 11.90 percent. I then conclude that a
17 reasonable range of ROEs applicable to CWSNC would be
18 between 11.50 percent and 11.90 percent. And that
19 concludes my testimony -- or summary of my direct
20 testimony.

21 MR. BENNINK: The witness is available
22 for cross.

23 CHAIRMAN FINLEY: Cross examination?

24 MR. ALLEN: No questions.

1 MS. FORCE: No questions on direct.

2 CHAIRMAN FINLEY: All right.

3 Mr. Grantmyre?

4 CROSS EXAMINATION BY MR. GRANTMYRE:

5 Q. Mr. D'Ascendis, you have in your testimony a
6 small company adjustment, correct?

7 A. I do, yes.

8 Q. And you understand that Carolina Water has
9 approximately 50,000 customers in North Carolina?

10 A. Yes.

11 Q. And that would place them as the second
12 largest water and wastewater company in North Carolina.

13 Are you aware of that?

14 A. Yes. But when you're looking for a relative
15 risk adjustment, you're looking more towards comparing
16 it with your publicly traded utility group, not other
17 companies within the state lines.

18 Q. And, now, you're aware that Carolina Water
19 gets all its debt from Utilities, Inc., correct?

20 A. I do.

21 Q. And all of its equity comes from Utilities,
22 Inc.?

23 A. I do.

24 Q. And you realize we're using Utilities, Inc.

1 capital structure and cost of debt in this proceeding?

2 A. Yes. And one thing I --

3 CHAIRMAN FINLEY: Mr. Grantmyre, pull
4 that mic up, please, sir.

5 THE WITNESS: And one thing I could
6 point out --

7 CHAIRMAN FINLEY: Mr. Gray is working on
8 a hearing aid.

9 MR. GRANTMYRE: I'm sorry, Mr. Gray --
10 Commissioner Gray.

11 COMMISSIONER GRAY: I'm going to my
12 hearing test this week, just so you know.

13 MR. GRANTMYRE: Okay. I'm out of
14 practice. I'm out of practice.

15 THE WITNESS: One thing I could point
16 out is the capitalization, and this is in my
17 rebuttal testimony, page 4. I know we're not on
18 rebuttal. But the Company provided information for
19 their common equity balance. Utilities, Inc., the
20 parent is \$252 million, right? So if you apply
21 that \$252 million, and if you apply the market to
22 book ratio of the publicly traded utility
23 companies, which is on page 2 of Schedule DWD-8,
24 that's 300 -- that's 300 percent. All right. So

1 if you apply the market to book ratio three times
2 by the 250-or-so million dollars in equity, you're
3 at 700.

4 BY MR. GRANTMYRE:

5 Q. 758?

6 A. Yeah, 750.

7 Q. We got a hearing exhibit on that.

8 A. All right. Well, you got the \$758 million.

9 That corresponds to the eighth decile in that Ibbotson
10 study, and that would -- that would -- that would move
11 to a size premium of 2.08 percent over CAPM results.
12 And if you compare that to the proxy group of six water
13 companies of 4 -- 0.98, you would still have an
14 indicated size adjustment of 1. -- 110 basis points.

15 So even if you did look at Utilities, Inc. as
16 a whole, they're still significantly smaller than the
17 proxy group, and -- which still necessitates a size
18 adjustment, even though CWS North Carolina is what you
19 need to look at when it comes to size adjustment.

20 MR. GRANTMYRE: Well, while we're on
21 this subject, Mr. Chairman, we would request that
22 this be identified as Public Staff D Ascendis Cross
23 Examination Exhibit Number 1.

24 CHAIRMAN FINLEY: All right. Shall be

1 so marked.

2 (Public Staff D'Ascendis Direct Cross
3 Examination Exhibit Number 1 was marked
4 for identification.)

5 COMMISSIONER GRAY: Need one more,
6 please.

7 MR. GRANTMYRE: Uh, oh.

8 COMMISSIONER GRAY: Guess who.

9 BY MR. GRANTMYRE:

10 Q. Do you recognize the companies on this
11 schedule here?

12 A. I do.

13 Q. And these -- this is four of the six proxy
14 companies in your studies; is that correct?

15 A. Yes.

16 Q. And you recognize by the footnotes, at the
17 top is the top right-hand side, or towards the top, the
18 \$758 million market capitalization if, in fact, we were
19 using Utilities, Inc., correct?

20 A. That's right. Thank you.

21 Q. And we also have the market capitalization
22 that was in your direct testimony, DWD-8, page 2,
23 column 6.

24 Do you recognize those numbers?

1 A. Yes.

2 Q. And you would agree, then, that the
3 Utilities, Inc. market capitalization is larger than
4 both Middlesex Water Company, which is in your proxy
5 group, by about \$158 million?

6 A. I do. But like I said earlier, what you
7 should be looking at would be the CWS North Carolina
8 estimated market cap, just because this is where the
9 Commission can set rates. They can't set rates for the
10 entirety of the line.

11 Q. And it's substantially bigger than York Water
12 Company?

13 A. It is, but for the same reasons.

14 Q. Okay. Thank you.

15 Now, you realize that an investor cannot buy
16 stock in Carolina Water; is that correct?

17 A. That's true.

18 Q. Now, if, in fact, Utilities, Inc. was
19 publicly traded as it was years ago, I realize it's
20 privately held now, that's where they would have to go
21 to buy stock if they wanted to own a piece of Carolina
22 Water, correct?

23 A. Well, that may be true. You're still --
24 you're setting rates for this jurisdictional rate base.

1 So any type of rates being set, any type of -- I know
2 it's a theoretical exercise, just like your question is
3 theoretical because nobody could just buy Utilities,
4 Inc. stock. You have to be able to set rates. You
5 have to be able to estimate the return for this
6 jurisdictional rate base. That's the whole point of
7 ratemaking.

8 Q. And are you aware that, or will you accept,
9 subject to check, that this Commission has never made
10 an ROE size adjustment for Carolina Water, or the other
11 large company which used to be Heater Utilities, in a
12 general rate case?

13 A. I don't know if there -- I don't know if
14 they explicit -- I wouldn't take it subject to check,
15 because I don't know whether they're just silent on the
16 issue or if they explicitly rejected a size adjustment.
17 I'm not sure. But if they did, I wouldn't know.

18 Q. Well, you realize, in Mr. Hinton's testimony,
19 direct testimony, he points out a CWS systems case back
20 in the '90s, which is an affiliate of Carolina Water,
21 and the Commission specifically rejected a size
22 adjustment?

23 A. All right.

24 Q. And although Carolina Water has approximately

1 50,000 customers, if you were to -- will you accept,
2 subject to check, that, if you go down the list of next
3 largest companies, the next largest company would be
4 Pluris, LLC, which only has about 6,000 customers in
5 North Carolina?

6 A. Sure. But like I said, for a size adjustment
7 for a relative risk adjustment, you'd have to use the
8 market data of the proxy group, not local utilities.

9 MR. GRANTMYRE: Mr. Chairman, we would
10 request this next exhibit be identified as Public
11 Staff Direct Cross Examination Exhibit 2. It says
12 1 on it, but if we could change that to a 2, that
13 would be appreciated.

14 CHAIRMAN FINLEY: We will mark this
15 exhibit as Public Staff D'Ascendis Direct Cross
16 Examination Exhibit Number 2.

17 (Public Staff D'Ascendis Direct Cross
18 Examination Exhibit Number 2 was marked
19 for identification.)

20 MR. GRANTMYRE: We do not have the big
21 jumbo version. We modified it.

22 MR. BENNINK: Do you have another copy?

23 MR. GRANTMYRE: I'm sorry.

24 BY MR. GRANTMYRE:

1 Q. Do you recognize this as being a response to
2 one of our data requests?

3 A. It is.

4 Q. And this is basically the cases that you have
5 presented testimony on from March of 2015 up through
6 the current date; is that correct?

7 A. That's right.

8 Q. And the column "Recommended ROE" towards the
9 middle of the page, that is either the range or the
10 specific ROE that you recommended; is that correct?

11 A. That's right.

12 Q. Now, and the "Authorized ROE," which is the
13 second column from the right, that is what the
14 Commission approved?

15 A. That is correct.

16 Q. And your footnote Number 1 indicates that
17 those were settled cases, and the Commission approved a
18 settlement ROE; is that correct?

19 A. That's correct, all but one.

20 Q. Now, there was also -- when you testified in
21 Aqua about a month or so ago, you also had the Emporium
22 Water in Pennsylvania that was authorized ROE in
23 January of 2015; is that correct?

24 A. Yes. It was 10 percent, I believe.

1 Q. And that was a fully-litigated ROE?

2 A. It was.

3 Q. And in that case, you had a recommended ROE
4 of 11.05?

5 A. I would think so, yes.

6 Q. So you're -- the approval was 105 basis
7 points below your recommendation?

8 A. Right.

9 Q. Okay. Now, if we look at -- going down,
10 we're not going to go through all of these like we did
11 in the prior case, but the third case down is Carolina
12 Water, which was a 2015 case.

13 Now, will you agree that this shows that a
14 9.34 ROE was approved?

15 A. Yes. But like I said, in the Aqua case, that
16 company --

17 Q. Carolina Water.

18 A. Yeah, Carolina Water Service of
19 South Carolina, they've since filed another case, and
20 the Commission in that case ruled in my favor and took
21 my entire recommendation, which was fully litigated, as
22 opposed to this, which is a settlement.

23 Q. And that is the 10.5, which is the last
24 number under the authorized ROE, correct?

1 A. It is.

2 Q. And as you go down the page, you see that the
3 Aqua Illinois case, about halfway down, your
4 recommended ROE was 125 basis points over the approved
5 ROE?

6 A. Right. And the details of the settlements,
7 like you know, are, I guess, a result of a
8 give-and-take. So that 9.60 doesn't fully reflect,
9 say, what they've gotten returned from the Commission
10 or the Commission staff.

11 From what -- from what I remember, that case,
12 I think they received approximately 90 percent of what
13 they asked for in the case. So that 9,60 is a number,
14 but what they got in total of their ask is 90 percent.
15 So from the give-and-take of the negotiations, you get
16 that outcome.

17 Q. And the case immediately below that is Aqua
18 Virginia, which was filed in August 2017.

19 And your recommended ROE in that case was
20 10.60; is that correct?

21 A. That's true, yes.

22 Q. And you're aware, as you testified in the
23 Aqua North Carolina case, that there was a settlement
24 in that case which the hearing examiner has approved

1 and sent up to the Commission for approval, and it's
2 still pending before the Commission but the settlement
3 ROE was 9.25 percent?

4 A. Yes. And I checked before -- before
5 submitting this to make sure that it was still up for
6 approval. I knew that the 9.25 was sent up by the
7 hearing examiner, but as to that point, as when I had
8 to send this over, it still wasn't fully approved yet,
9 so I didn't want to put it in as approved.

10 Q. Now -- and below that, or two down is
11 Middlesex Water, and that was -- they approved a
12 9.6 percent on March 6, 2018; is that correct?

13 A. Yeah. Again, as a settlement, but yes.

14 Q. And that was 110 basis points below your
15 recommendation?

16 A. It was.

17 Q. And will you accept, if we took these nine
18 cases that have approved ROE, including the Carolina
19 Water, which I gave you a zero below -- as being below
20 your recommendation, that the average is 142 basis
21 points below your recommendation?

22 A. Right. But if you -- if you look at it,
23 every single one but the one that was zero was a
24 settlement. So I wouldn't say that that's convincing,

1 but that's up to the Commission.

2 Q. But in each of these cases, the Commission
3 did approve the ROE, even though it was a settlement,
4 correct?

5 A. That's true.

6 MR. GRANTMYRE: We would ask that this
7 next exhibit be identified as Public Staff
8 D'Ascendis Direct Cross Examination Exhibit 3.

9 CHAIRMAN FINLEY: Shall be so marked.
10 (Public Staff D'Ascendis Direct Cross
11 Examination Exhibit Number 3 was marked
12 for identification.)

13 BY MR. GRANTMYRE:

14 Q. And you recognize RRA Water Advisory as a
15 major publication by -- that follows the utility
16 industry in this country?

17 A. Yes.

18 Q. And you also recognize S&P Global?

19 A. Yes, I do.

20 Q. And both are reputable publications?

21 A. Yes.

22 Q. And did you testify in the Aqua case that S&P
23 Global is your parent company?

24 A. I think the transcript was wrong.

1 Q. That's what I thought.

2 A. So S&P is RRA's parent company.

3 Q. Parent company. All right.

4 And you recognize that this was published on
5 July 27, 2018, and it includes the cases that RRA
6 reports through June 30th?

7 A. Yes.

8 Q. And we can agree RRA does not include all
9 cases in all states, correct?

10 A. Right. Some -- there's a size -- there's a
11 size specification. Also there's -- I think there's a
12 state -- if major companies like American Aqua
13 Utilities, Inc., EPCORE, et cetera, if they're not in
14 those states, they don't report on them, so.

15 Q. And you will agree that, on page 1 at the
16 bottom of the cases reported in 2000 -- through
17 June 30, the average rate reward was 9.41?

18 A. Yes. But I have something to say about that.
19 The -- so there are one, two, three, four, five, six,
20 seven -- there are seven awards there. The California
21 companies: California Water, California American,
22 Golden State, San Jose, they were all part of one
23 singular rate proceeding. So as that goes, that would
24 skew the results.

1 Another thing about California is that they
2 aren't -- they aren't like North Carolina, where this
3 California case is set for three years in the future.
4 This is -- so they have -- they set for this year, next
5 year, and the year after that. And, actually, they
6 could keep on going as the Commission sees fit. They
7 could call them in after three years, but it's a
8 forward three-year projection of revenue earnings. So
9 that's one difference.

10 Second difference, they have full revenue
11 decoupling. Third difference -- I don't think there is
12 a third difference, but third difference would be, you
13 know, they have other mechanisms in addition to full
14 decoupling that they have memorandum accounts, things
15 like that, that show that regulatory jurisdictions
16 aren't created equal. So that takes some consideration
17 into those answers -- or those numbers, actually.

18 Q. Now, we'll come back to California, but I
19 turn you to page 4.

20 And would you agree that, for the year 2017,
21 the average that they reported was 9.56?

22 A. Yes.

23 Q. And there were nine cases decided that they
24 reported?

1 A. Yes.

2 Q. And referring back to Number -- page 1, where
3 the 9.41, that includes the 10.5 ROE for Carolina Water
4 Service, correct, in South Carolina, May 2, 2018?

5 A. It does, but like I said before, they're
6 overweighting the California decisions.

7 Q. Would you agree, then, on the math, if
8 South Carolina Water -- or Carolina Water in
9 South Carolina was determined to be an outlier and
10 eliminated from the average, the average would drop to
11 approximately 9.23 percent?

12 A. I don't agree with your statement that it's
13 an outlier, so I can't agree with your math either.

14 Q. Okay. But you could agree that, if we did
15 not count that for whatever reason, the math would be
16 approximately 9.23 percent average ROE?

17 A. Yes. Because I think -- is this the only
18 one -- that was the only one in the second quarter,
19 correct, that was specified?

20 Q. Yes.

21 A. So --

22 Q. No, no. Missouri -- Missouri does not have
23 an ROE, yes.

24 A. Yeah. I know that -- so it would be -- it

1 would equal the first quarter, is what it would be. It
2 would be 9.3. But like I said, it's skewed.

3 Q. And would you agree that, on pages 5 and 6,
4 it lists, at least the cases they reported, each ROE
5 that was approved by a Commission on the ones that they
6 reported?

7 A. Yes.

8 Q. And on page 5, for 2014, would you agree that
9 there was not one decision at 10.0 or above?

10 A. I would agree to that. Usually, I think
11 California -- the California's in this one, they kept
12 it silent, but I think it was around 9.9 in the black
13 box. But like I said, that's still under 10.

14 Q. And in 2015, where the average was 9.76,
15 would you agree that only two cases that were a 10 or
16 above, being Maryland American Water and Kona Water
17 Service?

18 A. It is. And like you said, RRA doesn't cover
19 every single company from every single state, so it's
20 an incomplete list.

21 Q. And on 2000 -- moving to page 6, 2016, would
22 you agree that the average was 9.71 for the nine
23 companies that they reported on -- nine cases that they
24 reported on?

1 A. Yes.

2 Q. And the only one at 10 -- 10.0 or above was
3 Hawaii Water Service at 10.1 percent?

4 A. That's right.

5 Q. And for 2017, would you agree that the
6 approved average of the approvals was 9.56?

7 A. Yes. But like I said before, regulatory
8 jurisdictions aren't created equal, and if one wanted
9 to look at a comparable jurisdiction, the Commission
10 should look at the most recent Duke case, which
11 approved a 9.9. And I explained, in my rebuttal
12 testimony, that the measures of risk have increased
13 since then, including beta.

14 Q. In the Duke case, you will admit that was a
15 settled case?

16 A. I would, yes.

17 Q. Okay.

18 A. But if you wanted to look at it -- and there
19 is difference in North Carolina where you have to
20 satisfy the Cooper Supreme Court case. So there's a
21 little difference between settlements here and
22 settlements elsewhere.

23 Q. And you will agree that, for 2017, the
24 Utilities, Inc. of Florida case, they use a formula

1 down there, don't they, and the formula is used unless
2 it's contested by a party; is that correct?

3 A. Yes. And usually we're the ones who support
4 the formula for the Commission.

5 Q. And there the approved capital structure
6 equity was 41.92 percent, correct, at least on this?

7 A. Yes.

8 Q. Okay.

9 A. Yes. It's based on -- the formula is based
10 on leverage.

11 Q. And we're going to get to it in your rebuttal
12 testimony, but in your rebuttal, you changed the
13 capital structure and updated it to June 30, 2018,
14 correct?

15 A. I did.

16 Q. So you basically agree with the Public
17 Staff's capital structure? The Company agrees with the
18 June 30, 2018, capital structure?

19 A. Yes. Well, it was Company provided, so yes.
20 They -- I think Mr. Hinton, he started with one, and
21 then after we got and verified the Company data, we all
22 agreed to the capital structure.

23 Q. So that would modify your direct testimony of
24 47 percent of debt to approximately 49-and-change debt?

1 A. It would. And I changed my rate of return
2 also.

3 Q. Now, moving to page 7, we've highlighted a
4 number of cases. Now, Aqua Illinois, the approved ROE
5 was 9.6.

6 And I believe you testified, even though it
7 says litigated, that the ROE portion of that case was
8 settled?

9 A. It was. And like I said, regulatory
10 jurisdictions aren't equal. Illinois has forward test
11 year and full decoupling in that case.

12 Q. Now, the companies, all except Carolina
13 Water, all these companies are in your proxy group, in
14 that Golden State Water is a wholly-owned subsidiary of
15 American States Water; isn't that correct?

16 A. San Jose is no longer based on the --

17 Q. Okay.

18 A. -- based on that merger, but in Aqua, yes,
19 they were. But in this case, I took them out.

20 Q. San Jose is out.

21 A. Yes.

22 Q. And you admitted earlier in your testimony,
23 the California cases were decided on March 22, 2018?

24 A. They were.

1 Q. And all four of those -- well, there was one
2 case that included four companies -- the ROE and
3 capital structure was fully litigated?

4 A. It was.

5 Q. This is not an exhibit.

6 I believe you testified in the last case
7 you're Robert Hevert's boss?

8 A. He's my boss.

9 Q. Okay. And you know he testified in the Duke
10 case?

11 A. I do.

12 Q. Duke Energy Carolinas?

13 A. Sure.

14 Q. And you're aware that he filed rebuttal
15 testimony, including exhibits, consisting of
16 approximately -- exactly 382 pages?

17 A. I was not the support on that case, I don't
18 think, so I didn't have the pleasure of putting that
19 together.

20 Q. Well, I would submit to you -- will you
21 accept, subject to check, that Exhibit RBH-R28 is an
22 exhibit on recently authorized ROEs that he filed?

23 A. I have no idea.

24 Q. And will you accept, subject to check, that

1 when you scroll down, it's 300 -- page 381 and 382, the
2 last two pages?

3 A. Like I said, I don't know, but yes, subject
4 to check.

5 Q. Now, on this exhibit, which is in the
6 Commission's files, he also includes the RRA rank for
7 each Commission that had a case on -- within that time.

8 A. I don't know how this is -- can I look at
9 that or --

10 Q. (Handing.)

11 A. (Witness peruses document.)

12 MR. GRANTMYRE: Can I approach? I'm
13 already here.

14 CHAIRMAN FINLEY: Ex post facto, you may
15 approach.

16 MR. GRANTMYRE: We're getting to the
17 end.

18 CHAIRMAN FINLEY: Good.

19 THE WITNESS: Okay.

20 BY MR. GRANTMYRE:

21 Q. And they rate the various Commissions, or at
22 least RRA, as far as he testifies on page 195 of his
23 rebuttal testimony, "RRA provides an assessment as to
24 the extent to which regulatory jurisdictions are

1 constructive from an investor's perspective."

2 Would you agree that that would be a
3 reasonably accurate statement?

4 A. How does this -- how does this have to do
5 with my testimony?

6 Q. Okay. Would you answer the question?

7 A. Yes.

8 Q. Okay. Now, the way they rate it is above
9 average, and it's 1 is the highest; above average 2;
10 above average 3; and then average 1, 2, 3; below
11 average 1, 2, 3.

12 So if you are a 1 in a group, you're higher
13 than the 2s and the 3s; do you accept that?

14 A. That's true.

15 Q. Now, do you accept that, in this study -- I
16 will show it to you again -- that California is an
17 above-average 3?

18 A. When was that as of? And there's also
19 separate -- there is also separate regulatory rankings
20 from RRA for both water and energy. So that above
21 average may be a little different for that water
22 company. And even if it was above average at that
23 time, because that was -- say that again. His was in
24 December 17th, right?

1 Q. No. This rebuttal testimony he filed was --

2 A. December 17th, right?

3 Q. No, I think he filed it somewhere around
4 March of 2018.

5 A. North Carolina, right?

6 Q. Yes, for Duke Energy Carolinas. And will you
7 accept that --

8 A. That water -- those water companies were out
9 in March too, correct? So that RRA ranking could be
10 stale.

11 Q. Okay. But you would accept, on this exhibit
12 anyway, that only two companies are ranked above -- two
13 Commissions above California, being Wisconsin and
14 Florida, that are above-average 2?

15 A. Like I said, I think it may be irrelevant
16 based on the RRA rankings for water. So then when you
17 look at it that way -- and I could file an exhibit to
18 figure out whether or not that ranking is true for both
19 water and energy, but I don't think it's the case,
20 especially the backlash that the California Commission
21 received after that order.

22 Q. Now, above-average 3, which is the California
23 group, the only other company -- Commission included is
24 Tennessee?

1 A. I accept.

2 Q. And will you accept, at least on this rating,
3 that North Carolina is average 1, which puts them in
4 the highest rating for the average group?

5 A. Okay. Can I see that for one more time,
6 please?

7 MR. GRANTMYRE: May I approach again?

8 CHAIRMAN FINLEY: Yes, you may.

9 BY MR. GRANTMYRE:

10 Q. (Handing.)

11 A. Thank you.

12 (Witness peruses document.)

13 So on page 2 -- I guess -- should we make
14 this an exhibit so they could see this? But on page 2,
15 it has the averages of these authorized returns by
16 above average, average, or below average. And if you
17 look at all cases, which is electric, vertically
18 integrated, and TND only, above average, you have a
19 mean of 10.10 with a max of 10.55. And the average
20 jurisdictions, they have a mean of 9.53 percent with a
21 max of 10.30.

22 So -- and as -- and it looks kind of weird,
23 because the below-average cases, their maximum allowed
24 ROE was 11.95. So I don't know how informative this

1 is, especially based on what I said about the RRA
2 rankings that were separate from electric and water.

3 MR. GRANTMYRE: Mr. Chairman, we would
4 ask that this next exhibit be identified as Public
5 Staff D'Ascendis Direct Cross Examination Exhibit
6 Number 4.

7 CHAIRMAN FINLEY: We'll mark it Number
8 4.

9 (Public Staff D'Ascendis Direct Cross
10 Examination Exhibit Number 4 was marked
11 for identification.)

12 MR. BENNINK: Mr. Chairman, may I
13 approach the witness before we proceed?

14 CHAIRMAN FINLEY: For what purpose?

15 MR. BENNINK: I want to discuss the last
16 question.

17 CHAIRMAN FINLEY: No, no, you may not.
18 Sit down.

19 MR. BENNINK: The purpose, at this
20 point, is that I would ask that the Public Staff
21 exhibit that Mr. Grantmyre was referring to be put
22 into the record so it is clear what the testimony
23 pertained to.

24 CHAIRMAN FINLEY: Any objection to that,

1 Mr. Grantmyre?

2 MR.. GRANTMYRE: We have no objection. I
3 would get a clean copy. I've got all my cheat
4 sheet notes on here.

5 CHAIRMAN FINLEY: All right. We will
6 accept that.

7 MR. BENNINK: All right. Thank you.

8 BY MR. GRANTMYRE:

9 Q. Now, do you recognize that the California
10 order that you talked about was March 22, 2018?

11 A. That's right.

12 Q. And the four companies listed in the approved
13 ROE, the 9.2 and the 8.9, those are correct?

14 A. They are.

15 Q. And you testified that there was a backlash
16 in the investment community relating to the decision on
17 March 22, 2018?

18 A. There was.

19 Q. Now, you accept -- will you accept that MSN
20 Money is a reliable source for a market-to-close
21 prices?

22 A. I do.

23 Q. And in this, we list the four companies. And
24 instead of Golden State Water Company, we list American

1 States, which is the second coming down on the list of
2 stock prices market close.

3 Do you -- do you agree that that is the
4 parent company?

5 A. Yes.

6 Q. And in the first column, March 22, 2018, that
7 is the stock price.

8 Would you agree that -- subject to check,
9 that that was the stock closing price on that date?

10 A. Yes.

11 Q. And the March 26, 2018, several days later,
12 you would agree that it may take a day, or two, or
13 three, or four for the investment community to absorb a
14 utility commission decision?

15 A. Well, it would be -- it would probably be a
16 better illustration if there was a chart for daily
17 prices. This -- you know, three dates doesn't a story
18 make. There's also no volume reports on this. In
19 addition, American Waterworks is a humongous company.
20 California Water is almost negligible. The California
21 American Water operations are almost negligible, so
22 that would never -- I wouldn't think that it would
23 affect the stock price as much as it does.

24 Q. But the -- will you accept that the

1 October 15, 2018, prices, subject to check, are
2 correct?

3 A. Yes.

4 Q. And if we look at the American Waterworks,
5 for example, the \$88 versus the \$80.15, will you
6 accept, subject to check, that the increase is
7 9.8 percent in market price?

8 A. I agree. Like I said, there's a
9 significant -- not only other regulated water company
10 operations, there is also significant unregulated
11 operations in that company. So there -- and that's --
12 that holds true for all of these. And then if you look
13 at San Jose Water, they're in the middle of a merger,
14 so that's going to affect stock prices as well. I
15 actually think, around that March 22nd time frame, is
16 when they announced their merger.

17 Q. And would you accept, subject to check, that
18 the American States Water has increased to March --
19 October 15th of \$4.56, which comes out to be an
20 8.4 percent increase?

21 A. Yes. And one more thing I have to say. The
22 backlash is for the ALJ order, it wasn't for the actual
23 amended prices. So you'd have to actually go back to
24 the ALJ order and the effect on the prices then. Not

1 right now, because after that, the market was already
2 priced in. And that was sometime in February, if I'm
3 not mistaken. So if you looked back at February when
4 the ALJ decision was made public, that's when the
5 prices started shooting down, that's when the outrage
6 started.

7 Q. Well, the California Water Service, would you
8 accept, subject to check, that the dollar increase was
9 \$2.77 a share which is a 7.3 increase?

10 A. Yes.

11 Q. And for San Jose Water, it was \$5.04 increase
12 being 9.5 percent?

13 A. Yes. And like I said, they're in the middle
14 of a merger, so I don't know if that says anything
15 about the resiliency of that company, based on that
16 order.

17 Q. Now, as an investment person, you would agree
18 that, year to date, the S&P 500 is up approximately
19 4.4 percent? Subject to check.

20 A. Subject to check.

21 Q. And would you also agree that, for
22 March 22, 2018, to October 15, 2018, the S&P 500 is up
23 4.1 percent?

24 A. Yes. But what's -- maybe I should put this

1 in as an exhibit, but for these companies, what are
2 the -- what are the year to date; do you have that?

3 Q. I don't have that.

4 A. Well, then, the first question that you asked
5 is irrelevant if you don't have an apples-to-apples
6 comparison.

7 Q. However, the March 22nd to October 15th date
8 is an accurate comparison by dates?

9 A. It is.

10 Q. And you will admit that the 9.8, the 8.5, the
11 8.4, the 7.3, and the 9.5 that we talked about earlier
12 are more than double the S&P 4.1 for those dates?

13 A. Your math is right, yes.

14 Q. Last exhibit. Last exhibit.

15 MR. GRANTMYRE: We would ask that this
16 be identified as Public Staff D'Ascendis Cross
17 Examination Exhibit Number 5.

18 CHAIRMAN FINLEY: The exhibit being
19 passed out marked for identification as Public
20 Staff D'Ascendis Cross Examination Exhibit
21 Number 5.

22 (Public Staff D'Ascendis Direct Cross
23 Examination Exhibit Number 5 was marked
24 for identification.)

1 BY MR. GRANTMYRE:

2 Q. And you recognize that all five of these
3 companies are within your proxy group, at least Golden
4 State is part of American State's Water; is that
5 correct?

6 A. It is.

7 Q. And we've eliminated San Jose, which was not
8 in your proxy group?

9 A. That's right.

10 Q. And will you agree that, under the approved
11 ROEs in this 2018 for your proxy group, the average is
12 9.3 percent?

13 A. Yes. But that's -- doing -- looking for an
14 ROE based on just straight decisions -- and Mr. Hinton
15 would agree with me here, I would think -- is not the
16 way that you do things. The way Mr. Hinton does it is
17 he uses it to regress -- regress a projected equity
18 risk premium given a bond rate of -- given a bond
19 yield. I agree with him.

20 So this 9.30 is not -- it's not appropriate.
21 It brings in an element of circularity that, if you
22 say, you know, Commission X granted a 9.6, well, then,
23 what does that do? Does that -- that cuffs the hands
24 of the utility commissions presiding over cases in the

1 future, if they're just looking at what's authorized in
2 other jurisdictions.

3 So your math is right, but I don't agree with
4 jumping to a conclusion of 9.30 being appropriate.

5 Q. Now, the last sentence, there's a note at the
6 bottom of the page. If you want to read that and say
7 whether or not you agree with that. That is what
8 happened, not that you agree with the 9.25.

9 A. So it says:

10 "This Aqua Virginia response further states
11 that, on page 11, Aqua Virginia agrees that
12 the hearing examiner proposed 9.25 percent.
13 Aqua Virginia current ROE is the appropriate
14 ROE."

15 Q. And do you agree that that is an accurate
16 statement from the order or -- yes, the order of the
17 hearing examiner?

18 A. Right. And like it said in the first
19 sentence, it's entered into a joint stipulation, which
20 means that there is some give-and-take. It's
21 negotiations based on what have you. I wasn't a party
22 to those conversations.

23 MR. GRANTMYRE: We have no further
24 questions.

1 CHAIRMAN FINLEY: Redirect?

2 THE WITNESS: Thank you.

3 CHAIRMAN FINLEY: Redirect?

4 MR. BENNINK: Yes, just a few.

5 REDIRECT EXAMINATION BY MR. BENNINK:

6 Q. Let's go back through Public Staff's
7 exhibits, Mr. D'Ascendis.

8 A. Sure.

9 Q. Do you have any further comments that you
10 want to make about Cross Examination Exhibit Number 1?

11 A. No, I don't think so. I think Mr. Grantmyre
12 said what he needed to say and that the -- that every
13 single one of these, except for -- except for one was a
14 stipulation, and therefore a -- therefore, a product of
15 negotiations. And I think that's pretty much all that
16 needs to be said about that. And the one that wasn't,
17 the Commission took my entire recommendation, including
18 the size adjustment.

19 Q. How about Cross Examination Exhibit --

20 CHAIRMAN FINLEY: Mr. Bennink, please
21 ask him a question instead of just an open-ended,
22 "Do you have comments?" Objection sustained.

23 BY MR. BENNINK:

24 Q. On Cross Examination Exhibit Number 3, the

1 table at the bottom of page 1 shows the 2018 -- January
2 to June 2018 returns for these particular companies.
3 Look at the column which is headed, "Common equity as a
4 percent of capital."

5 A. Okay.

6 Q. How do those common equity percentages
7 compare to what Carolina Water Service is requesting in
8 this case?

9 A. The average rate award common equity, as a
10 percent of capital, 53.85 percent, is higher than what
11 we're proposing in this case, which is 50.91 percent.
12 Which means that Carolina Water relatively would have
13 more financial risk, more leverage risk than the
14 companies that were approved from January to June.

15 But like I said, addressing Mr. Grantmyre,
16 these are -- it would be circular to rely on something
17 like this. It's just a guidepost to kind of see
18 whether or not the Company is more risky or less risky.
19 I wouldn't use, you know, 53.85, that's what we're
20 going to go in as because everybody else is averaging
21 that. We're using the actual capital structure. It
22 happens to be a little more risky than what has been
23 approved this year for other water utility companies.

24 Q. Do you know if the common equity ratio shown

1 on this page are the actuals for any of those
2 companies?

3 A. I'm not sure. I would -- I would say that
4 they are, but they may be of a parent company. They
5 could also be of a hypothetical nature, given -- given
6 if they only have equity in their capital structure
7 just like CWS. So it depends, but I would say it's a
8 representative capital structure, yes.

9 Q. All right. And going back to the exhibit
10 that Mr. Grantmyre was asking you about that will be
11 provided later for the record, the RRA rankings, do you
12 have any further comment as to the relevance of that
13 exhibit and that line of questioning?

14 A. Well, it's from the past. It's from -- it's
15 from another witness' -- even though it's my boss,
16 we're not the same person. We don't hold the same --
17 we don't have the same exact feelings or opinions about
18 models or things like that. So I don't know how he was
19 doing it in that case.

20 As for the rankings, there are different
21 water and energy rankings by RRA. Connecticut jumps
22 out to me as one where, in the energy space, they're
23 ranked very low, and then in the water space, they're
24 ranked high. This may be the case in California, I

1 don't know. But given what they did in California
2 earlier in the year, I wouldn't be surprised. Even
3 though they have several mechanisms that are helpful
4 for the Company to earn their authorized rate of
5 return, I do not know whether or not they are the same
6 ranking for energy or water.

7 CHAIRMAN FINLEY: This exhibit that is
8 being talked about that hadn't been circulated,
9 what I'm going to ask you to do, Mr. Grantmyre,
10 is -- you got a clean copy of it now?

11 MR. GRANTMYRE: I don't have a clean
12 copy. I'll give the -- my cheat sheet. I'll give
13 all my notes. If you want a clean copy, I'll do
14 either one.

15 CHAIRMAN FINLEY: We'll have a break
16 before the morning's out. I would ask you please
17 make a clean copy, distribute it, and then
18 Mr. Bennink can have it identified and he can ask
19 Mr. D'Ascendis about it when he's up for rebuttal.

20 MR. BENNINK: All right. Thank you. No
21 further questions.

22 THE WITNESS: Thank you.

23 CHAIRMAN FINLEY: Questions by the
24 Commission?

1 EXAMINATION BY CHAIRMAN FINLEY:

2 Q. I just have a couple of questions to you
3 about Public Staff Direct Cross Examination Exhibit
4 Number 3.

5 A. And that is?

6 Q. That's the RRA water advisory Heike Doerr
7 there.

8 You were looking at the decisions for the
9 California cases, right?

10 A. Yes, sir.

11 Q. I think you said that one of the factors that
12 perhaps influenced the rate of return that the
13 California Commission approved was that there was
14 folded coupling by those companies; is that right?

15 A. Yes. But I think it's more the three-year
16 rate plan, because they're set for three years. So
17 they don't have to come in, and they don't have to --
18 there's no -- there's pretty much nothing -- they set
19 it, and then three years later they come back in, or
20 the companies can delay the filing. And if they delay
21 it, then they would have to be approved by the
22 Commission.

23 I think last time that there was a fully
24 litigated one, I want to say is seven years. So they

1 had the three-year rate plan, and then they went four
2 years on an extension. And they were able to keep
3 rates in place prospectively for seven years. So
4 that -- I think that's more of an influence than, say,
5 the coupling mechanisms. We have -- I will stop there,
6 but --

7 Q. But you did mention the coupling?

8 A. Yes, I did. Yes.

9 Q. You mentioned this on a futuristic type
10 mechanism, the California --

11 A. Sure.

12 Q. Are you aware that, in this case, the
13 Company's requesting a consumption band water and
14 wastewater rate adjustment mechanism?

15 A. Yes.

16 Q. And would you agree that, depending on what
17 the Commission does with respect to that, it might
18 influence the rate of return that the Commission would
19 give up or down, depending on what it does?

20 A. I respect that, but there are -- it all
21 depends on relative risk. Like I was saying with
22 Mr. Grantmyre, if there are mechanisms in place, the
23 publicly traded companies that we base our ROEs on,
24 then that would -- then it would be already subsumed in

1 market prices. On my -- in my rebuttal testimony, I
2 think it's Exhibit 10, 10-R, it has a list of the
3 mechanisms in each of my proxy group companies.

4 So out of that -- obviously, all the -- out
5 of the six, three of them are California companies. So
6 American States Water, American Water, California Water
7 Service Group, all have decoupling mechanism. So
8 that's half. And then American Water actually has it
9 in Illinois and New York as well. I know there are
10 some pending. Aqua, they have it in north -- they have
11 it in Illinois and also requested in North Carolina.
12 Middlesex does not have decoupling and neither does
13 York, so it would be four out of six.

14 But then there's another -- there's another
15 study that I've made with a couple other authors, and
16 it's currently under academic review at the utility
17 policy journal. And using -- using the GARCH
18 methodology and changes in beta, it shows that there
19 aren't any statistically significant changes in
20 investor required return before or after the
21 implementation of the GARCH method -- or of decoupling
22 mechanism.

23 So there's one screen would be take a look at
24 the -- take a look at the companies that you're

1 comparing CWS to, and then second is, does it really
2 matter as a -- as a, I guess, in respect to investor
3 required return, which we found that there wasn't any
4 statistically significant measure. And that's mainly
5 because there are so many things affecting publicly
6 traded companies like --

7 Q. Earlier in your testimony, in response to
8 Mr. Grantmyre's testimony, you mentioned the fact that,
9 in California, there was decoupling, and you mentioned
10 that as a factor that was, in your opinion, coming into
11 play in the rate of return that the Company -- that the
12 Commission set. And now you're saying that didn't make
13 any difference.

14 Are you changing your testimony on that?

15 A. No. I'm just saying that, in this case, you
16 need to make sure to look at it, because, in that case,
17 they did, and they didn't make any deduction for
18 decoupling. They have in the past. They have in
19 the -- so the California -- California two cases back,
20 seven years ago, they did make an adjustment for
21 decoupling. They made a downward adjustment to ROE.

22 Q. Explicit adjustment?

23 A. Explicit. Explicit.

24 Q. Would you agree that the more mechanisms that

1 exist, the Commission, in a hypothetical water company,
2 approves that reduce regulatory lag and that reduce
3 risks, that should influence one way or another what
4 the rate of return on equity that the Commission
5 approves?

6 A. It should be, you just have to compare. So
7 say if CWS gets an inordinate amount of mechanisms that
8 nobody else has, which isn't the case here, then yes.
9 But if it's common, if it's widespread, I would say no.
10 And like I said, in the -- this California case, there
11 wasn't an explicit reduction for decoupling in that
12 case.

13 Q. The more mechanisms, perhaps the reduction in
14 risk, and the fewer adjustments, perhaps the greater
15 the risk?

16 A. So then -- so then what -- I guess what you
17 would say is it's relative. So say if you don't -- say
18 if you don't --

19 Q. Can you answer that question yes or no and
20 then elaborate on it?

21 A. Can you say it again?

22 Q. The more mechanisms you have that reduce
23 risk, the -- the lower the -- the lower the rate of
24 return on equity, and the fewer that you have that

1 increase risk, then the higher the rate on equity, all
2 other things being equal?

3 A. If everything's equal, yes. But if it's
4 compared -- if you're comparing, that's -- but if I'm
5 getting what you're saying, say if this isn't -- say
6 the decoupling mechanism in this case is rejected, and
7 it's commonly -- it's common throughout the proxy
8 group, then that logic would be that they would receive
9 a higher rate of return because they would be more
10 risky than the proxy group, correct? All right.

11 Q. All right. Okay.

12 CHAIRMAN FINLEY: Other questions by
13 the Commission?

14 (No response.)

15 CHAIRMAN FINLEY: Questions on the
16 Commission's questions?

17 CROSS EXAMINATION BY MS. FORCE:

18 Q. I regret this, but as I understand the last
19 conversation you had with the Chairman, you haven't
20 quantified the basis point impact of adoption or not
21 adoption of this proposed mechanism in this case, have
22 you?

23 A. No, because I think it's zero, based on
24 the -- based on the adoption of the proxy group

1 companies and based on our studies that say that there
2 isn't a measurable effect on the ROE required by
3 investors of the publicly traded companies.

4 Q. Thank you.

5 A. Yeah.

6 RECROSS EXAMINATION BY MR. GRANTMYRE:

7 Q. Chairman Finley asked you about mechanisms.
8 You're aware that, in North Carolina,
9 Carolina Water has available to it the water system
10 improvement charge and the sewer system improvement
11 charge?

12 A. Yes. And that's pretty common throughout all
13 the proxy group companies and most of the states in the
14 country now.

15 Q. Well, isn't it true that most of the other
16 states have a DSIC, which is a distribution system
17 improvement charge, and it's limited to the
18 distribution system for water companies and the
19 collection system for wastewater companies?

20 A. There are differences. Pennsylvania is a
21 DSIC. There's also a WSIC/SSIC up in Connecticut.
22 There's -- there's -- there are different names of
23 different things, but most -- investors would look at
24 it as pretty much the same stuff.

1 Q. But isn't -- have you looked at the
2 North Carolina statute that gets into the WSIC/SSIC,
3 how broad it is, compared to, say, the DSIC in
4 Pennsylvania, isn't it much, much broader?

5 A. I haven't looked at the statute.

6 Q. Okay. Thank you. No further questions.

7 A. Yup.

8 FURTHER REDIRECT EXAMINATION BY MR. BENNINK:

9 Q. Mr. D'Ascendis, going back to the questions
10 that Chairman Finley asked you, in North Carolina, are
11 you aware of the mechanisms that the water and sewer
12 industry has for outside general rate case cost
13 recovery?

14 A. Well, this case is just the WSIC and the
15 SSIC, right?

16 Q. That's right. I mean, both the Carolina
17 Water Service and Aqua both have what we call the
18 WSIC/SSIC ratemaking mechanism.

19 A. Correct.

20 Q. Are you aware of any other mechanisms that
21 are actually in place for the water utility industry in
22 North Carolina today?

23 A. Not that I'm aware of, no.

24 Q. And the mechanisms being proposed in this

1 case is a -- would be a new mechanism, if approved by
2 the Company, that would be in place for Carolina Water
3 Service?

4 A. It would be new, but it's common across the
5 publicly traded companies. So even though it's new
6 here, it's not new everywhere, and the -- that would be
7 subsumed in the market prices of the proxy group, which
8 means that it's already reflected in my ROE
9 recommendation, if there is any risk.

10 Q. And can you state for the record, if you
11 know, in terms of the proxy group, what other
12 mechanisms that those companies may have that Carolina
13 Water Service does not have?

14 A. Well, from what I -- from what I said
15 earlier, you have -- the California companies have
16 future test year, Illinois has future test year,
17 Indiana has future test year, PA has future test year,
18 New Jersey has a measurable -- met and measurable, I
19 think some -- I think it's nine months' forecast at
20 three months' historical. And then you have the
21 various infrastructure riders and -- which are in my
22 Exhibit 10R in my rebuttal. The various decoupling
23 mechanisms.

24 There's also other ones that I did not -- did

1 not illustrate in 10R, which -- purchase water, things
2 like that, that I didn't -- I didn't put in. But
3 they're fairly common and they don't really take up a
4 lot -- there's not a lot of revenue impact in those, at
5 least in my opinion. So, I mean, the major ones are
6 future test year decoupling and the infrastructure
7 riders. And those are the ones that I focused on.

8 Q. So would it be fair to say that, in terms of
9 the other companies in the comparable group, they have
10 a much more robust availability of ratemaking
11 adjustments outside of the general rate case than in
12 North Carolina?

13 A. I would say, comparably speaking, because of
14 their lack of mechanisms, they're -- it's harder for
15 them to earn their rate of return. But like I said,
16 the mechanisms, themselves, aren't quantifiable when it
17 comes to an ROE adjustment or anything like that. It's
18 just something that you have to consider going forward.

19 Q. And are you aware of the ratemaking
20 adjustment mechanisms of the electric utility industry
21 and the natural gas utility industry have in
22 North Carolina, as compared to the water industry?

23 MR. GRANTMYRE: I'm going to object. I
24 don't remember asking about electric and gas.

1 CHAIRMAN FINLEY: Overruled. Overruled.

2 THE WITNESS: Well, in electric and gas
3 in this state, there are several mechanisms that
4 help them -- that help these companies earn their
5 rate of return, where -- that aren't available to
6 water companies. I don't know the specifics. I
7 know that there are there, just for working in the
8 industry and seeing some of the tariffs from
9 working on some of these cases outside of water.

10 BY MR. BENNINK:

11 Q. For instance, the electric and natural gas
12 industries have purchased, or they -- fuel clause
13 adjustments and gas cost adjustment passthroughs,
14 correct?

15 A. They do, they do.

16 Q. And they also have other surcharge
17 adjustments for things such as energy efficiency
18 measures and things of that nature?

19 A. They do, yes.

20 Q. All right.

21 MR. BENNINK: That's all, thank you.

22 CHAIRMAN FINLEY: All right. Thank you,
23 Mr. D'Ascendis.

24 We will accept into evidence, the Direct

1 Examination Exhibits 1 and 2 [sic], and the
2 appendix also will be received into evidence at
3 this time. And the -- without objection, the Cross
4 Examination Exhibits 1 through 5.

5 MR. GRANTMYRE: Yes, please. Thank you.

6 (Whereupon, D'Ascendis Direct Exhibit
7 Number 1, Schedules DWD-1 through DWD-8,
8 and Public Staff D'Ascendis Direct Cross
9 Examination Exhibit Numbers 1 through 5
10 were admitted into evidence.)

11 CHAIRMAN FINLEY: Mr. Hinton, is he
12 next, Mr. Hinton? We are going to go until 1:00
13 before the lunch break.

14 JOHN HINTON,

15 having first been duly sworn, was examined

16 and testified as follows:

17 DIRECT EXAMINATION BY MR. GRANTMYRE:

18 Q. Please state your name and by whom you are
19 employed.

20 A. My name is John Robert Hinton. I'm employed
21 by the Public Staff.

22 Q. And did you cause to be prefiled on
23 October 3, 2018, direct testimony consisting of
24 40 pages of direct testimony, Appendix A and Appendix

1 B?

2 A. Yes.

3 Q. And also Hinton Exhibits JRH 1 through 5?

4 A. Yes.

5 Q. Do you have corrections to your direct
6 testimony?

7 A. Yes, I do.

8 Q. Could you please go through those?

9 A. Okay. I have four corrections. On page 21,
10 line 10, the number 54.92 should read 49.09. On that
11 same line, the debt cost should be 5.68 percent. Going
12 on to line 11, common equity ratio reads 45.08 percent.
13 It should read 50.91 percent. On page 31, on line 8,
14 it should read 3.2 times. It currently reads 3.7
15 times. On page 39, line 18, the number 54.92 should
16 read 49.09 percent. And on that same line, the number
17 45.08 percent should read 50.91 percent. That's all.

18 Q. And if I were -- with those corrections, if I
19 were to ask you the same questions again, would your
20 answers be the same?

21 A. Yes.

22 Q. And did you cause to be prefiled on
23 October 12, 2018, supplemental testimony consisting of
24 four pages and one exhibit being JRH Exhibit 5?

1 A. Yes.

2 Q. And do you have any corrections on that?

3 A. No.

4 Q. And if I were to ask you those same questions
5 again today, would your answers be the same?

6 A. Yes.

7 MR. GRANTMYRE: Chairman Finley, we
8 would request that his direct testimony be copied
9 into the record and his -- as if given orally, and
10 his supplemental testimony be copied into the
11 record as if given orally, and that the exhibits be
12 identified.

13 CHAIRMAN FINLEY: All right.
14 Mr. Hinton's direct prefiled testimony of
15 October 4, 2018, of 40 pages and his two appendices
16 are copied into the record as if given orally from
17 the stand. And his four pages of supplemental
18 testimony of October 12, 2018, are copied into the
19 record as if given orally from the stand. And his
20 appendices -- excuse me, and his exhibits are
21 marked for identification as premarked in filing
22 both direct and supplemental.

23 (Hinton Exhibit Numbers JRH-1 through
24 JRH-5 and Supplemental Hinton Exhibit

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Number 5 were marked for
identification.)
(Whereupon, the prefiled direct
testimony and prefiled supplemental
testimony of John Hinton was copied into
the record as if given orally from the
stand.)

OCT 04 2018

Clerk's Office
N.C. Utilities Commission

**CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA
DOCKET NO. W-354, SUB 360**

**TESTIMONY OF JOHN R. HINTON
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION**

October 4, 2018

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

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

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

9 **A.** The purpose of my testimony is to present to the North Carolina
10 Utilities Commission (Commission) the results of my analysis and
11 my recommendations as to the fair rate of return to be used in
12 establishing rates for water and sewer utility service provided by
13 Carolina Water Service, Inc. of North Carolina, Inc. (CWSNC or
14 Company).

1 Q. WHAT IS THE CURRENTLY APPROVED COST OF
2 CAPITAL FOR CWSNC?

3 A. In the last CWSNC general rate case, Docket No. W-354, Sub 356,
4 the Commission approved a capital structure of 48.00% long-term
5 debt, 52.00% common equity, a cost rate of long-term debt of
6 5.93%, and a cost rate of common equity of 9.60% for an overall
7 weighted cost of capital of 7.84%.

8 Q. WHAT IS THE COST OF CAPITAL REQUESTED BY CWSNC IN
9 THIS PROCEEDING?

10 A. CWSNC has requested an overall rate of return or cost of capital of
11 8.91%. This applied for rate of return is based on a capital structure
12 of 47.11% long-term debt, 52.89% common equity, a cost rate of
13 long-term debt of 6.00%, and a cost rate for common equity of
14 11.50%.

15 Q. HOW DOES CWSNC WITNESS D'ASCENDIS DEVELOP HIS
16 RECOMMENDATION?

17 A. CWSNC witness D'Ascendis utilizes three cost of equity methods: (1)
18 Discounted Cash Flow (DCF); (2) the Predictive Risk Premium method
19 (PRPM); and (3) Capital Asset Pricing Model (CAPM). He applies
20 these methodologies to a proxy group of six publically-traded water

1 companies. His first method relies on the DCF model which produces
2 a cost of equity of 9.10%. The second method is the Predictive Risk
3 Premium Model (PRPM) that relies on predicted bond yields produces
4 a 13.43% cost of equity. The witness includes a second risk premium
5 analysis that he characterizes as a "total market approach" which
6 produces a 10.80% cost of equity for his utility proxy group. The
7 witness concludes by averaging the 13.43% PRPM result with the
8 10.80 total market result to derive his overall risk premium result of
9 12.12% cost of equity. His third method incorporates the capital asset
10 pricing model (CAPM) that is based on a risk-free rate of return, beta
11 coefficient, and the expected return on the market. To derive the
12 expected return on the market, the witness relies on one historical
13 arithmetic return on the S&P 500 of 11.97% and two forecasted based
14 returns on the S&P 500 of 14.59% and 15.73%. With these and other
15 inputs, he estimated the cost of equity by averaging the traditional
16 CAPM result of 11.25% and with his empirical CAPM result of 11.37%
17 for a 11.31% cost of equity. He also applies the DCF method, Risk
18 Premium methods, and CAPM to a group of comparable risk non-price
19 regulated companies and derives cost of equity estimates of 14.15%,
20 12.46%, and 11.78%, respectively. He averages these three non-
21 utility results to arrive at 12.63% cost of equity for his non-price
22 regulated group of companies. His final conclusion for the cost of

1 equity using his three methods as applied to a utility and a non-utility
2 groups of companies is 11.50%. Given that the witness believes that
3 CWSNC's small size relative to his proxy groups has added risks, he
4 increases the baseline cost of equity by 0.40%, which raises his
5 recommended cost to 11.90%. However, the Companies Schedule D-
6 1 of the Item 10 shows a proposed cost rate of 11.50% for common
7 equity.

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

10 A. The Public Staff recommends an overall rate of return of 7.37%,
11 based on the June 30, 2018, capital structure and cost of debt
12 consisting of 54.92% long-term debt at a cost rate of 5.87% and
13 45.08% common equity. As such, the disagreement between the
14 Company and the Public Staff is the capital structure, the
15 embedded debt cost rate, pre-tax interest coverage and
16 recommended cost rate of common equity of 9.20%.

17 **Q. HOW IS THE REMAINDER OF YOUR TESTIMONY**
18 **STRUCTURED?**

19 A. The remainder of my testimony is presented in the following five
20 sections:

- 1 I. Legal and Economic Guidelines for Fair Rate of Return
- 2 II. Present Financial Market Conditions
- 3 III. Appropriate Capital Structure and Cost of Long-Term Debt
- 4 IV. The Cost of Common Equity Capital
- 5 V. Concerns with Company Witness D'Ascendis' Testimony
- 6 VI. Summary and Recommendations

7 I. LEGAL AND ECONOMIC GUIDELINES FOR FAIR RATE OF
8 RETURN

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

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

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

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

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

13 In Bluefield Waterworks & Impr. Co. v. Public Service Comm'n, 262
14 U.S. 679, 692-93 (1923) (Bluefield) the United States Supreme
15 Court stated: A public utility is entitled to such rates as will permit it
16 to earn a return on the value of the property which it employs for
17 the convenience of the public equal to that generally being made at
18 the same time and in the same general part of the country on
19 investments in other business undertakings which are attended by
20 corresponding risks and uncertainties, but it has no constitutional
21 right to profits such as are realized or anticipated in highly profitable
22 enterprises or speculative ventures. The return should be
23 reasonably sufficient to assure confidence in the financial

1 soundness of the utility, and should be adequate, under efficient
2 and economical management, to maintain and support its credit
3 and enable it to raise the money necessary for the proper discharge
4 of its public duties. A rate of return may be reasonable at one time
5 and become too high or too low by changes affecting opportunities
6 for investment, the money market, and business conditions
7 generally.

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

1 shaped by expected risk and return, is paramount in attracting
2 capital.

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

1 revenue requirement and is a crucial issue for a company and its
2 ratepayers.

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

6 to produce a fair return for its shareholders,
7 considering changing economic conditions and other
8 factors, . . . to maintain its facilities and services in
9 accordance with the reasonable requirements of its
10 customers in the territory covered by its franchise, and
11 to compete in the market for capital funds on terms
12 that are reasonable and are fair to its customers and
13 to its existing investors.

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

15 On April 12, 2013, the North Carolina Supreme Court decided State
16 ex rel. Utils. Comm'n v. Cooper, 366 N.C. 484, 739 S.E. 2d 541
17 (2013) (Cooper). In that decision, the Supreme Court reversed and
18 remanded the Commission's January 27, 2012, Order in Docket
19 No. E-7, Sub 989, approving a stipulated return on equity of
20 10.50% for Duke Energy Carolinas, LLC. In its decision, the
21 Supreme Court held (1) that the 10.50% return on equity was not
22 supported by the Commission's own independent findings and
23 analysis as required by State ex rel. Utils. Comm'n v. Carolina Util.
24 Customers Ass'n, 348 N.C. 452, 500 S.E.2d 693 (1998) (CUCA I),

1 in cases involving nonunanimous stipulations, and (2) that the
2 Commission must make findings of fact regarding the impact of
3 changing economic conditions on consumers when determining the
4 proper return on equity for a public utility. In Cooper, the Court's
5 holding introduced a new factor to be considered by the
6 Commission regardless of whether there is a stipulation.

7 In considering this new element, the Commission is guided by
8 ratemaking principles laid down by statute and interpreted by a
9 body of North Carolina case law developed over many years.
10 According to these principles, the test of a fair rate of return is a
11 return on equity that will provide a utility, by sound management,
12 the opportunity to (1) produce a fair profit for its shareholders in
13 view of current economic conditions, (2) maintain its facilities and
14 service, and (3) compete in the marketplace for capital. State ex
15 rel. Utils. Comm'n v. General Tel. Co., 281 N.C. 318, 370, 189
16 S.E.2d 705, 738 (1972). Rates should be set as low as reasonably
17 possible consistent with constitutional constraints. State ex rel.
18 Utils. Comm'n v. Pub. Staff-N. Carolina Utils. Comm'n, 323 N.C.
19 481, 490, 374 S.E.2d 361, 366 (1988). The exercise of subjective
20 judgment is a necessary part of setting an appropriate return on
21 equity. Id. Thus, in a particular case, the Commission must strike

1 a balance that (1) avoids setting a return so low that it impairs the
2 utility's ability to attract capital, (2) avoids setting a return any
3 higher than needed to raise capital on reasonable terms, and (3)
4 considers the impact of changing economic conditions on
5 consumers.

6 **Q. WHAT IS A FAIR RATE OF RETURN?**

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

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

17 A. To determine the fair rate of return, I performed a cost of capital
18 study consisting of three steps. First, I determined the appropriate
19 capital structure for ratemaking purposes, i.e., the proper
20 proportions of each form of capital. Utilities normally finance assets

1 with debt and common equity. Because each of these forms of
2 capital have different costs, especially after income tax
3 considerations, the relative amounts of each form employed to
4 finance the assets can have a significant influence on the overall
5 cost of capital, revenue requirements, and rates. Thus, the
6 determination of the appropriate capital structure for ratemaking
7 purposes is important to the utility and to ratepayers. Second, I
8 determined the cost rate of each form of capital. The individual
9 debt issues have contractual agreements explicitly stating the cost
10 of each issue. The embedded annual cost of debt may be
11 calculated by simply considering these agreements and the utility's
12 books and records. The cost of common equity is more difficult to
13 determine, because it is based on the investor's opportunity cost of
14 capital. Various economic and financial models or methods are
15 available to measure the cost of common equity. Third, by
16 combining the appropriate capital structure ratios for ratemaking
17 purposes with the associated cost rates, I calculated an overall
18 weighted cost of capital or fair rate of return.

1 **II. PRESENT FINANCIAL MARKET CONDITIONS**

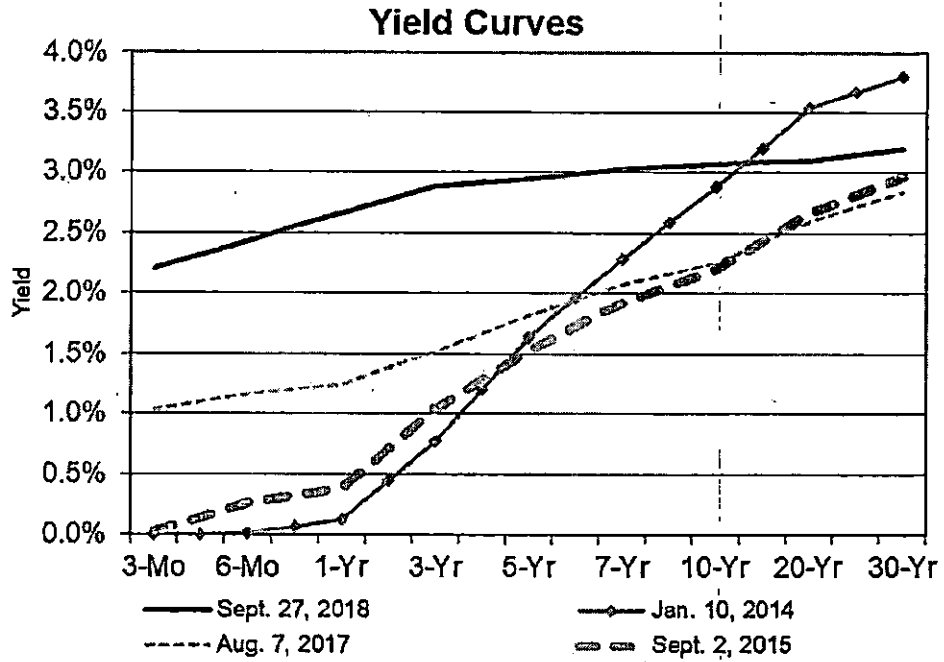
2 **Q. CAN YOU BRIEFLY DESCRIBE CURRENT FINANCIAL MARKET**
3 **CONDITIONS?**

4 A. Yes. The cost of financing is much lower today than in the more
5 inflationary period of the 1990s. More recently, the continued low
6 rates of inflation and expectations of future low inflation rates have
7 contributed to even lower interest rates. According to Moody's Bond
8 Survey, yields on long-term "A" rated public utility bonds as of
9 August, 2018 is 4.26% and 4.27% for July, 2018. By the close of this
10 proceeding, the Company will, most likely, have received four rate
11 increases over the last five years (Docket Nos. W-354, Sub 356, Sub
12 344, and Sub 336). At the time of the filed cost of capital settlement
13 on January 10, 2014 in Docket No. W-354, Sub 336, Moody's A-
14 rated utility bonds yielded 4.63%, which is 37 basis points higher
15 than the current yields on its long-term bonds, as illustrated in Exhibit
16 JRH-1.

17 **Q. HOW HAVE SHORT-TERM INTEREST RATES CHANGED SINCE**
18 **THE COMPANY'S LAST RATE CASE?**

19 A. They have increased as shown in the graph below as there is a
20 flattening of the yield curves, which can be seen as movement to in

1 the direction of historical normals. However, there has been little
 2 changes in the cost rates for 30-year treasury securities which are
 3 indicators of the interest rates for long-term utility bonds. As
 4 illustrated in the graph below, since the time of the last CWSNC
 5 stipulation filed on September 19, 2017, yields on 30-year treasury
 6 securities have risen 12 basis points; however, the yields on 30-year
 7 treasury securities are 60 basis point lower since January 10, 2014,
 8 the date that the cost of capital stipulation was filed in Docket W-354,
 9 Sub 336.



10

1 Q. HOW DO INTEREST RATES AFFECT THE FINANCING COSTS
2 OF A COMPANY?

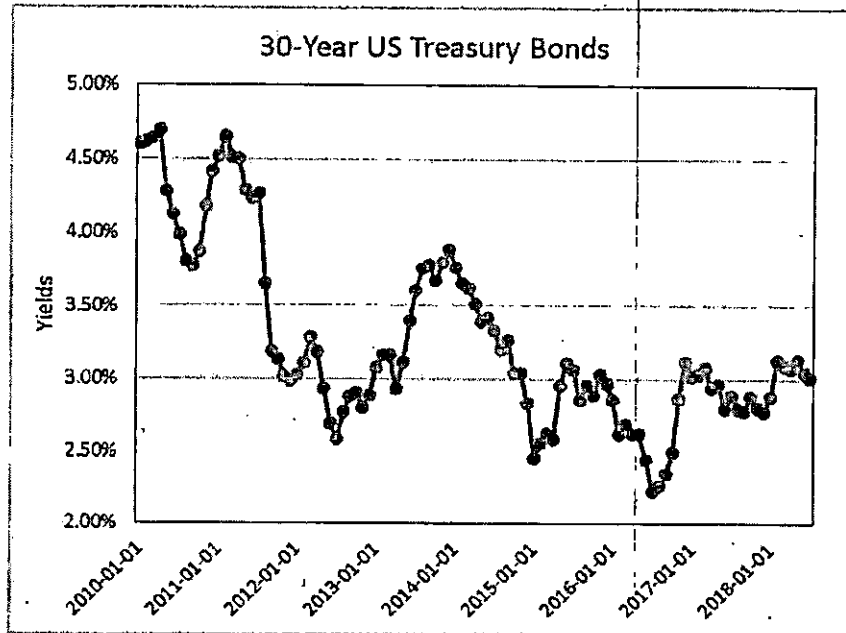
3 A. In simple terms, the current lower interest rates and stable
4 inflationary environment of today indicate that borrowers are paying
5 less for the time value of money. This is significant since utility
6 stocks and utility capital costs are highly interest rate-sensitive
7 relative to most industries within the securities markets.
8 Furthermore, given that investors often view purchases of the
9 common stocks of utilities as substitutes for fixed income
10 investments, the reductions in interest rates observed over the past
11 ten or more years has paralleled the decreases in investor required
12 rates of return on common equity.

13 Q. GIVEN YOUR GRAPH OF YIELD CURVES SHOWS RATES HAVE
14 INCREASED, DO YOU RELY ON INTEREST RATE
15 PREDICTIONS IN YOUR INVESTIGATION?

16 A. Yes, I will review predictions; however, I generally do not rely on
17 interest rate forecasts to determine the cost of equity. Rather, I
18 believe that relying on current interest rates, especially in relation to
19 yields on long-term bonds, is more appropriate for ratemaking in that,
20 it is reasonable to expect that as investors are pricing bonds, they
21 are based on expectations on future interest rates, inflation rates,

1 etc. While I have a healthy respect for forecasting, I'm aware of the
2 risk of relying on predictions of rising interest rates in rate cases. A
3 case can be observed in the supplemental testimony of Company
4 witness Ahern in the Aqua rate case in Docket W-218, Sub 363.
5 Here the witness identified several interest rate forecasts by Blue
6 Chip Financial Forecasts of 30-year Treasury Bonds yields that were
7 predicted to rise to 4.3% in 2015, 4.7% in 2016, 5.2% in 2017, and
8 5.5% for 2020-2024¹. The graph below, reveals how these forecasts
9 significantly over-estimated actual interest rates for 30-year Treasury
10 Bonds. As such, I tend to place more weight in current market
11 interest rates which are inherently forward looking as they reflect
12 investor expectations of current and future returns.

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



1

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

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

4 **A.** For companies that do not have monopoly power, the price that an
5 individual company charges for its products or services is set in a
6 competitive market and that price is generally not influenced by the
7 company's capital structure. However, the capital structure that is
8 determined to be appropriate for a regulated public utility has a

1 direct bearing on the fair rate of return, revenue requirement, and,
2 therefore, the prices charged to captive ratepayers.

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

6 **A.** The capital structure is simply a representation of how a utility's
7 assets are financed. It is the relative proportions or ratios of debt
8 and common equity to the total of these forms of capital, which
9 have different costs. Common equity is far more expensive than
10 debt for ratemaking purposes for two reasons. First, as mentioned
11 earlier, there are income tax considerations. Interest on debt is
12 deductible for purposes of calculating income taxes. The cost of
13 common equity, on the other hand, must be "grossed up" to allow
14 the utility sufficient revenue to pay income taxes and to earn its cost
15 of common equity on a net or after-tax basis. Therefore, the
16 amount of revenue the utility must collect from ratepayers to meet
17 income tax obligations is directly related to both the common equity
18 ratio in the capital structure and cost of common equity. A second
19 reason for this cost difference is that the cost of common equity
20 must be set at a marginal or current cost rate. Conversely, the cost
21 of debt is set at an embedded rate because the utility is incurring

1 costs that are previously established in contracts with security
2 holders.

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

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

13 (2) Each \$1 of long-term debt costs a ratepayer less than 6
14 cents per year.

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

17 **A.** The Company's application requests to use a capital structure of
18 47.11% long-term debt and 52.89% common equity as of
19 December 31, 2017.

1 Q. DO YOU SUPPORT THE CAPITAL STRUTURE PROPOSED BY
2 THE COMPANY IN THIS CASE?

3 A. No. I recommend that the Company update its capital structure as
4 of June 30, 2018. Secondly, I recommend that the capital structure
5 include the June 30, 2018 balance of the Company's Revolving
6 Credit Facility of \$80 million that was entered into on October 23,
7 2015 that contains a maturity date of October 23, 2020. I believe
8 that the updated capital structure that includes the Revolving Credit
9 Facility of 54.92% debt and 45.08% common equity is both
10 representative and reasonable for ratemaking.

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

13 A. I recommend the use of the Company's proposed cost of debt that
14 has been updated as of June 30, 2018 to 5.87%. The Company
15 maintains that the make whole provisions contained in their existing
16 Notes make it uneconomic for refinancing. CWSNC and Utilities,
17 Inc. have a history of making private placements of debt at
18 relatively higher interest rates relative to public offerings by other
19 water and sewer utilities, such as with Aqua North Carolina. Unlike
20 Aqua North Carolina, CWSNC does not have any loans that are
21 associated with the rehabilitation of water infrastructure that were

1 enabled through the North Carolina State Revolving Fund Program
 2 authorized by the Safe Drinking Water Act. The Public Staff urges
 3 the Company to continue to investigate this source of funding which
 4 are at cost rates that are typically significantly lower than available
 5 in the market. My recommended capital structure and cost of debt
 6 is as follows:

	CWSNC	
	as of June 30, 2018	
	Ratio	Debt Cost
10 Long-Term Debt	54.92%	5.87%
11 Common Equity	45.08%	
12 Total	100.00%	

13 **IV. THE COST OF COMMON EQUITY CAPITAL**

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

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

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

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

5 Q. PLEASE DESCRIBE YOUR DCF ANALYSIS.

6 A. The discounted cash flow model is a method of evaluating the
7 expected cash flows from an investment by giving appropriate
8 consideration to the time value of money. The DCF model is based
9 on the theory that the price of the investment will equal the
10 discounted cash flows of returns. The return to an equity investor
11 comes in the form of expected future dividends and price
12 appreciation. However, as the new price will again be the sum of
13 the discounted cash flows, price appreciation is ignored and
14 attention focused on the expected stream of dividends.
15 Mathematically, this relationship may be expressed as follows:

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

17 g = expected growth rate of dividends;

18 k = cost of equity capital; and

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

1 Then,

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

3
4
5 This equation represents the amount an investor would be willing to
6 pay for a share of common stock with a dividend stream over the
7 future periods. Using the formula for a sum of an infinite geometric
8 series, this equation may be reduced to:

$$9 \quad P = \frac{D_1}{k-g}$$

10
11
12 Solving for k yields the DCF equation:

$$13 \quad k = \frac{D_1 + g}{P}$$

14
15
16
17 Therefore, the rate of return on equity capital required by investors
18 is the sum of the dividend yield (D_1/P) plus the expected long-term
19 growth rate in dividends (g)
20

21 **Q. DID YOU APPLY THE DCF METHOD DIRECTLY TO CWSNC?**

22 **A.** No. I applied the DCF method to a comparable group of water
23 utilities followed by Value Line Investment Survey (Value Line).
24 The standard edition of Value Line covers nine water companies.
25 However, I excluded Connecticut Water Service, Inc. and The SJW

1 Group because of a merger of the two companies. I also excluded
2 Consolidated Water Co. because of its significant overseas
3 operations.

4 Q. WHAT MEASURES OF RISK DID YOU REVIEW TO
5 DETERMINE THE COMPARABILITY OF INVESTING IN
6 CWSNC TO INVESTING IN OTHER WATER UTILITIES?

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

17 I reviewed the Value Line Safety Rank, which is defined as a
18 measure of the total risk of a stock. The Safety Rank is
19 calculated by averaging two variables (1) the stock's index of

1 price stability, and (2) the Financial Strength rating of the
2 company.

3 In addition, I reviewed the S&P Common Stock Rating. The
4 stock rating system takes into consideration two important
5 factors in the determination of a stock's rating: the stability and
6 growth of earnings and dividends. However, the stock rating
7 does not consider a company's balance sheet or other factors.
8 The stock rating system has seven grades with A+ being the
9 highest rating possible.

10 I also reviewed S&P's Bond Rating, which is an assessment of
11 the creditworthiness of a company. Credit rating agencies focus
12 on the creditworthiness of the particular bond issuer, which
13 includes a detailed and thorough review of the potentials areas
14 of business risk and financial risk of the company. These and
15 other risk measures for the comparable group are shown in
16 Exhibit JRH-2 and are further explained in Appendix B.

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

19 **A.** I calculated the dividend yield by using the Value Line estimate of
20 dividends to be declared over the next 12 months divided by the

1 price of the stock as reported in the Value Line Summary and Index
2 sections for each week of the 13-week period June 29, 2018
3 through September 21, 2018. A 13-week averaging period tends to
4 smooth out short-term variations in the stock prices. This process
5 resulted in an average dividend yield of 2.1% for the comparable
6 group of water utilities.

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

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

20 Finally, I incorporated the consensus of various analysts' forecasts

1 of five-year EPS growth rate projections as reported in Yahoo
2 Finance. The dividend yields and growth rates for each of the
3 companies and for the average for the comparable group are
4 shown in Exhibit JRH-3.

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

8 A. Based upon the DCF analysis, I determined that a reasonable
9 expected dividend yield is 2.1% with an expected growth rate of
10 6.1% to 7.1%. While I consider historical growth rates in making
11 my recommendations, I often place the greatest weight on
12 predicted growth rates. In this case, the average growth is 6.6%
13 which produces a 8.7% mid-point result for my DCF analysis. As
14 such, the analysis produces a cost of common equity estimate for
15 CWSNC that is within the range of 8.20% to 9.20%.

16 **Q. PLEASE DESCRIBE YOUR RISK PREMIUM ANALYSIS.**

17 A. The equity risk premium method can be defined as the difference
18 between the expected return on a common stock and the expected
19 return on a debt security. The differential between the two rates of
20 return are indicative of the return investors require in order to

1 compensate them for the additional risk involved with an investment
2 in the Company's common stock over an investment in the
3 Company's bonds that involves less risk.

4 In order to quantify the risk premium, I need estimates of the cost of
5 equity and the cost of debt at contemporaneous points in time. In
6 that, my method relies on approved returns on common equity for
7 water utility companies from various public utility commissions that
8 is published by the Regulatory Research Associates, Inc. (RRA),
9 within SNL Global Market Intelligence. In order to estimate the
10 relationship with a representative cost of debt capital, I have
11 regressed the average annual allowed equity returns with the
12 average Moody's A-rated yields for Public Utility bonds from 2006
13 through 2018. The regression analysis which incorporates years of
14 historical data is combined with recent monthly yields to provide an
15 estimate of the current cost of common equity.

16 **Q. WHAT ARE THE STRENGTHS OF USING ALLOWED RETURNS?**

17 **A.** The use of allowed returns as the basis for the expected equity
18 return has two strengths over other approaches that involve various
19 models that estimate the expected equity return on common stocks
20 and subtracting a representative cost of debt. One strength of my

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

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

8 A. The summary data of risk premiums shown on Exhibit JRH-4, page
9 1 of 2 indicates that the average risk premium is 4.95% with a
10 maximum premium of 5.78% and minimum premium of 3.73%,
11 which when combined with the last six months of A-rated bond yields
12 produces yields with an average cost of equity of 9.11%, a maximum
13 cost of equity of 9.94%, and a minimum cost of equity of 7.89%. As
14 noted, a statistical regression was performed in order to quantify the
15 relationship of allowed equity returns and bond costs. Exhibit JRH-
16 4, page 2 of 2 displays a regression analysis of the data that
17 indicates a significant statistical relationship of the allowed equity
18 returns and bond costs, such that a one percent decrease in the
19 bond cost corresponds to an increase of approximately 26 basis

1 points in the equity risk premium.² While various studies on the cost
2 of equity capital have differed on the level of the negative
3 relationship of interest rates and risk premiums there has been
4 agreement that as interest rates fall, there is an increase in the
5 premium.³ Applying this relationship to the current utility bond cost
6 of 4.22%⁴ resulted in a current estimate of the cost of equity of
7 9.70% which reflects a risk premium of 5.48%.

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

10 A. Based on all of the results of my DCF model that indicate a cost of
11 equity from 8.2% to 9.2% with a central point estimate of 8.70% and
12 Risk Premium model that indicates a cost of equity of 9.70%, I
13 determined that the investor required rate of return for CWSNC is
14 between 8.70% and 9.70%. I further conclude that 9.20% is my
15 single best estimate of the Company's cost of common equity.

² The regression indicated a significant statistical relationship of $ROE = 0.08603 + 0.26086$, with an adjusted $R^2 = 0.74952$.

³ 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.

⁴ The 4.22% current bond yield was determined using the most recent six-month average yield-to-maturity rate of Moody's A-rated Utility Bond Yields.

1 Q. WHAT OTHER EVIDENCE DID YOU CONSIDER IN YOUR
2 ASSESMENT OF THE REASONABLENESS OF YOUR
3 RECOMMENDED RETURN?

4 A. In regard to reasonableness assessment with financial risk, I
5 considered the pre-tax interest coverage ratio produced by my cost
6 of capital recommendation. Based on the recommended capital
7 structure, cost of debt, and equity return of 9.20%, the pre-tax
8 interest coverage ratio is approximately 3.7 times. This level of pre-
9 tax interest coverage should allow CWSNC to qualify for a single
10 "A" bond rating.

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

16 A. In my opinion, the water and sewer improvement charge
17 mechanism (WSIC and SSIC) provides the ability for enhanced
18 cost recovery of the eligible capital improvements which reduces
19 regulatory lag through incremental and timely rate increases. I
20 believe this mechanism is seen by debt and equity investors as
21 supportive regulation that mitigates business and regulatory risk.

1 As such, I believe that this mechanism is noteworthy and is
2 supportive of my recommendation.

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

7 A. I am aware of no clear numerical basis for quantifying the impact of
8 changing economic conditions on customers in determining an
9 appropriate return on equity in setting rates for a public utility.
10 Rather, the impact of changing economic conditions nationwide is
11 inherent in the methods and data used in my study to determine the
12 cost of equity for utilities that are comparable to Aqua. I have
13 reviewed certain information on the economic conditions in the
14 areas served by CWSNC, specifically, the 2014, 2015, and 2016
15 data on total personal income from the Bureau of Economic
16 Analysis (BEA) and the Development Tier Designations published
17 by the North Carolina Department of Commerce for the counties in
18 which Aqua's systems are located. The BEA data indicates that
19 from 2014 to 2016, total personal income weighted by the number
20 of water customers by county grew at a compound annual growth
21 rate (CAGR) of approximately 3%.

1 The North Carolina Department of Commerce annually ranks the
2 state's 100 counties based on economic well-being and assigns
3 each a Tier designation. The most distressed counties are rated a
4 "1" and the most prosperous counties are rated a "3." The rankings
5 examine several economic measures such as, household income,
6 poverty rates, unemployment rates, population growth, and per
7 capita property tax base. For 2017, the average Tier ranking that
8 has been weighted by the number of water customers by county is
9 2.6. Both these economic measures indicate that there have been
10 improvement in the economic conditions for CWSNC's service area
11 relative to the three previous rate increases in Docket Nos. W-354,
12 Subs 356, 344, and 336 that were approved in 2017, 2015, and
13 2014, respectively.

14 As discussed above, it is the Commission's duty to set rates as low
15 as reasonably possible consistent within constitutional constraints.
16 This duty exists regardless of the customers' ability to pay.
17 Moreover, the rate of return on common equity is only one
18 component of the rate established by the Commission. N.C. Gen.
19 Stat. § 62-133 sets out an intricate formula for the Commission to
20 follow in determining a utility's overall revenue requirement. It is the
21 combination of rate base, expenses, capital structure, cost rates for

1 debt and equity capital, and capital structure that determines how
2 much customers pay for utility service and how much investors
3 receive in return for their investment. The Commission must
4 exercise its best judgment in balancing the interests of both groups.
5 My analysis indicates that my recommended rate of return on
6 equity will allow the Company to properly maintain its facilities,
7 provide adequate service to its customers, attract capital on terms
8 that are fair and reasonable to its customers and investors, and will
9 result in rates that are just and reasonable.

10 **V. CONCERNS WITH COMPANY WITNESS D'ASCENDIS'**

11 **TESTIMONY**

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

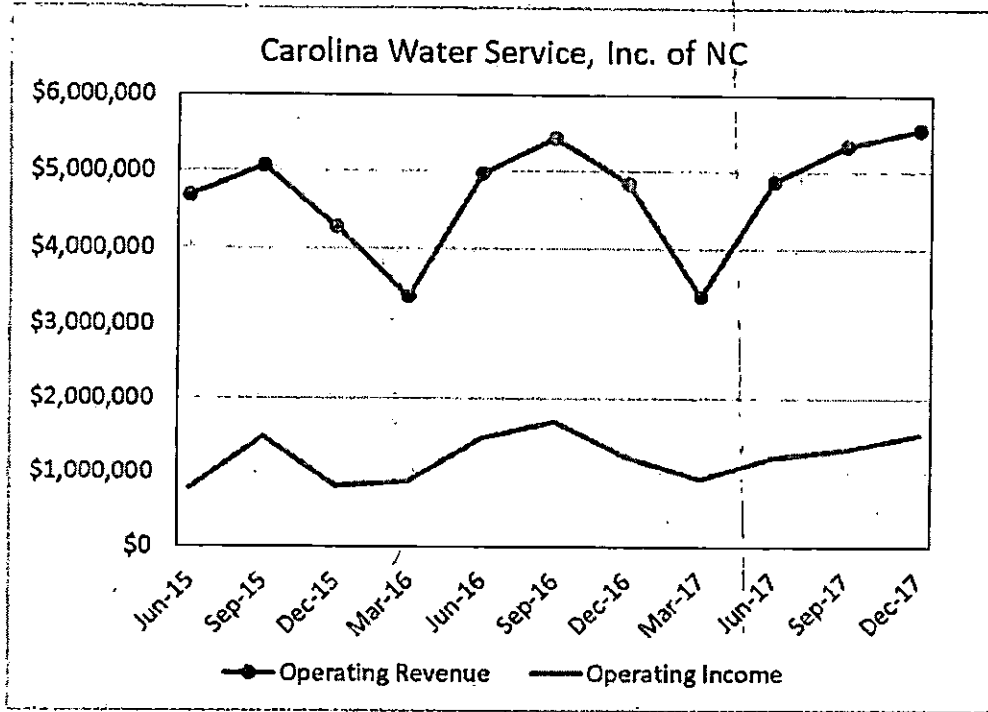
14 **A.** Yes, my first concern is his adjustment for business risk. I do not
15 believe that it is appropriate to add a risk premium to the cost of
16 equity due to the size of a regulated utility company. My reasons
17 are as follows: first, from a regulatory policy perspective, ratepayers
18 should not be required to pay higher rates because they are located
19 in the franchise area of a utility of a size which is arbitrarily
20 considered to be small. Further if such adjustments were routinely

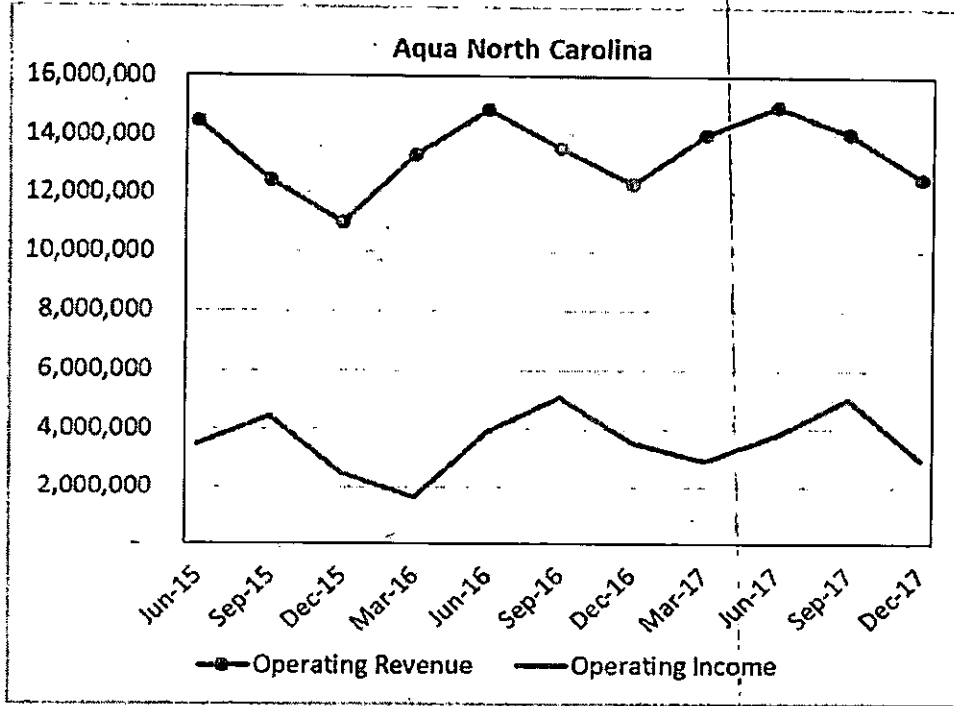
1 allowed, an incentive would exist for large existing utilities to form
2 subsidiaries when merging or even to split-up into subsidiaries as to
3 obtain higher allowed returns. Lastly, CWSNC operates in a
4 franchise environment that insulates the company from competition
5 and it operates with procedures in place that allow for rate
6 adjustments for eligible capital improvements, cost increases, and
7 other unusual circumstances that impact its earnings.

8 Furthermore, CWSNC operates in an industry where bottled water
9 provides the only alternative to utility service. Thus, the industry is
10 often considered less risky from an investor's perspective relative to
11 natural gas industry, which competes with electric service, propane,
12 and other alternative fuel sources. As such, I have compared the
13 quarterly operating revenue and the quarterly operating income
14 before interest and income taxes of CWSNC, Aqua North Carolina,
15 Inc., Public Service Company of North Carolina, Inc. (PSNC) and
16 the North Carolina operations of Piedmont Natural Gas Company,
17 Inc. (Piedmont) over the last couple of years. As expected, the
18 operating revenue and the operating income⁵ of CWSNC and Aqua

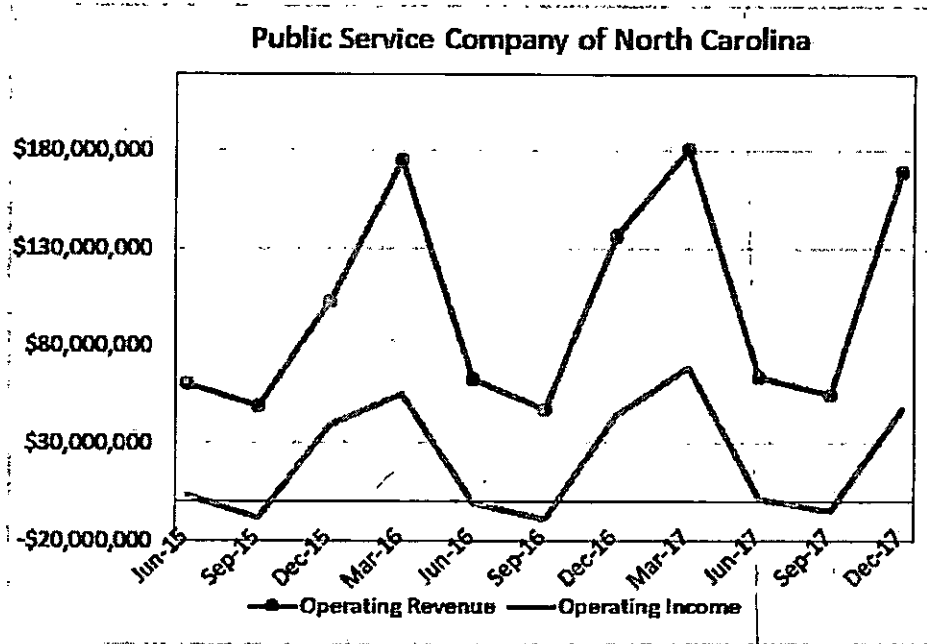
⁵ The operating revenue and income data is from monthly and quarterly reports provided to the Public Staff. Operating income includes general taxes; but, excludes interest charges and state and federal income taxes.

1 are more predictable and stable overtime relative to PSNC and
2 Piedmont, as shown in the following graphs:

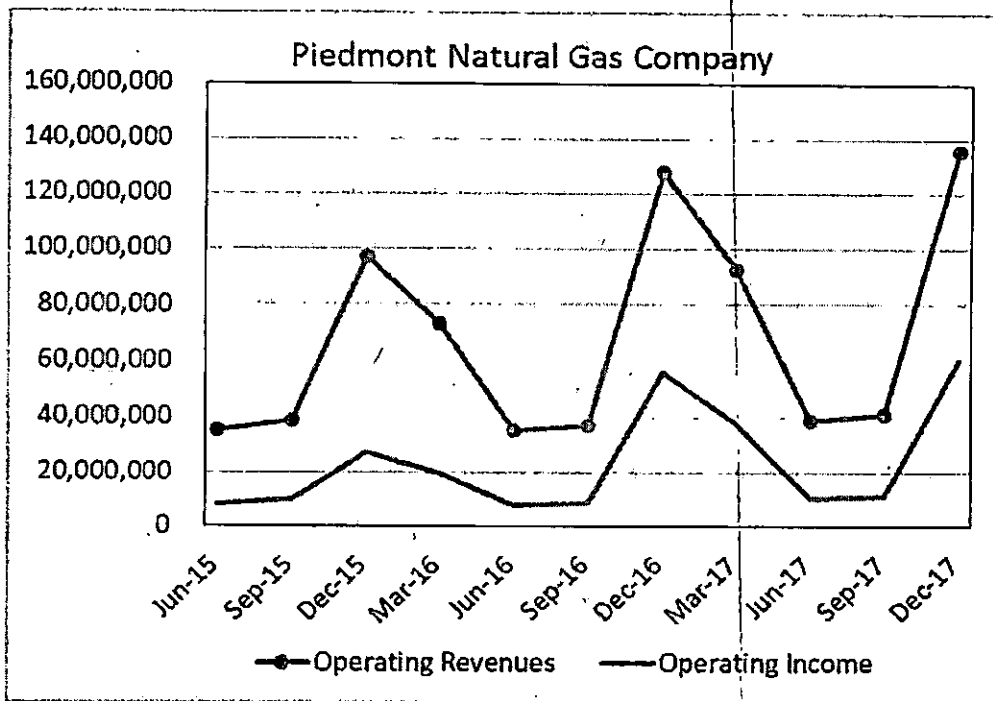




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2



1

2 Q. DO YOU KNOW OF STUDUES THAT QUESTION THE
3 ADDITIONAL RISK TO UTILITIES AS IT RELATES TO SIZE?

4 A. Yes, I am aware of a study by Dr. Annie Wong⁶ that focuses on the
5 size of regulated utilities and risk. Dr. Wong has tested for a size
6 premium in utilities and concluded that, unlike industrial stocks,
7 utility stocks do not exhibit a significant size premium. As explained
8 by Professor Wong, there are several reasons why such a size
9 premium would not be attributable to utilities; in that, utilities are

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

1 regulated closely by state and federal agencies and commissions,
2 and hence, their financial performance is monitored on an ongoing
3 basis by both the state and federal governments.

4 I believe that size premiums as advocated by witness D'Ascendis
5 cannot be applied to regulated utilities in the same manner as they
6 are applied for non-price regulated companies. In that, regulated
7 water companies do not face the same operating and financing
8 risks of other companies that have to compete for business. The
9 above counter arguments to a size premium were persuasive to the
10 NC Commission in a previous 1997 decision involving CWS
11 Systems, Inc.⁷ that were made by Frank J. Hanley of AUS
12 Consultants, Inc.

13 **VI. SUMMARY AND RECOMMENDATIONS**

14 **Q. WOULD YOU PLEASE SUMMARIZE YOUR RECOMMEND-**
15 **ATIONS CONCERNING THE COST OF CAPITAL?**

16 **A.** Based upon the results of this study, it is my recommendation that
17 the appropriate capital structure to employ for ratemaking purposes
18 in this proceeding consists of 54.92% long-term debt and 45.08%

⁷ NCUC Order Granting Partial Rate Increase, Docket No. W-778, Sub 31, issued November 26, 1997, Finding of Fact No. 43, pages 61-62.

1 common equity. The appropriate embedded cost of long-term debt
2 associated with this capital structure is 5.87% and the
3 recommended cost of common equity of 9.20%. My recommended
4 overall weighted cost of capital produced is 7.37%, as shown on
5 Exhibit JRH-5.

6 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

7 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. 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,

and 148. 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 applications of avoided cost for 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; P-26, Sub 93; P-12, Sub 89; G-21, Sub 293; P-31, Sub 125; G-5, Sub 327; G-5, Sub 386; G-9, Sub 351; P-100, Sub 133b; P-100, Sub 133d (1997 and 2002); G-21, Sub 442; W-778, Sub 31; and W-218, Sub 319, E-22, Sub 532, and W-218, Sub 497 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.

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 from 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 (β)

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 (β_1) for regression described by Blume (1971). The estimated Beta is adjusted as follows:

$$\text{Adjusted } \beta_1 = 0.35 + 0.67\beta$$

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 (β)

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" debt issues.
- AA-
- 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

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-354, SUB 360

<p>In the Matter of Application by Carolina Water Service, Inc. of NC for Authority to Adjust and Increase Rates for Water and Sewer Utility Service in All Service Areas in North Carolina</p>	<p>)))))))</p>	<p>SUPPLEMENTAL TESTIMONY OF JOHN R. HINTON PUBLIC STAFF – NORTH CAROLINA UTILITIES COMMISSION</p>
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**CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA
DOCKET NO. W-354, SUB 360**

**SUPPLEMENTAL TESTIMONY OF JOHN R. HINTON
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION**

October 12, 2018

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

3 **A.** My name is John R. Hinton and my business address is 430 North
4 Salisbury Street, Raleigh, North Carolina. I am the Director of the
5 Economic Research Division of the Public Staff.

6 **Q. ARE YOU THE SAME JOHN R. HINTON WHOSE DIRECT**
7 **TESTIMONY WAS FILED IN THIS DOCKET ON OCTOBER 4,**
8 **2018?**

9 **A.** Yes.

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

12 **A.** The purpose of my testimony is to revise my recommended capital
13 structure and cost of debt. The Company has provided additional
14 information to the Public Staff on the test-year level and cost rate
15 for the Company's Revolving Credit Facility (Credit Facility) that

1 was noted in my previous testimony. The updated information
 2 allowed me to refine my recommendation for the June 30, 2018
 3 balance of long term debt and to revise the embedded cost rate of
 4 long term debt. As such, I recommend a capital structure that
 5 consists of 49.09% long-term debt and 50.91% common equity.
 6 Furthermore, I recommend a 5.68% cost rate for long term debt, as
 7 shown below and in Hinton Supplemental Exhibit 1:

8 CWSNC
 9 as of June 30, 2018

	Ratio	Cost Rate
10 Long-Term Debt	49.09%	5.68%
11 Common Equity	50.91%	9.20%
12 Total	100.00%	

15 Q. HOW DOES THIS UPDATE INFLUENCE YOUR RECOMMENDED
 16 OVERALL COST OF CAPITAL?

17 A. The use of the updated capital structure and embedded cost of
 18 debt combined with my October 4, 2018 pre-filed testimony
 19 recommended 9.20% cost rate for common equity supports an
 20 overall cost of capital of 7.47%, which supports a higher overall cost
 21 of capital, relative to the 7.37% return from my October 4, 2018
 22 testimony. The revised pretax interest coverage equals 3.2 times
 23 and a funds flow to debt ratio of 26%, which should qualify for a

1 single "A" bond rating.

2 **Q. HOW DOES THE UPDATED RECOMMENDATION COMPARE**
3 **WITH PREVIOUSLY APPROVED OVERALL COST OF CAPITAL**
4 **FOR CWSNC?**

5 A. The recommended approved overall cost of capital of 7.47% is
6 lower than the 7.84% approved in Sub 356, the 8.20% approved in
7 Sub 344, and the 8.18% approved in Sub 336. The updated
8 recommendation with respect to the approved capital structure
9 ratios for long term debt and common equity are all similar to the
10 ratios approved in the Company's three previous cases, Sub 356,
11 Sub 344, and Sub 336. The decrease in the overall cost of capital
12 is partially due to the reduction in the Company's embedded cost
13 rate of long term debt from 5.93% approved in Sub 356, and the
14 6.60% approved in Sub 344 and Sub 336. The other contributing
15 factor is the recommended 9.20% equity return relative to the
16 approved 9.60% equity return in the Sub 356 rate case and the
17 approved 9.75% equity return in the Sub 344 and Sub 366 cases.

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

19 A. Yes.

1 BY MR. GRANTMYRE:

2 Q. Do you have a summary of your testimony?

3 A. Yes.

4 Q. Please proceed with your summary.

5 A. The purpose of my testimony in this
6 proceeding is to present to the Commission my findings
7 as to the reasonable cost of capital to be used as a
8 basis for adjusting Carolina Water Service of
9 North Carolina's rates. As a result of my study, I
10 conclude that the overall cost of capital to Carolina
11 Water of North Carolina -- Carolina Water Service of
12 North Carolina is 7.47 percent.

13 My review of the current financial conditions
14 shows there's an overall decline in Moody's public
15 utility bond yields over the period of the last three
16 rate cases since March 10, 2014, in Docket Number
17 W-354, Sub 336, when, at the time, Moody's A-rated
18 utility bond yields were 4.51 percent. I believe that
19 decreases in long-term yields parallels decreases
20 investor required rates of return on common equity as
21 public utility commissions across the country have
22 correctly identified in the declining authorized
23 returns on common equity for water utilities.

24 My recommended capital structure ratio

1 consists of 50.91 percent common equity and 49.09
2 percent long-term debt. This capital structure was
3 revised to include 73 million of a revolving loan
4 that's considered long-term debt for ratemaking. This
5 additional financing reduced the embedded cost of debt
6 to 5.68 percent.

7 In analyzing the investor required return
8 requirement for common equity, I employed the
9 discounted cash flow method on a group of comparable
10 water companies. Secondly, I employed the risk premium
11 method that quantifies the historical relationship of
12 public utility commissions allowed on returns on equity
13 for water company utilities, and Moody's A-rated public
14 utility bond yields to establish a current cost rate of
15 equity. The cost rate estimate is based on a DCF range
16 from 8.2 percent to 9.2 percent with a midpoint of 8.7
17 percent. And the point estimate used in my risk
18 premium analysis is 9.7 percent.

19 Based on results of these two analyses, I
20 conclude that 9.2 percent is the single best estimate
21 of Carolina Water Service of North Carolina's cost of
22 common equity. To test reasonableness of my
23 recommended capital structure and cost of equity, I
24 calculated a pretax interest coverage ratio of 3.2

1 times and a 26 percent funds flow to debt ratio that I
2 believe is supportive of an A rating.

3 In an effort to display the water utility
4 business risk, I present graphs of the offering revenue
5 income of water utilities and local natural gas
6 distribution companies.

7 I further note my concerns with witness
8 D'Ascendis' testimony adjustment for business risk and
9 size. These same size and risk adjustments, as well as
10 other arguments that the DCF method understates the
11 cost of equity when market to book ratios, are
12 substantially above 1.0. The use of the total market
13 return method and the empirical CAPM were testified by
14 Frank J. Hanley in the 1997 CWS systems rate case in
15 Docket Number 778, Sub 31, which the Commission largely
16 found nonpersuasive.

17 This concludes my summary.

18 MR. GRANTMYRE: The witness is available
19 for cross examination.

20 CHAIRMAN FINLEY: Cross?

21 MS. FORCE: No questions.

22 MR. ALLEN: No questions.

23 MR. BENNINK: No questions.

24 CHAIRMAN FINLEY: Questions by the

1 Commission?

2 COMMISSIONER MITCHELL: Chairman Finley,
3 I do have two questions.

4 CHAIRMAN FINLEY: Commissioner Mitchell
5 has questions.

6 EXAMINATION BY COMMISSIONER MITCHELL:

7 Q. Good morning, Mr. Hinton. Question for you
8 about -- so as I understand your testimony, you
9 performed the discounted cash flow model and the risk
10 premium model, but you did not perform the capital
11 asset pricing or the comparable earnings models; is
12 that correct?

13 A. Correct.

14 Q. And can you explain why you didn't perform
15 those last two models?

16 A. Yes. If you remember -- well, the CAPM model
17 currently is providing the way I employed the method --
18 that I traditionally employed it. The returns on
19 equity that's generated by that method are below, I
20 think, the appropriate cost of capital for Carolina
21 Water in the 7 percent range. And I don't feel it's
22 appropriate to bring forth evidence and say I don't
23 think this is appropriate.

24 That was done by, I think, witness

1 Davis Parcell in the last Duke case. He presented his
2 CAPM analysis. We have similar methods of using
3 historical risk premiums on the market, and he, in that
4 case, did not utilize the results of that CAPM. Again,
5 my methods of doing the CAPM, which is a host of ways
6 you could be doing this, as the witness D'Ascendis has
7 used his empirical method, but the way I've done it,
8 traditionally, has been in line with Mr. Parcell,
9 because I met with him many years ago, and it just
10 results unreasonably low.

11 Okay. You also asked about the comparable
12 earnings method, correct? Okay. The comparable
13 earnings method is the exact opposite. It's currently
14 showing a return on equity it would give you -- if you
15 look at the last two years, you would see the required
16 return on equity is around 12 percent for many
17 companies. 12 percent is even above Mr. D'Ascendis'
18 recommendation, or even the 11 and 12 percent numbers
19 you averaged in the group. And, in my opinion, that's
20 above the cost of capital for what Carolina Water
21 requires, that the investor requires for a return on
22 common equity.

23 So I looked at these both methods, and yes, I
24 thought about including both of them, but they would

1 cancel each other out. And it would just -- you know,
2 to be honest with you, a waste of time.

3 COMMISSIONER MITCHELL: Thank you. I
4 have nothing further.

5 CHAIRMAN FINLEY: Questions on the
6 Commission's questions?

7 MR. GRANTMYRE: One quick question.

8 REDIRECT EXAMINATION BY MR. GRANTMYRE:

9 Q. On comparable earnings that shows for the
10 water utilities, isn't the ROE of 12, or whatever they
11 show, inflated because of the lack of payment of
12 federal income tax prior to the change in the tax code
13 this last December, in that their tax rates are not the
14 34, or 35 percent, or 21 percent we use in the
15 commission to set rates, it's really just their
16 effective tax rates that they have which increases
17 their ROE; is that correct?

18 A. I will accept that, yeah. The effective tax
19 rate is a lot lower than what is on the books, per se.

20 MR. GRANTMYRE: That's all I have.

21 CHAIRMAN FINLEY: All right. I will
22 accept Mr. Hinton's exhibits that have been marked
23 into evidence.

24 (Hinton Exhibit Numbers JRH-1 through

1 JRH-5 and Supplemental Hinton Exhibit
2 Number 5 were admitted into evidence.)

3 MR. GRANTMYRE: We would move that his
4 testimony and exhibits be entered into evidence.

5 CHAIRMAN FINLEY: I just entered them,
6 thank you very much. Okay. You may be excused,
7 Mr. Hinton.

8 Let's take a break and come back at
9 quarter of 12:00.

10 (At this time, a recess was taken from
11 11:28 a.m. to 11:45 a.m.)

12 CHAIRMAN FINLEY: We're planning on
13 having Mr. D'Ascendis back; are we not?

14 MR. BENNINK: Yes, sir.

15 CHAIRMAN FINLEY: Looks like
16 Mr. Grantmyre is still trying to scroll down and
17 get his exhibit. He hasn't given it to you yet,
18 has he?

19 MR. BENNINK: No, sir.

20 CHAIRMAN FINLEY: All right. Well,
21 carry on. We'll get it when we get, it I hope.

22 DYLAN D'ASCENDIS,
23 having previously been duly sworn, was examined
24 and testified as follows:

1 DIRECT EXAMINATION BY MR. BENNINK:

2 Q. Mr. D'Ascendis, did you file 37 pages of
3 rebuttal testimony in this docket on October 12th?

4 A. I did.

5 Q. And did you file Exhibits DWD-1R through
6 DWD-10R on that same date?

7 A. I did.

8 Q. If you were asked the same questions in your
9 testimony today, would your answers be the same?

10 A. They would.

11 Q. Do you have any additions or corrections to
12 make to that testimony?

13 A. I don't.

14 Q. Do you have a summary --

15 A. I do.

16 Q. -- of your rebuttal testimony?

17 CHAIRMAN FINLEY: Let's enter it into
18 evidence. Mr. D'Ascendis' rebuttal testimony of
19 37 pages of October 12, 2018, is copied into the
20 record as though given orally from the stand, and
21 his exhibits accompanying his supplemental [sic]
22 testimony marked for identification as premarked in
23 the filing.

24 MR. BENNINK: Thank you.

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(D'Ascendis Rebuttal Exhibit Number 1,
Schedules DWD-1R through DWD-10R were
marked for identification.)
(Whereupon, the prefiled rebuttal
testimony of Dylan W. D'Ascendis was
copied into the record as if given
orally from the stand.)

FILED

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

OCT 15 RECD

DOCKET NO. W-354, SUB 360

Clerk's Office
N.C. Utilities Commission

In the Matter of
Application by Carolina Water Service, Inc. of North Carolina
for Authority to Adjust and Increase Rates for
Water and Sewer Utility Service in All of Its Service Areas in
North Carolina, Except Corolla Light and Monteray Shores Service
Area

/Pre-filed Rebuttal Testimony

Of

DYLAN D'ASCENDIS, CRRA, CVA

On Behalf Of
CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA

October 12, 2018

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1 **I. INTRODUCTION**

2 **Q. Please state your name and business address.**

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

5 **Q. By whom are you employed and in what capacity?**

6 A. I am a Director at ScottMadden, Inc.

7 **Q. Are you the same Dylan W. D'Ascendis that provided direct testimony**
8 **in this proceeding?**

9 A. Yes, I am.

10 **II. PURPOSE OF TESTIMONY**

11 **Q. What is the purpose of your rebuttal testimony in this proceeding?**

12 A. My rebuttal testimony responds to the direct testimony of John R. Hinton,
13 witness for the Public Staff of the North Carolina Utilities Commission
14 ("Public Staff") concerning the investor required return on common equity
15 ("ROE") of Carolina Water Service, Inc. of North Carolina ("CWSNC" or the
16 "Company").

17 **Q. Have you prepared an exhibit in support of your rebuttal testimony?**

18 A. Yes. I have prepared D'Ascendis Rebuttal Exhibit No. 1, which consists of
19 Schedules DWD-1R through DWD-10R.

20 **III. SUMMARY**

21 **Q. What conclusions do you reach?**

22 A. My updated analysis recommends the North Carolina Utilities Commission
23 ("Commission" or "NCUC") authorize the Company the opportunity to earn

1 an overall rate of return between 8.29% and 8.49%, based on a ratemaking
 2 capital structure as of June 30, 2018. The updated capital structure is based
 3 on the actual capital structure of CWSNC's parent, Utilities, Inc., at June 30,
 4 2018. It consists of 49.09% long-term debt at an embedded cost rate of
 5 5.68% and 50.91% common equity at my updated range of common equity
 6 cost rates from 10.80% to 11.20%. My updated recommended overall rate
 7 of return is summarized on page 1 of Schedule DWD-1R and in Table 1,
 8 below:

9 **Table 1: Summary of Overall Rate of Return**

<u>Type of Capital</u>	<u>Ratios</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>
Long-Term Debt	49.09%	5.68%	2.79%
Common Equity	<u>50.91%</u>	10.80% - 11.20%	<u>5.50% - 5.70%</u>
Total	100.00%		8.29% - 8.49%

10
 11 I also respond to Mr. Hinton's estimation of the Company's ROE using the
 12 Discounted Cash Flow Model ("DCF") and Risk Premium Model ("RPM")
 13 approaches and explain its shortcomings, including its:

- 14 • Misapplication of the DCF;
- 15 • Misapplication of the RPM;
- 16 • Failure to account for size-specific risks;
- 17 • Opinion that the Company's Water and Sewer Improvement Charge
 18 Mechanisms are unique to the Company;

1 I will also address Mr. Hinton's opinions regarding current capital
2 markets.

3 **IV. UPDATED ANALYSIS**

4 **Q. Have you updated your analysis in this proceeding to reflect current**
5 **investor expectations?**

6 **A. Yes, I have. My updated study is as of September 28, 2018 and is**
7 **contained in Schedule DWD-1R.**

8 **Q. Have you applied the models in the same manner as you applied them**
9 **in your direct testimony?**

10 **A. No. I will list the changes in my analysis from the direct testimony below:**

- 11 • In the Predictive Risk Premium Model ("PRPM") applicable to the
12 proxy group companies, instead of averaging the spot and long-term
13 average predicted variances, I selected the minimum value for each
14 company;
- 15 • For the beta adjusted equity risk premium ("ERP"), instead of
16 averaging the ERPs by source (*i.e.* Ibbotson, Value Line, and
17 Bloomberg), I gave all six ERP measures equal weight;
- 18 • For the Standard & Poor's ("S&P") utility-specific ERP, instead of
19 averaging the ERPs by source, I gave all five ERP measures equal
20 weight; and
- 21 • For the market risk premium ("MRP") used in the Capital Asset
22 Pricing Model ("CAPM"), instead of averaging the MRPs by source,
23 I gave all six MRP measures equal weight.

24 **Q. When did you change your application of your models?**

25 **A. In May of 2018.**

1 Q. Did you also update the ratemaking capital structure?

2 A. Yes. The Company's ratemaking capital structure at June 30, 2018 consists
3 of 49.09% long-term debt at an embedded debt cost rate of 5.68% and
4 50.91% common equity. This capital structure includes the revolving credit
5 facility and its corresponding debt cost rate as shown on Table 2, below:

6 **Table 2: Calculation of Updated Capital Structure at June 30, 2018¹**

<u>Type of Capital</u>	<u>Balance at 6/30/18</u>	<u>Percentage</u>	<u>Cost Rate</u>	<u>Weighted Cost</u>
Term Notes	\$170,234		6.58%	4.61%
Revolving Credit Facility	<u>73,000</u>		3.57%	<u>1.07%</u>
Total Debt	\$243,234	49.09%		5.68%
Common Equity	\$252,230	50.91%		

7 **V. CURRENT CAPITAL MARKETS**

8 Q. Please summarize Mr. Hinton's summary of current capital markets.

9 A. Mr. Hinton provided the Moody's A-rated public utility bond yield as of
10 January 10, 2014, when Docket No. W-354, Sub 336 was stipulated, which
11 was 4.63%, and the current Moody's A-rated public utility bond as of August
12 2018, which is 4.26%. Mr. Hinton then presents a chart showing the current
13 flattening yield curve as compared with the yield curves in January 2014,
14 September 2015, and August 2017, the approximate dates of CWSNC's
15 last three rate cases.² Despite the graph showing increased short-term
16 interest rates, Mr. Hinton recommends the use of current bond yields in his
17 ROE analysis while reviewing forecasted interest rates. Mr. Hinton claims

¹ Company-provided. Dollar amounts in thousands.

² Hinton Direct Testimony, at 14.

1 that current interest rates are inherently forward-looking, as they reflect
2 investor expectation of current and future returns.³

3 **Q. Do you have any comment on Mr. Hinton's opinions regarding current**
4 **market conditions?**

5 **A.** Yes. Mr. Hinton should have focused on the changes in the capital markets
6 since CWSNC's most recent rate case, Docket No. W-354, Sub 356, not
7 from three rate cases ago (Docket No. W-354, Sub 336). If he did, Mr.
8 Hinton would discover that since September 2017, several risk measures
9 have increased, indicating a rising cost of capital.

10 In Table 3, below, the Moody's A-rated public utility bond, the 30-year
11 Treasury bond, the Federal Funds Rate, and water utility expected growth
12 rates in earnings per share ("EPS") have increased since the resolution of
13 CWSNC's last rate case. Since one needs both the dividend yield and an
14 expected growth rate to calculate a DCF, I also included the dividend yields,
15 which have declined slightly from CWSNC's last rate case.

³ *Ibid.*, at 15-16.

1 **Table 3: Risk Measures in September 2017 and September 2018⁴**

<u>Risk Measure</u>	<u>September 2017</u>	<u>September 2018</u>
A-Rated Public Utility Bonds	3.87%	4.32%
30-Year Treasury Bonds	2.78%	3.15%
Federal Funds Rate	100-125 bp	200-225 bp
Beta	0.725	0.767
Expected Growth in EPS	7.75%	8.33%
Dividend Yield	2.12%	2.08%
Indicated DCF ⁵	9.95%	10.50%

2 Q. **Is there another recent North Carolina rate case that may also inform**
 3 **the Commission regarding the current investor-required cost of**
 4 **common equity?**

5 A. Yes. In Docket No. E-7, Sub 1146, Duke Energy Carolinas, LLC ("Duke")
 6 was awarded a 9.90% return on common equity relative to a 52% equity
 7 ratio as a result of a settlement on June 22, 2018. The most recent monthly
 8 data available for that Docket was as of December 2017, which was
 9 presented in the rebuttal phase. The comparison between the market data
 10 in the Duke case and the market data in this case are presented in Table 4,
 11 below:

⁴ Interest rates are from Bloomberg Professional Services, all other measures are from Value Line Investment Survey, Standard Edition, July 14, 2017 and July 13, 2018.

⁵ The indicated DCF cost rate was derived consistent with my application of the DCF in my direct testimony as described on pages 14-17.

Table 4: Risk Measures in December 2017 and September 2018⁶

<u>Risk Measure</u>	<u>December 2017</u>	<u>September 2018</u>
A-Rated Public Utility Bonds	3.79%	4.32%
30-Year Treasury Bonds	2.77%	3.15%
Federal Funds Rate	100-125 bp	200-225 bp
Beta (Public Staff)	0.627	0.767
Beta (Company)	0.713	0.767
Expected Growth in EPS (Public Staff)	5.05%	8.33%
Expected Growth in EPS (Company)	5.45%	8.33%
Dividend Yield (Public Staff)	3.30%	2.08%
Dividend Yield (Company)	3.30%	2.08%
Indicated DCF (Public Staff) ⁷	8.44%	10.50%
Indicated DCF (Company) ⁸	8.85%	10.50%

As shown in Table 4, above, every single measure of risk has increased from the Duke case. The increases of these risk measures in conjunction with the smaller size and lower equity ratio of CWSNC compared to Duke justify my updated recommendation of 10.80% to 11.20% in view of the 9.90% authorized return on common equity in the Duke case.

Addressing the flattening yield curve, the Federal Reserve Bank ("Fed") has raised the Federal funds rate ("Fed funds rate") eight times, from 0.00% - 0.25% to 2.00% - 2.25%, after its Quantitative Easing Initiative was completed in October 2014 and it began the process of rate normalization.⁹ While the long-term Treasury yields have not yet caught up with the short-

⁶ Interest rates are from Bloomberg Professional Services, all other measures are from Value Line Investment Survey, Standard Edition, December 15, 2017, November 17, 2017, October 31, 2017, and July 13, 2018.

⁷ The indicated DCF cost rate was derived consistent with my application of the DCF in my direct testimony as described on pages 14-17.

⁸ The indicated DCF cost rate was derived consistent with my application of the DCF in my direct testimony as described on pages 14-17.

⁹ See Federal Reserve Press Release (December 16, 2015).

1 term yields, this has more to do with Fed policy, rather than market
2 fundamentals. As the Fed continues to unwind their balance sheet by not
3 reinvesting after their Treasury securities have matured,¹⁰ shorter-term
4 notes will mature faster than long-term notes, which will effectively lower
5 demand for those replacement notes (as the Fed is no longer reinvesting),
6 which will lower prices, and raise yields faster than the long-term notes. As
7 the unwinding of the Fed balance sheet continues, the longer-term notes
8 will mature, and the yields for the long-term Treasury securities will also
9 increase.

10 **Q. Do you believe that current interest rates are appropriate for the**
11 **estimation of the cost of common equity in this proceeding?**

12 **A.** No. Using current measures, like interest rates, are inappropriate for cost
13 of capital and ratemaking purposes because they are both prospective in
14 nature. The cost of capital, including the cost rate of common equity, is
15 expectational in that it reflects investors' expectations of future capital
16 markets, including an expectation of interest rate levels, as well as future
17 risks. Ratemaking is prospective in that the rates set in this proceeding will
18 be in effect for a period in the future.

19 Even though Mr. Hinton relies, in part, on projected growth rates in
20 his DCF analyses, he fails to apply the same logic to selecting an
21 appropriate interest rate in his RPM analysis.

¹⁰ The current monthly maturities of Treasury securities are \$30 billion per month. Starting in Q4 2018, maturities will be \$50 billion per month.

1 Whether Mr. Hinton believes those forecasts will prove to be
2 accurate is irrelevant to estimating the market-required cost of common
3 equity. Published industry forecasts, such as *Blue Chip Financial*
4 *Forecasts*' ("*Blue Chip*") consensus interest rate projections, reflect industry
5 expectations. Additionally, investors' expectations are not improper inputs
6 to cost of common equity estimation models simply because prior
7 projections were not proven correct in hindsight. As FERC noted in Opinion
8 No. 531, "the cost of common equity to a regulated enterprise depends upon
9 what the market expects, not upon what ultimately happens."¹¹ Because
10 our analyses are predicated on market expectations, the expected increase
11 in bond yields is a measurable and relevant data point that should be
12 reflected in Mr. Hinton's analysis.

13 **VI. RESPONSE TO MR. HINTON**

14 **Q. What does Mr. Hinton recommend in his direct testimony?**

15 **A.** Mr. Hinton recommends that the Commission establish an overall rate of
16 return of 7.47% based on a capital structure consisting of 49.09% long-term
17 debt at an embedded cost rate of 5.68% and 50.91% common equity at his
18 recommended cost of common equity of 9.20%.¹² His 9.20%
19 recommendation is based on the average of the midpoint of his DCF range
20 (8.70%)¹³ and the result of his RPM (9.70%).¹⁴

¹¹ Opinion No. 531, 150 FERC ¶ 61,165 at P 88.

¹² Hinton supplemental direct testimony.

¹³ Mr. Hinton's DCF results range from 8.20% to 9.20%.

¹⁴ Hinton Direct Testimony, at 30.

1 Q. Do you have any general comments on Mr. Hinton's recommended
2 ROE?

3 A. Yes. Mr. Hinton only relies on two models, the DCF and the RPM, in his
4 ROE analysis, while in Docket No. W-218, Sub 319, Mr. Hinton used both
5 the Capital Asset Pricing Model ("CAPM") and the Comparable Earnings
6 Model ("CEM") in conjunction with the DCF to arrive at his recommended
7 ROE.¹⁵ As discussed in my direct testimony,¹⁶ the use of multiple models
8 adds reliability to the estimation of the common equity cost rate, and the
9 prudence of using multiple cost of common equity models is supported in
10 both the financial literature and regulatory precedent. Therefore, Mr. Hinton
11 should have included the CAPM and CEM in his analysis.

12 Q. Can you please provide some examples from the financial literature
13 which support the use of multiple cost of common equity models in
14 determining the investor-required return?

15 A. Yes. In one example, Morin states:

16 Each methodology requires the exercise of considerable
17 judgment on the reasonableness of the assumptions
18 underlying the methodology and on the reasonableness of the
19 proxies used to validate a theory. The inability of the DCF
20 model to account for changes in relative market valuation,
21 discussed below, is a vivid example of the potential
22 shortcomings of the DCF model when applied to a given
23 company. Similarly, the inability of the CAPM to account for
24 variables that affect security returns other than beta tarnishes
25 its use.

26 **No one individual method provides the necessary level of**
27 **precision for determining a fair return, but each method**
28 **provides useful evidence to facilitate the exercise of an**

¹⁵ Docket No. W-218, Sub 319, Direct Testimony of John R. Hinton, at 21-22.

¹⁶ D'Ascendis Direct Testimony, at 37.

1 informed judgment. Reliance on any single method or
 2 preset formula is inappropriate when dealing with investor
 3 expectations because of possible measurement difficulties
 4 and vagaries in individual companies' market data.
 5 (emphasis added)

6 * * *

7 The financial literature supports the use of multiple methods.
 8 Professor Eugene Brigham, a widely respected scholar and
 9 finance academician, asserts (footnote omitted):

10 Three methods typically are used: (1) the Capital Asset
 11 Pricing Model (CAPM), (2) the discounted cash flow (DCF)
 12 method, and (3) the bond-yield-plus-risk-premium approach.
 13 **These methods are not mutually exclusive – no method**
 14 **dominates the others**, and all are subject to error when used
 15 in practice. Therefore, when faced with the task of estimating
 16 a company's cost of equity, we generally use all three
 17 methods and then choose among them on the basis of our
 18 confidence in the data used for each in the specific case at
 19 hand. (emphasis added)

20 Another prominent finance scholar, Professor Stewart Myers, in an
 21 early pioneering article on regulatory finance, stated^(footnote omitted):

22 Use more than one model when you can. Because estimating
 23 the opportunity cost of capital is difficult, **only a fool throws**
 24 **away useful information**. That means you should not use
 25 any one model or measure mechanically and exclusively.
 26 Beta is helpful as one tool in a kit, to be used in parallel with
 27 DCF models or other techniques for interpreting capital
 28 market data. (emphasis added)

29 Reliance on multiple tests recognizes that no single
 30 methodology produces a precise definitive estimate of the
 31 cost of equity. As stated in Bonbright, Danielsen, and
 32 Kamerschen (1988), 'no single or group test or technique is
 33 conclusive.' Only a fool discards relevant evidence. (italics in
 34 original) (emphasis added)

35 * * *

36 While it is certainly appropriate to use the DCF methodology
 37 to estimate the cost of equity, there is no proof that the DCF
 38 produces a more accurate estimate of the cost of equity than

1 other methodologies. Sole reliance on the DCF model
 2 ignores the capital market evidence and financial theory
 3 formalized in the CAPM and other risk premium methods.
 4 **The DCF model is one of many tools to be employed in**
 5 **conjunction with other methods to estimate the cost of**
 6 **equity.** It is not a superior methodology that supplants other
 7 financial theory and market evidence. The broad usage of the
 8 DCF methodology in regulatory proceedings in contrast to its
 9 virtual disappearance in academic textbooks does not make
 10 it superior to other methods. The same is true of the Risk
 11 Premium and CAPM methodologies. (emphasis added)¹⁷

12 Finally, Brigham and Gapenski note:

13 In practical work, *it is often best to use all three methods –*
 14 *CAPM, bond yield plus risk premium, and DCF – and then*
 15 *apply judgment when the methods produce different results.*
 16 *People experienced in estimating equity capital costs*
 17 *recognize that both careful analysis and some very fine*
 18 *judgments are required. It would be nice to pretend that these*
 19 *judgments are unnecessary and to specify an easy, precise*
 20 *way of determining the exact cost of equity capital.*
 21 *Unfortunately, this is not possible. Finance is in large part a*
 22 *matter of judgment, and we simply must face this fact. (italics*
 23 *in original)*¹⁸

24 In the academic literature cited above, three methods are
 25 consistently mentioned: the DCF, CAPM, and the RPM, all of which I used
 26 in my analyses.

27 **Q. Can you also provide specific examples where this Commission has**
 28 **considered multiple cost of common equity models?**

29 **A. Yes. The Commission in Docket E-2, Sub 1142, concerning Duke Energy**
 30 **Progress, LLC, stated:**

31 "Thus, the Commission finds and concludes that the
 32 Stipulation, along with the expert testimony of witnesses

¹⁷ Roger A. Morin, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 428-431. ("Morin")

¹⁸ Eugene F. Brigham and Louis C. Gapenski, Financial Management – Theory and Practice, 4th Ed. (The Dryden Press, 1985) at 256. ("Brigham and Gapenski")

1 Hevert (risk premium analysis), O'Donnell (comparable
2 earnings), and Parcell (comparable earnings), are credible
3 and substantial evidence of the appropriate rate of return on
4 equity and are entitled to substantial weight in the
5 Commission's determination of this issue."

6 Also, in Docket E-7, Sub 1026, concerning Duke Energy Carolinas,
7 LLC, the commission stated the following:

8 "In summary, the Commission finds and concludes, for
9 purposes of this case and after thoroughly and independently
10 reviewing all of the evidence, that Company witness Hevert's
11 DCF analysis, particularly on the basis of mean growth rates,
12 is credible and deserving of substantial weight, and that
13 witness Johnson's comparable earnings analysis provides
14 independent corroboration for the results of that analysis and
15 is also credible and deserving of substantial weight,"

16 In the Commission Orders cited above, there is clear language that
17 the Commission considers multiple models in its determination of ROE. It
18 is also my interpretation of these Orders that the Commission correctly
19 observes capital market conditions and their effect on the model results in
20 determining a ROE for utility companies. This, in addition to the academic
21 literature cited above, justifies the use of the DCF, CAPM, RPM, and CEM
22 in this proceeding.

23 **Q. Have you performed a CAPM and CEM analysis for Mr. Hinton's proxy**
24 **group generally consistent with his DCF spot date of September 21,**
25 **2018?**

26 **A. Yes, I have. The CAPM analysis and the selection criteria of the**
27 **comparable group of non-regulated companies is presented on Schedule**
28 **DWD-1R, pages 21 through 25, which is as of September 28, 2018. The**
29 **application of the DCF to the non-regulated group is presented on Schedule**

1 DWD-2R,¹⁹ which is also as of September 28, 2018. The results of the
2 CAPM applied to Mr. Hinton's proxy group average 10.88%, with a median
3 of 10.97%. The results of the DCF, RPM, and CAPM applied to the non-
4 regulated proxy group, similar in total risk to Mr. Hinton's proxy group, is
5 14.13%, 12.32%, and 11.52%, respectively. The average result is 12.66%,
6 while the median is 12.32%.

7 **Q. Have you applied the CEM differently to Mr. Hinton's water proxy**
8 **group than when you applied them to your proxy group in your**
9 **updated analysis?**

10 **A. Yes.** In the application of the DCF model for the non-regulated group, I
11 calculated the prospective dividend yield as Mr. Hinton described in his
12 direct testimony at pages 25 and 26. I then added the prospective dividend
13 yield to the average prospective EPS growth rate from Value Line and
14 Yahoo Finance. I only include expected EPS growth rates for use in the
15 DCF, as will be explained in detail, below.

16 **A. Discounted Cash Flow Model**

17 **Q. Please summarize Mr. Hinton's DCF analysis.**

18 **A.** Mr. Hinton calculated his dividend yield by using the Value Line estimate of
19 dividends to be declared over the next 12 months divided by the price of the
20 stock as reported in the Value Line Summary and Index for 13 weeks ended
21 September 21, 2018.²⁰ He then added the expected dividend yield of 2.1%

¹⁹ Since Mr. Hinton and I have the same non-regulated proxy group, the RPM and CAPM results can be found on Schedule DWD-1R, pages 28 and 31, respectively.

²⁰ Hinton Direct Testimony, at 25-26.

1 to a range of growth rates from 6.1% to 7.1%²¹ to arrive at his range of
2 results from 8.2% to 9.2%.

3 **Q. Please comment on Mr. Hinton's growth rate analysis in his**
4 **application of the DCF Model.**

5 **A. Mr. Hinton states on page 26 of his direct testimony that he employed EPS,**
6 **dividends per share ("DPS"), and book value of equity per share ("BVPS")**
7 **growth rates as reported in Value-Line, both five- and ten-year historical and**
8 **forecasted, and five-year EPS growth rate projects as reported by Yahoo**
9 **Finance. He includes both historical and forecasted growth rates, "because**
10 **it is reasonable to expect that investors consider both sets of data in deriving**
11 **their expectations". After reviewing the array of growth rates, Mr. Hinton**
12 **determined a range of expected growth rates between 6.1% and 7.1%.**
13 **Notwithstanding this statement, it is unclear exactly how much weight Mr.**
14 **Hinton gave to each of the projected and historical growth rates in arriving**
15 **at his high and low growth rate estimates for his proxy group, because his**
16 **range of growth rates bears no logical relationship to the array of growth**
17 **rates he evaluated.**

18 Moreover, there is a significant body of empirical evidence
19 supporting the superiority of analysts' EPS growth rates in a DCF analysis,
20 indicating that analysts' forecasts of earnings remain the best predictor of
21 growth to use in the DCF model. Such ample evidence of the proven

²¹ Mr. Hinton reviewed 10 and 5-year historical growth rates in EPS, DPS, and BVPS as well as 3-5 year projected growth in EPS, DPS and BVPS from Value Line and 5-year projections of EPS growth from Yahoo Finance.

1 reliability and superiority of analysts' forecasts of EPS should not be
2 dismissed by Mr. Hinton.

3 **Q. Please describe some of the empirical evidence supporting the**
4 **reliability and superiority of analysts' EPS growth rates in a DCF**
5 **analysis.**

6 **A.** As discussed in my direct testimony at page 16, lines 11-12, over the long
7 run, there can be no growth in DPS without growth in EPS. Security
8 analysts' earnings expectations have a more significant, but not the only,
9 influence on market prices than dividend expectations. Thus, the use of
10 projected earnings growth rates in a DCF analysis provides a better match
11 between investors' market price appreciation expectations and the growth
12 rate component of the DCF, because they have a significant influence on
13 market prices and the appreciation or "growth" experienced by investors.²²
14 This should be evident even to relatively unsophisticated investors just by
15 listening to financial news reports on radio, TV, or by reading the
16 newspapers.

17 In addition, Myron Gordon, the "father" of the standard regulatory
18 version of the DCF model widely utilized throughout the United States in
19 rate base/rate of return regulation, recognized the significance of analysts'

²² Morin, at 298-303.

1 forecasts of growth in EPS in a speech he gave in March 1990 before the
2 Institute for Quantitative Research and Finance²³, stating on page 12:

3 We have seen that earnings and growth estimates by security
4 analysts were found by Malkiel and Cragg to be superior to
5 data obtained from financial statements for the explanation of
6 variation in price among common stocks... estimates by
7 security analysts available from sources such as IBES are far
8 superior to the data available to Malkiel and Cragg.

9 * * *

10 Eq (7) is not as elegant as Eq (4), but it has a good deal more
11 intuitive appeal. It says that investors buy earnings, but what
12 they will pay for a dollar of earnings increases with the extent
13 to which the earnings are reflected in the dividend or in
14 appreciation through growth.

15 Professor Gordon recognized that the total return is largely affected
16 by the terminal price, which is mostly affected by earnings (hence
17 price/earnings multiples).

18 Studies performed by Cragg and Malkiel²⁴ demonstrate that
19 analysts' forecasts are superior to historical growth rate extrapolations.
20 While some question the accuracy of analysts' forecasts of EPS growth, the
21 level of accuracy of those analysts' forecasts well after the fact does not
22 really matter. What is important is the forecasts reflect widely-held
23 expectations influencing investors at the time they make their pricing
24 decisions, and hence, the market prices they pay.

²³ Gordon, Myron J., "The Pricing of Common Stock", Presented before the Spring 1990 Seminar, March 27, 1990 of the Institute for Quantitative Research in Finance, Palm Beach, FL.

²⁴ Cragg, John G. and Malkiel, Burton G., Expectations and the Structure of Share Prices (University of Chicago Press, 1982) Chapter 4.

1 In addition, Jeremy J. Siegel²⁵ also supports the use of security
2 analysts' EPS growth forecasts when he states:

3 For the equity holder, the source of future cash flows is the
4 earnings of firms. (p. 90)

5 * * *

6 Some people argue that shareholders most value stocks'
7 cash dividends. But this is not necessarily true. (p. 91)

8 * * *

9 Since the price of a stock depends primarily on the present
10 discounted value of all expected future dividends, it appears
11 that dividend policy is crucial to determining the value of the
12 stock. However, this is not generally true. (p. 92)

13 * * *

14 Since stock prices are the present value of future dividends, it
15 would seem natural to assume that economic growth would
16 be an important factor influencing future dividends and hence
17 stock prices. However, this is not necessarily so. The
18 determinants of stock prices are earnings and dividends on a
19 *per-share* basis. Although economic growth may influence
20 *aggregate* earnings and dividends favorably, economic
21 growth does not necessarily increase the growth of per-share
22 earnings or dividends. It is earnings per share (EPS) that is
23 important to Wall Street because per-share data, not
24 aggregate earnings or dividends, are the basis of investor
25 returns. (italics in original) (pp. 93-94)

26 Therefore, given the overwhelming academic and empirical support
27 regarding the superiority of security analysts' EPS growth rate forecasts,

²⁵ Jeremy J. Siegel, Stocks for the Long Run – The Definitive Guide to Financial Market Returns and Long-Term Investment Strategies, McGraw-Hill 2002, pp. 90-94.

1 such EPS growth rate projections should have been relied on by Mr. Hinton
2 in his DCF analysis.

3 **Q. What would Mr. Hinton's DCF result be had he only relied on EPS**
4 **growth forecasts?**

5 A. As shown on Schedule DWD-3R, the mean DCF derived cost rate based
6 on EPS growth forecasts is 9.10%. This result should be viewed with
7 caution, however, as the DCF model is currently understating the investor
8 required return.

9 **Q. Why is it your opinion that the DCF model is currently understating**
10 **the investor-required return?**

11 A. Traditional rate base/rate of return regulation, where a market-based
12 common equity cost rate is applied to a book value rate base, presumes
13 that market-to-book ("M/B") ratios are at unity or 1.00. However, that is
14 rarely the case. Morin states:

15 The third and perhaps most important reason for caution and
16 skepticism is that application of the DCF model produces
17 estimates of common equity cost that are consistent with
18 investors' expected return only when stock price and book
19 value are reasonably similar, that is, when the M/B is close to
20 unity. As shown below, application of the standard DCF
21 model to utility stocks understates the investor's expected
22 return when the market-to-book (M/B) ratio of a given stock
23 exceeds unity. This was particularly relevant in the capital
24 market environment of the 1990s and 2000s where utility
25 stocks were trading at M/B ratios well above unity and have
26 been for nearly two decades. The converse is also true, that
27 is, the DCF model overstates that investor's return when the
28 stock's M/B ratio is less than unity. The reason for the
29 distortion is that the DCF market return is applied to a book

1 value rate base by the regulator, that is, a utility's earnings are
2 limited to earnings on a book value rate base.²⁶

3 As he explains, a "simplified" DCF model, like that used by Mr.
4 Hinton, assumes an M/B ratio of 1.0 and therefore under- or over-states
5 investors' required return when market value exceeds or is less than book
6 value, respectively. It does so because equity investors evaluate and
7 receive their returns on the market value of a utility's common equity,
8 whereas regulators authorize returns on the book value of that common
9 equity. This means that the market-based DCF will produce the total annual
10 dollar return expected by investors only when market and book values of
11 common equity are equal, a very rare and unlikely situation.

12 **Q. Why do market and book values diverge?**

13 **A.** Market values can diverge from book values for a myriad of reasons
14 including, but not limited to, EPS and DPS expectations, merger/acquisition
15 expectations, interest rates, etc. As noted by Phillips:

16 Many question the assumption that market price should equal
17 book value, believing that 'the earnings of utilities should be
18 sufficiently high to achieve market-to-book ratios which are
19 consistent with those prevailing for stocks of unregulated
20 companies.²⁷

21 In addition, Bonbright states:

22 In the first place, commissions cannot forecast, except within
23 wide limits, the effect their rate orders will have on the market
24 prices of the stocks of the companies they regulate. In the
25 second place, *whatever the initial market prices may be, they*
26 *are sure to change not only with the changing prospects for*
27 *earnings, but with the changing outlook of an inherently*

²⁶ Morin, at 434.

²⁷ Charles F. Phillips, The Regulation of Public Utilities, Public Utilities Reports, Inc., 1993, p. 395.

1 *volatile stock market.* In short, market prices are beyond the
2 control, though not beyond the influence of rate regulation.
3 Moreover, even if a commission did possess the power of
4 control, any attempt to exercise it ... would result in harmful,
5 uneconomic shifts in public utility rate levels. (*italics added*)²⁸

6 Q. **Can the under- or over-statement of investors' required return by the**
7 **DCF model be demonstrated mathematically?**

8 A. Yes, it can. Schedule DWD-4R demonstrates how a market-based DCF cost
9 rate of 8.70%,²⁹ when applied to a book value substantially below market
10 value, will understate the investors' required return on market value. As
11 shown, there is no realistic opportunity to earn the expected market-based
12 rate of return on book value. In Column [A], investors expect an 8.70% return
13 on an average market price of \$50.04 for Mr. Hinton's proxy group of water
14 utility companies. Column [B] shows that when Mr. Hinton's 8.70% return
15 rate is applied to a book value of \$15.56,³⁰ the total annual return opportunity
16 is \$1.354. After subtracting dividends of \$1.051, the investor only has the
17 opportunity for \$0.303 in market appreciation, or 0.61%. The magnitude of
18 the understatement of investors' required return on market value using Mr.
19 Hinton's 8.70% cost rate is 5.99%, which is calculated by subtracting the
20 market appreciation based on book value of 0.61% from Mr. Hinton's
21 expected growth rate of 6.60%.

²⁸ James C. Bonbright, Albert L. Danielsen and David R. Kamerschen, Principles of Public Utility Rates (Public Utilities Reports, Inc., 1988), p. 334.

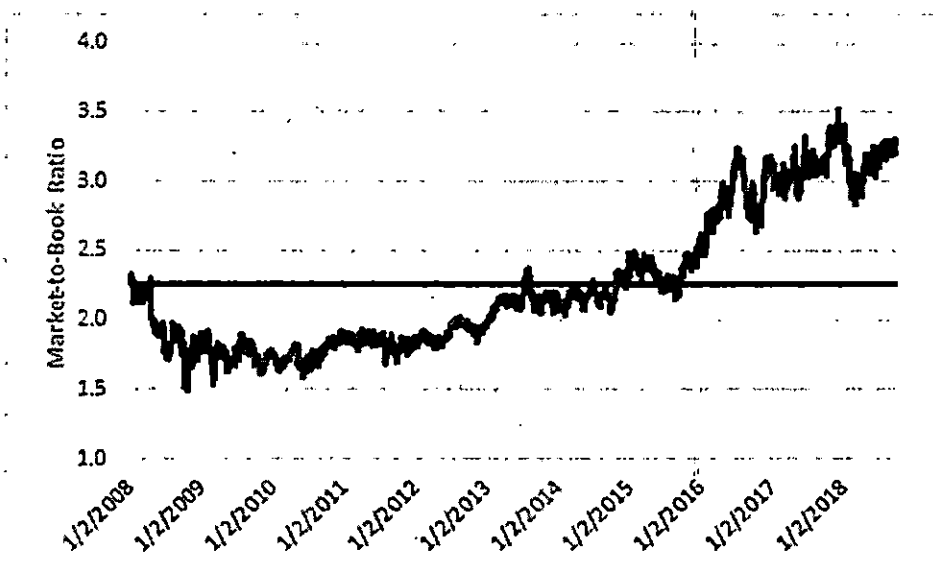
²⁹ Mr. Hinton's DCF cost rate as shown in Hinton Exhibit JRH-3.

³⁰ Representing a market-to-book ratio of 321.56%.

1 Q. HOW DO THE M/B RATIOS OF THE WATER PROXY GROUP COMPARE
2 TO THEIR TEN-YEAR AVERAGE?

3 A. The M/B ratios of the water proxy group are currently extraordinarily high
4 compared with their ten-year average. As shown in Chart 1, below, since
5 early 2016, the M/B ratios of the water proxy group have increased
6 dramatically over their ten-year average M/B ratio of approximately 2.25
7 times.

8 **Chart 1: M/B Ratios Compared with Ten-Year Average³¹**



9
10 The significance of this is that even though the ten-year average M/B
11 ratio has always been greater than 1.0x, the current M/B ratio is even further
12 removed from 1.0x, which further distorts DCF results.

³¹ Source: Bloomberg Financial Services.

1 Q. HOW CAN ONE QUANTIFY THE INACCURACY OF THE DCF MODEL
2 WHEN THE M/B RATIOS ARE DIFFERENT THAN UNITY?

3 A. One can quantify the inaccuracy of the DCF model when M/B ratios are not
4 at unity by estimating the implied cost of equity using the market-value DCF
5 results (based on a market-value capital structure) to reflect a book-value
6 capital structure.

7 Q. HOW CAN THE INACCURACY OF THE DCF MODEL BE QUANTIFIED BY
8 SUCH A LEVERAGE ADJUSTMENT?

9 A. The inaccuracy of the DCF model, when market values diverge from book
10 values, can be measured by first calculating the market value of each proxy
11 company's capital structure, which consists of the market value of the
12 company's common equity (shares outstanding multiplied by price) and the
13 fair value of the company's long-term debt and preferred stock. All of these
14 measures, except for price, are available in each company's SEC Form 10-K.

15 Second, one must de-leverage the implied cost of common equity
16 based on the DCF. This is accomplished using the Modigliani / Miller
17 equation as illustrated in Schedule DWD-5R and shown below:

18
$$k_u = k_e - (((k_u - i)(1 - t)) D/E) - (k_u - d) P/E \text{ [Equation 1]}$$

19 Where:

20 k_u = Unlevered (i.e., 100% equity) cost of common
21 equity;
22 k_e = Market determined cost of common equity;
23 i = Cost of debt;
24 t = Income tax rate;

- 1 D = Debt ratio;
 2 E = Equity ratio;
 3 d = Cost of preferred stock; and
 4 P = Preferred equity ratio.

5 Using average proxy group-specific data, the equation becomes:

$$6 \quad k_u = 8.70\% - (((k_u - 5.25\%)(1 - 21\%)) 22.20\% / 77.74\%) - (k_u - 7.26\%) 0.06\% / 77.74\%$$

7 Solving for k_u results in an unlevered cost of common equity of 8.06%.

8 Next, one must re-leverage those costs of common equity by relating
 9 them to each proxy group's average book capital structure as shown below:

$$10 \quad k_e = k_u + (((k_u - i)(1 - t)) D/E) + (k_u - d) P/E \text{ [Equation 2]}$$

11 Once again, using average proxy group-specific data, the equation becomes:

$$12 \quad k_e = 8.06\% + (((8.06\% - 5.25\%)(1 - 21\%)) 45.27\% / 54.61\%) + (8.06\% - 7.26\%) 0.12\% / 54.61\%$$

13 Solving for k_e results in a 9.91% indicated cost of common equity
 14 relative to the book capital structure of the proxy group, which is an increase
 15 of 121 basis points over Mr. Hinton's average indicated DCF result of 8.70%.

16 **Q. ARE YOU ADVOCATING A SPECIFIC ADJUSTMENT TO THE DCF**
 17 **RESULTS TO CORRECT FOR ITS MIS-SPECIFICATION OF THE**
 18 **INVESTOR-REQUIRED RETURN?**

19 **A.** No. The goal of this discussion is to demonstrate that, like all cost of
 20 common equity models, the DCF has its limitations. The use of multiple cost
 21 of common equity models, in conjunction with informed expert judgment,
 22 provides a clearer picture of the investor-required ROE.

1 **B. Application of the Risk Premium Model**

2 Q. **Please summarize Mr. Hinton's RPM.**

3 A. Mr. Hinton's RPM explores the relationship between average allowed equity
4 returns for water utility companies published by Regulatory Research
5 Associates, Inc. ("RRA") and annual average Moody's A-rated utility bond
6 yields. Using data from the years 2006 through 2018, Mr. Hinton conducts
7 a regression analysis, which he then combines with recent monthly yields
8 on Moody's A-rated public utility bonds to develop his risk premium estimate
9 of 5.48% and a corresponding cost of equity of 9.70%.

10 Q. **Please comment on Mr. Hinton's application of the RPM.**

11 A. As previously addressed, it is inappropriate to use current bond yields to
12 determine an expected ROE, so I will not repeat that discussion here. In
13 addition, instead of using yearly average authorized returns and Moody's
14 A-rated public utility bond yields, it is preferable to use the authorized
15 returns and Moody's A-rated public utility bond yields on a case by case
16 basis.

17 Q. **What is the corrected result of the RPM after reflecting a prospective**
18 **Moody's A-rated public utility bond yield and using individual rate**
19 **case data in place of annual rate case data?**

20 A. As shown on page 1 of Schedule DWD-6R, the analysis is based on a
21 regression of 169 rate cases for water utility companies from August 24,
22 2006 through May 2, 2018. It shows the implicit equity risk premium relative

1 to the yields on Moody's A-rated public utility bonds immediately prior to the
2 issuance of each regulatory decision.³²

3 I determined the appropriate prospective Moody's A-rated public
4 utility yield by relying on a consensus forecast of about 50 economists of
5 the expected yield on Moody's Aaa-rated corporate bonds for the six
6 calendar quarters ending with the fourth calendar quarter of 2019, and *Blue*
7 *Chip's* long-term projections for 2020 to 2024, and 2025 to 2029.³³ As
8 described on note 1 of Schedule DWD-6R, the average expected yield on
9 Moody's Aaa-rated corporate bonds is 4.71%. I then derived an expected
10 yield on Moody's A2-rated public utility bonds, by making upward
11 adjustment of 0.36%, which represents a recent spread between Moody's
12 Aaa-rated corporate bonds and Moody's A2-rated public utility bonds.³⁴
13 Adding the recent 0.36% spread to the expected Moody's Aaa-rated
14 corporate bond yield of 4.71% results in an expected Moody's A2-rated
15 public utility bond yield of 5.07%.

16 I then used the regression results to estimate the equity risk premium
17 applicable to the projected yield on Moody's A2-rated public utility bonds of
18 5.07%. Given the expected Moody's A-rated utility bond yield of 5.07%, the
19 indicated equity risk premium is 4.87%, which results in an indicated ROE
20 of 9.94%, as shown on Schedule DWD-6R.

³² If the Order was in the first half of the month, the Moody's A rated utility bond from two months prior would be used. If the Order was in the second half of the month, the Moody's A rated public utility bond from the last prior month was used.

³³ *Blue Chip Financial Forecasts*, September 1, 2018, at 2, June 1, 2018, at 14.

³⁴ As explained in note 1, of Schedule DWD-6R.

1 Q. **What are the results of Mr. Hinton's ROE models after making the**
2 **adjustments described above and including the CAPM and CEM.**

3 As discussed above, my adjustments to Mr. Hinton's DCF and RPM result
4 in ROEs of 9.10% and 9.94%, respectively. After the inclusion of the CAPM
5 (10.93%) and CEM (12.49%) results,³⁵ Mr. Hinton's average result is
6 10.62%. The average result of 10.62% still does not reflect the cost of
7 common equity for CWSNC, as it has not been adjusted for the Company's
8 greater risk relative to the proxy group based on its small size.

9 Q. **Mr. Hinton justifies his recommended ROE of 9.20% by reviewing the**
10 **interest coverage ratio and confirming that his ROE would allow the**
11 **Company a single "A" rating.³⁶ Does one measure of financial risk**
12 **such as pre-tax interest coverage make a credit rating?**

13 A. No. While I do not take issue with Mr. Hinton's inputs or calculations in
14 determining CWSNC's pre-tax interest coverage ratio, I note that the ratios
15 of pre-tax coverage needed to qualify for a single "A" rating range from 3.0
16 to 6.0. As can be seen in my Schedule DWD-7R, ROE's ranging from 7.94%
17 to as high as 20.08% all allow CWSNC to qualify for a single "A" rating
18 based on its pre-tax coverage ratio. Clearly these results indicate that
19 simply relying on one measure, out of a multitude of measures, to determine
20 a company's bond rating is misleading and without significance.

³⁵ Average of mean and median results as shown on Schedules DWD-1R, page 21 and DWD-2R, respectively.

³⁶ Hinton Direct Testimony, at 31.

1 **C. Failure to Reflect CWSNC's Greater Relative Risk Due to its**
2 **Small Size**

3 **Q. Does Mr. Hinton make a specific adjustment to reflect the smaller size**
4 **of CWSNC relative to the proxy group?**

5 **A. No. As previously discussed in my direct testimony,³⁷ relative company size**
6 **is a significant element of business risk for which investors expect to be**
7 **compensated through greater returns. Smaller companies are simply less**
8 **able to cope with significant events which affect sales, revenues and**
9 **earnings. For example, smaller companies face more exposure to business**
10 **cycles and economic conditions, both nationally and locally. Additionally,**
11 **the loss of revenues from a few large customers would have a far greater**
12 **effect on a small company than on a larger company with a more diverse**
13 **customer base. Finally, smaller companies are generally less diverse in**
14 **their operations and have less financial flexibility. Consistent with the**
15 **financial principle of risk and return in my direct testimony,³⁸ such increased**
16 **risk due to small size must be taken into account in the allowed rate of return**
17 **on common equity.**

18 **Q. Is there another empirical study in addition to the empirical analysis**
19 **you performed in your direct testimony that evaluates the effect of size**
20 **on the cost of equity?**

21 **A. Yes. Duff & Phelps' ("D&P") 2018 Valuation Handbook Guide to Cost of**
22 **Capital – Market Results through 2017 ("D&P 2018") presents a Size Study**

³⁷ D'Ascendis Direct Testimony, at 38-39.

³⁸ *Ibid.*, at 8.

1 based on the relationship of various measures of size and return. Relative
2 to the relationship between average annual return and the various
3 measures of size, D&P state:

4 **The size of a company is one of the most important risk**
5 **elements to consider when developing cost of equity**
6 **estimates for use in valuing a firm.** Traditionally,
7 researchers have used market value of equity (*i.e.*, "market
8 capitalization" or "market cap") as a measure of size in
9 conducting historical rate of return research. For example, the
10 Center for Research in Security Prices (CRSP) "deciles" are
11 developed by sorting U.S. companies by market
12 capitalization. Another example is the Fama-French "Small
13 Minus Big" (SMB) series, which is the difference in return of
14 "small" stocks minus "big" (*i.e.*, large) stocks, as defined by
15 market capitalization. (emphasis added)³⁹

16 The Size Study uses the following eight measures of size, all of which
17 have empirically shown that over the long-term, the smaller the company,
18 the higher the risk:

- 19 ▪ Market Value of Common Equity (or total capital if no debt /
20 equity);
- 21 ▪ Book Value of Common Equity;
- 22 ▪ Net Income (five-year average);
- 23 ▪ Market Value of Invested Capital;
- 24 ▪ Total Assets (Invested Capital);
- 25 ▪ Earnings Before Interest, Taxes, Depreciation &
26 Amortization ("EBITDA") (five-year average);
- 27 ▪ Sales / Operating Revenues; and
- 28 ▪ Number of Employees.

³⁹ D&P 2018, at p. 10-1.

1 I used the D&P Size Study to determine the approximate magnitude
2 of any necessary risk premium due to the size of CWSNC relative to the
3 water proxy group. Schedule DWD-8R shows the relative size of CWSNC
4 compared with the water proxy group. Indicated size adjustments based on
5 these relative measures range from 0.94% to 2.18%, averaging 1.48%.⁴⁰
6 From these results, it is clear that CWSNC is riskier than the water proxy
7 group due to its small size, and that my proposed size adjustment of
8 40 basis points for CWSNC is conservative.

9 **Q. Mr. Hinton cites a study by Dr. Annie Wong for the proposition that**
10 **there is no size premium for utilities. Does this study establish that**
11 **contention?**

12 **A.** No. Dr. Wong's study is flawed because she attempts to relate a change in
13 size to beta coefficients, which accounts for only a small percentage of
14 diversifiable company-specific risk. Size is company-specific and therefore
15 diversifiable. For example, the average R-squared, or coefficient of
16 determination for the water proxy group, is 0.0941 as shown on Schedule
17 DWD-9R. An R-squared of 0.0941 means that approximately 9.50% of total
18 risk is explained by beta, leaving 90.50% unexplained by beta.

19 **Q. Is there also a published response to Dr. Wong's article?**

20 **A.** Yes, there is. In response to Professor Wong's article, *The Quarterly*
21 *Review of Economics and Finance* published an article in 2003, authored
22 by Thomas M. Zepp, which commented on the Annie Wong article cited by

⁴⁰ We did not have data for 2013 for CWSNC, so the average net income and EBITDA were averaged over four years instead of five.

1 Mr. Hinton. Relative to Ms. Wong's results, Dr. Zepp concluded in the
2 Abstract on page 1 of his article: "Her weak results, however, do not rule
3 out the possibility of a small firm effect for utilities."⁴¹ Dr. Zepp also noted on
4 page 582 that: "Two other studies discussed here support a conclusion that
5 smaller water utility stocks are more risky than larger ones. To the extent
6 that water utilities are representative of all utilities, there is support for
7 smaller utilities being more risky than larger ones."⁴² Finally, I note that
8 Professor Wong's study, while relying on a large group of gas and electric
9 utilities, used no water utilities.

10 **Q. Are you aware of any other academic article relating to the**
11 **applicability of a size premium?**

12 **A.** Yes. An article by Michael A. Paschall, ASA, CFA, and George B. Hawkins
13 ASA, CFA, "Do Smaller Companies Warrant a Higher Discount Rate for
14 Risk?" also supports the applicability of a size premium. As the article
15 makes clear, all else equal, size is a risk factor which must be taken into
16 account when setting the cost of capital or capitalization (discount) rate.

17 Paschall and Hawkins state in their conclusion as follows:

18 The current challenge to traditional thinking about a small
19 stock premium is a very real and potentially troublesome
20 issue. The challenge comes from bright and articulate people
21 and has already been incorporated into some court cases,
22 providing further ammunition for the IRS. Failing to consider
23 the additional risk associated with most smaller companies,
24 however, is to fail to acknowledge reality. Measured properly,
25 small company stocks have proven to be more risky over a
26 long period of time than have larger company stocks. This

⁴¹ Thomas M. Zepp, Thomas M. "Utility Stocks and the Size Effect -- Revisited", *The Quarterly Review of Economics and Finance*, 43 (2003) at 578-582.

⁴² *Ibid*, at 582.

1 makes sense due to the various advantages that larger
2 companies have over smaller companies. Investors looking
3 to purchase a riskier company will require a greater return on
4 investment to compensate for that risk. There are numerous
5 other risks affecting a particular company, yet the use of a size
6 premium is one way to quantify the risk associated with
7 smaller companies.⁴³

8 Hence, Paschall and Hawkins corroborate the need for a small size
9 adjustment, all else equal. Consistent with the financial principle of risk and
10 return discussed previously, and the stand-alone nature of ratemaking, an
11 upward adjustment must be applied to the indicated cost of common equity
12 derived from the cost of equity models of the water proxy group used in this
13 proceeding.

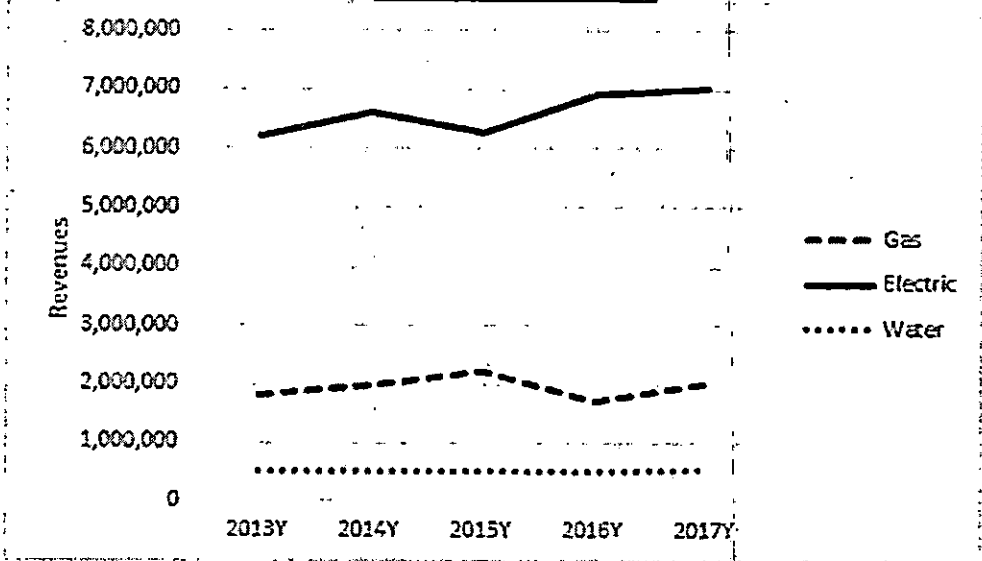
14 **Q. Mr. Hinton presents several charts of North Carolina utility companies'**
15 **quarterly revenues and earnings to explain that the water industry is**
16 **less risky than the electric or gas industries. Please comment.**

17 **A.** Using quarterly data in seasonal industries like the gas and electric
18 industries makes Mr. Hinton's graphs misleading. A more informative chart
19 would use annual data instead of quarterly, which would eliminate the
20 seasonality of the specific industries. As shown in Charts 2 and 3 below,
21 annual revenues and earnings for publicly traded electric, gas, and water
22 companies are fairly stable, with the only difference being the amount of
23 sales and earnings.

⁴³ Michael A. Paschall, ASA, CFA and George B. Hawkins ASA, CFA, "Do Smaller Companies Warrant a Higher Discount Rate for Risk?", CCH Business Valuation Alert, Vol. 1, Issue No. 2, December 1999.

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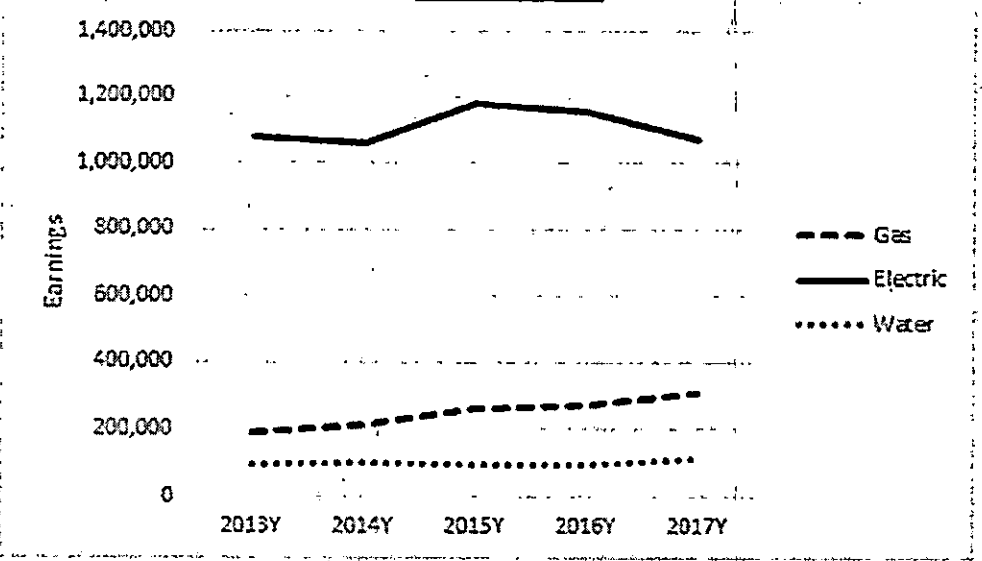
Chart 2: Annual Revenues of Publicly Traded Electric, Gas, and Water Companies⁴⁴



3

4
5

Chart 3: Annual Earnings of Publicly Traded Electric, Gas, and Water Companies⁴⁵



6

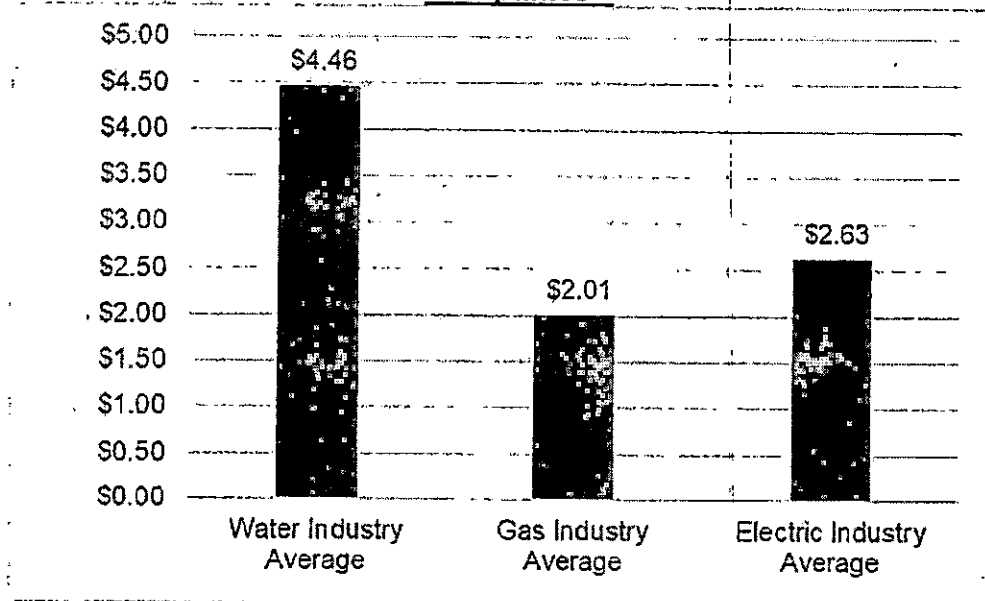
⁴⁴ Source: SNL Financial.
⁴⁵ *Ibid.*

1 Q. Are there other ways to measure relative risk between electric, gas
2 and water industries?

3 A. Yes. As stated in my direct testimony,⁴⁶ water utility companies have high
4 capital intensity (how many dollars of plant generate one dollar in revenue)
5 and low depreciation rates (a source of internal cash flow). As a capital-
6 intensive industry, water utilities require significantly greater capital
7 investment in infrastructure required to produce a dollar of revenue than
8 electric and natural gas utilities. For example, as shown on Chart 4, below,
9 it took \$4.46 of net utility plant on average to produce \$1.00 in operating
10 revenues in 2017 for the water utility industry as a whole. In contrast, for
11 the electric and natural gas utility industries, on average it took just \$2.63
12 and \$2.01, respectively, to produce \$1.00 in operating revenues in 2017.
13 As financing needs have increased and will continue to increase, the
14 competition for capital from traditional sources has increased and continues
15 to increase, making the need to maintain financial integrity and the ability to
16 attract needed new capital increasingly important.

⁴⁶ D'Ascendis direct testimony, at 7-8.

1 **Chart 4: Capital Intensity of Publicly Traded Electric, Gas, and Water**
 2 **Companies⁴⁷**



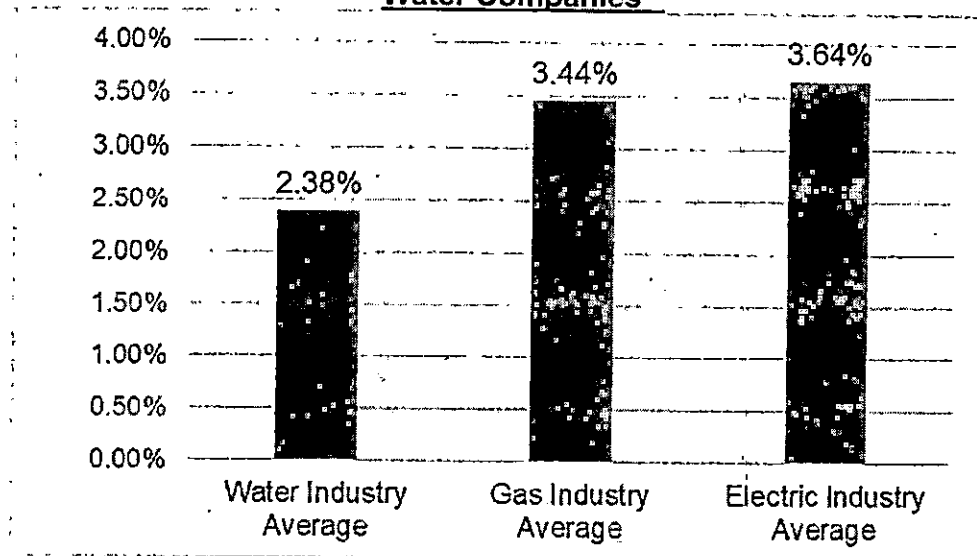
3
 4 Coupled with its capital-intensive nature, the water utility industry
 5 also experiences lower relative depreciation rates compared with other
 6 types of utilities. Given that depreciation is one of the principal sources of
 7 internally-generated cash flows for all utilities, lower depreciation rates
 8 mean that water utilities cannot rely upon depreciation as a source of cash
 9 to the same extent that electric and gas utilities do. Because water utility
 10 assets have longer lives and, hence, longer capital recovery periods than
 11 other types of utilities, water utilities face greater risk due to inflation, which
 12 results in a significantly higher replacement cost per dollar of net plant than
 13 for other types of utilities.

14 As shown on Chart 5, below, water utilities experienced an average
 15 depreciation rate of 2.38% for 2017. In contrast, in 2017, the electric and

⁴⁷ Source: SNL Financial, Company 10-K Filings.

1 natural gas utilities experienced average depreciation rates of 3.64% and
 2 3.44%, respectively. Low depreciation rates signify that the pressure on
 3 cash flows remains significantly greater for water utilities than for other
 4 types of utilities.

5 **Chart 5: Depreciation Rates of Publicly Traded Electric, Gas, and**
 6 **Water Companies⁴⁸**



7
 8 **Q. What are the average betas for the companies comprising each**
 9 **industry?**

10 **A.** The data is provided in Table 5, below. As shown, the water industry's
 11 average beta is 0.767, while the electric and gas utility betas are 0.643 and
 12 0.685, respectively. Since beta is a measure of systematic risk, this
 13 measure indicates the higher relative risk of the water industry over the
 14 electric and gas industries at this time.

⁴⁸ *Ibid.*

1 **Table 5: Average Betas of the Electric, Gas, and Water Industries**⁴⁹

<u>Industry</u>	<u>Average Beta</u>
Electric	0.643
Gas	0.685
Water	0.767

2 **D. Consideration of Mechanisms in Place for CWSNC**

3 Q. **Mr. Hinton discusses the Company's Water and Sewer System**
4 **Improvement Charges ("WSIC" and "SSIC") mechanisms that he**
5 **claims impact risk for CWSNC.⁵⁰ Is his claim valid?**

6 A. No. The cost of capital is a comparative exercise, so if the mechanism is
7 common throughout the companies that one bases their analyses on, the
8 comparative risk is zero because any impact of the perceived reduced risk
9 of the mechanism(s) by investors would be reflected in the market data of
10 the proxy group. To that point, as shown on Schedule DWD-10R, every
11 single one of the proxy companies has a Distribution Service Improvement
12 Charge or comparable Water Revenue Adjustment Mechanism in at least
13 one of their jurisdictions.

14 **VII. CONCLUSION**

15 Q. **Does this conclude your rebuttal testimony?**

16 A. Yes, it does.

⁴⁹ Value Line Investment Survey, Standard Edition.
⁵⁰ Hinton Direct Testimony, at 31.

1 BY MR. BENNINK:

2 Q. You can proceed with your summary.

3 A. Okay.

4 My rebuttal testimony responds to the direct
5 testimony of Mr. John R. Hinton of the Public Staff and
6 updates my updated -- or updates my recommended range
7 of return on common equity cost rates to 10.80 percent
8 to 11.20 percent, reflecting current markets. I also
9 update the Company's capital structure and cost of
10 long-term debt as of June 30, 2018. The updated
11 ratemaking capital structure consists of 49.09 percent
12 long-term debt at an embedded debt cost rate of 5.68
13 percent and 50.91 percent common equity. The updated
14 analysis results in an updated recommended overall rate
15 of return between 8.29 percent and 8.49 percent.

16 Also in my rebuttal testimony, I address
17 several concerns I have with Mr. Hinton's analysis
18 including his exclusion of the CAPM and comp earnings
19 models in his analysis; his including of historical
20 growth rates in his DCF analysis; his inclusion of
21 growth and dividends per share and book values per
22 share in his DCF analysis; his use of yearly average
23 authorized returns in his risk premium analysis; his
24 use of historical interest rates in his risk premium

1 analysis; and his rejection of a small size premium.

2 Corrections and additions to Mr. Hinton's
3 analyses result in an indicated return on common equity
4 of 10.62 percent before any adjustment for the
5 Company's small size compared to the proxy group.

6 That concludes my rebuttal testimony summary.

7 MR. BENNINK: The witness is available
8 for cross examination.

9 CHAIRMAN FINLEY: Cross examination?

10 MR. ALLEN: No questions.

11 CHAIRMAN FINLEY: Ms. Force?

12 CROSS EXAMINATION BY MS. FORCE:

13 Q. Mr. D'Ascendis?

14 A. Hello.

15 Q. Hi. I have a few questions for you. And I
16 want to start off, you mentioned in your rebuttal
17 testimony, again, the size of Carolina Water Service,
18 and there was an earlier discussion about Utilities,
19 Inc.

20 Is Utilities, Inc. a subsidiary of Corix?

21 A. They are.

22 Q. And that's an investor group based in British
23 Colombia, as I understand it?

24 A. It is, and it holds both regulated and

1 nonregulated companies. Utilities, Inc., however, is
2 fully regulated. They only own regulated water
3 utilities.

4 Q. And in those other holdings of Corix, are
5 there any subsidiaries that are public utilities,
6 besides Utilities, Inc.?

7 A. There are -- I think there's a water company
8 in Alaska.

9 Q. And that's all that you recall?

10 A. That's all I recall.

11 Q. Okay. The public -- you had some questions,
12 and I just want to follow up briefly about the
13 recommendations you've had for ROE compared to the
14 authorized ROE in cases, and that's illustrated in that
15 that Public Staff D'Ascendis Direct Cross Examination
16 Exhibit 2.

17 MR. BENNINK: Objection. She had an
18 opportunity to cross on that the first go around.

19 CHAIRMAN FINLEY: Overruled.

20 BY MS. FORCE:

21 Q. My question is about the -- your
22 recommendations. And they're depicted there on that
23 column, and show ranges for many of those. And then
24 there are authorized ROEs. I don't remember whether --

1 I don't believe that this was asked or addressed
2 earlier, but when I look down the columns, it appears
3 to me that there are -- these are mostly settled cases,
4 right?

5 A. That's right.

6 Q. And you've given some explanation about the
7 other factors, but nonetheless -- that play into
8 settlement, but nonetheless, in all of those cases that
9 were settled, and we show an ROE that was the
10 settlement authorized in those cases, isn't it true
11 that those are all lower than the bottom of the range
12 that you recommended for authorized?

13 A. For this company?

14 Q. No. For the various companies that are
15 listed on this exhibit.

16 A. Oh, I get it.

17 Q. There are a list of ROEs that you've
18 recommended and ranges that you've recommended, and in
19 all of those settled cases, the company that you were
20 testifying for was willing to accept an ROE, in many
21 cases, considerably below your range of recommendation;
22 isn't that right?

23 A. It is. And like I said before, it's a
24 product of negotiations. And I pointed out, in Aqua

1 Illinois, that they got over 90 percent of their ask in
2 their settlement. So, I mean, sometimes ROE is a big
3 issue, sometimes ROE isn't a big issue. And it depends
4 on their priority. Sometimes they would rather have
5 the money than the number, which makes sense.

6 Q. Okay. I have a different piece of paper.
7 I'm looking at a table that I put together when I
8 looked at your direct testimony, and I crossed through
9 it to show your recommendation for the return on equity
10 in your rebuttal testimony.

11 And it's my read of that that your original
12 range in this case was 11.5 to 11.9 percent, and in
13 your rebuttal testimony, it's 10.8 to 11.2 percent; is
14 that right?

15 A. It is, yes.

16 Q. Okay. And then that -- there's also an
17 adjustment to the overall rate of return.

18 In your original testimony or direct
19 testimony, if I can follow my notes, am I right that
20 you recommended -- or that your study using the DCF
21 model, the discounted cash flow model, produced a
22 result of 9.12 percent; does that sound right?

23 A. In my direct or my rebuttal?

24 Q. In your direct.

1 A. Okay. Let me get there.

2 (Witness peruses document:)

3 Q. I don't have -- I have it marked, but I don't
4 have it open.

5 A. Don't worry, I've got it. It's 9.10,
6 actually, 9.1.

7 Q. 9.1?

8 A. Yes.

9 Q. Okay. And then in your DCF analysis on
10 rebuttal, am I right that that went up a little bit?

11 A. Yes. 9.15.

12 Q. Okay. But overall, your recommendation went
13 down quite a bit; is that right?

14 A. It did. And it was based on my changes, and
15 I set them forth in --

16 Q. In your testimony?

17 A. Yes.

18 Q. And as to the DCF, though, it's really very
19 similar but a little bit higher?

20 A. Just a little bit.

21 Q. Okay. And do you know, would you agree with
22 me that the DCF result from that model, the discounted
23 cash flow model that was performed by Mr. Hinton,
24 produced an 8.7 percent?

1 A. Yes. And his corrected -- I guess, when I
2 corrected his, it was 9.1, I think.

3 Q. And you say "corrected," but you're not
4 talking about mathematical corrections, right? You're
5 talking about how you would have done it using some of
6 his --

7 A. Well, it's not how I would have done it. If
8 you read -- in my testimony, there's significant
9 academic literature that establishes that using
10 earnings per share is the superior way to use -- to
11 apply the DCF. So it's not just me saying it, it's
12 Nobel prize winners, and professors at universities,
13 and things like that.

14 Q. And using that earnings per share for
15 growth -- that's what we're talking about, right, for
16 the growth --

17 A. Right. Yes.

18 Q. -- part of the analysis?

19 You still came up with, in your rebuttal
20 testimony -- I'm going to get this mixed up -- I think
21 9.1?

22 A. Yes.

23 Q. 9.15?

24 A. Yes. And like I said, I guess in the Aqua

1 hearing, I didn't say it yet here, that's just one
2 point -- that's just one data point. When you look at
3 an ROE, you have to -- you have to incorporate
4 relevant -- as much relevant information as you can.

5 In my rebuttal testimony, I talk about using
6 multiple models so you could gain more insight into the
7 investor required return. In my rebuttal testimony, I
8 say, you know, the DCF under -- under-specifies the ROE
9 when market book ratios are over one. Now, market book
10 ratios have been over one forever, but in recent --
11 recent history, it's spiked even higher than the
12 10-year average. So these DCF results are further
13 distorted from reality.

14 Saying that, I still incorporate it, I don't
15 make any adjustments to it, I just take a look at other
16 ones to make sure that I have a clear view of what's
17 going on using multiple models.

18 Q. And to clarify what you were just talking
19 about -- I'll come back to the book value issue -- but
20 you said you use one data point for the DCF model, but
21 you used growth factors that you reviewed from Value
22 Line, and Reuters, and Zax, and Yahoo, right?

23 A. Right. Right.

24 Q. You didn't just use one?

1 A. Right. And that's -- that is consistent with
2 what I'm saying. You use multiple -- you use multiple
3 sources of relevant information. But, now, the DCF is
4 one model out of many. That's what I was trying to
5 say.

6 Q. You did other models too?

7 A. Right.

8 Q. But it is true that the DCF model is one that
9 can be performed -- we went through an exercise in the
10 Aqua case -- I'm going to -- I'm going to go through
11 that in this case -- where we looked at the Value
12 Line --

13 A. Right.

14 Q. -- reports.

15 And you have those Value Line reports in
16 your -- as an exhibit this time too?

17 A. Yes. And I guess I could -- if we were using
18 the -- just the one Value Line report for the proxy
19 group, even though I have a 9.15 as my conclusion, if
20 you look on Table 3 of page 6 of my testimony, of my
21 rebuttal testimony, that on the last -- the last line
22 of that table, if you take a look at the indicated DCF,
23 which is what Ms. Force is referring to, you're at
24 10.50 percent, which isn't that far off of my bottom

1 end of the range.

2 But like I said, that's one -- that's one
3 measure. So I use multiple measures to make sure that
4 the one measure or confirming one measure over another.
5 So that just proves your point that you want to use
6 more relevant data than less.

7 Q. If we look at those exhibits that are
8 attached to your rebuttal testimony that are the Value
9 Line reports, I have a question for you that's -- I
10 guess, first of all, the Value Line number that you
11 referred to was quite a bit higher than the others, I
12 take it, in the DCF analysis that you did; is that what
13 you're saying? Or it would vary from company to
14 company, perhaps?

15 A. Yeah. It averages, but that's what the
16 average ends up being, 10.50, as opposed to the
17 overall, which is 9.15. So it's a little higher than
18 the other three measures.

19 Q. Okay. And you also just were talking about
20 where the book value is -- excuse me, the stock value
21 is quite high relative to book value, that that can
22 tend to affect the DCF analysis?

23 A. That's right.

24 Q. If you were to look on, for example, the

1 American States Water value line, I want to get a
2 handle on this and make sure I understand. That's page
3 4 in your Rebuttal Exhibit 1, Schedule DWD-1R, page 4?

4 A. Yes. I'm there.

5 Q. So when you talk about the book value for
6 American States Water, I read that as 17.35; is that
7 right?

8 A. That's right.

9 Q. And then, if I wanted to compare that to the
10 stock value, this present price is 58.12?

11 A. Yes.

12 Q. Is that right? Is that the comparison you're
13 making? It's actually quite high?

14 A. Exactly.

15 Q. And that's so for the other utilities in your
16 comparable group as well?

17 A. Yes. As Mr. Grantmyre pointed out in my
18 direct, it averages around three times book -- the
19 market -- the market prices averaging around three
20 times book value for the proxy, the water proxy group.
21 And it's usually two and a half times.

22 Q. And where you've got a --

23 A. Or 2.25, I'm sorry.

24 Q. If you have a stock that's about valued for

1 stock purposes at its book value, when dividends are
2 paid, if they were paid out to those stockholders based
3 on book value, those folks would be getting quite a bit
4 higher yield, would they not? So the closer you come
5 to one -- the yield is higher if you have a lower stock
6 price; isn't that right?

7 A. It is. But since investors are investing
8 based on market value, and the return that's being set
9 in this case is on book value, there's a mismatch
10 there. So since we're setting on book, there's a --
11 there's a disconnect. Where since it is so much
12 removed from book -- since market price is so much
13 removed from book value -- and I'll point to where I
14 illustrate it in my testimony, and it would be Schedule
15 DWD-4R.

16 Q. You don't deny that -- oh, you weren't done.
17 Go ahead.

18 A. Well, I'm trying to explain.

19 Q. Okay.

20 A. On -- so if you look at Schedule DWD-4R, I
21 have an explanation here that -- like you said, that
22 the dividends on book on -- so what you're referring to
23 is on column B, right? So you have the book value --
24 the average book value of \$15, \$15 and change, and you

1 have the dividends of \$1.50 -- \$1.05. So you would see
2 that, yes, that yield is higher, but since people are
3 paying \$50 for the stock, the yield is actually what
4 the yield is, which is around 2 percent nowadays,
5 2.1 percent.

6 So when you're getting these returns, you're
7 supposed to be getting these returns on dollars in line
8 3, where actually we're getting them set on column B,
9 line 3. So as market value goes up or down from one,
10 those numbers change -- the DCF under- or
11 over-specifies the investor required return.

12 Q. As the stock values have gone up, though,
13 there is the potential to sell that stock and make
14 money in that way as well, too, right?

15 A. Sure, but the premise behind the DCF is that
16 you're holding it forever.

17 Q. Okay, And if you are holding it, though,
18 your yield is not as high, then, as the stock, if
19 you're willing to buy it at the higher stock price?

20 A. Right. And nowadays there's a relationship
21 between -- we're getting into different -- PE
22 multiples, which is price over earnings multiples. If
23 you get a higher price to earnings multiples, indicate
24 that there's going to be higher growth in that price.

1 So -- or higher earnings growth.

2 So as the dividend yield goes down, the PE
3 multiple goes up. And as that PE multiple goes up, the
4 expected growth rate also goes up. So the DCF cost
5 rate, even though the -- even though the yield is going
6 down, usually the growth makes up for the decrease in
7 yield and sometimes more so.

8 As shown, I guess, on page 6 of my testimony,
9 on that same risk measures based on September 17 and
10 September 18, where you could see that the --
11 September 17, the dividend yield was 2.12 based on
12 Value Line, and the growth rate was 7.75 percent. Now,
13 as the price went up, now September 18, dividend yield
14 went down slightly to 2.08 but the growth rate has
15 increased to 8.33.

16 So even though the yield has been going down
17 because the prices are going up, the expected growth is
18 also increasing, which affects the DCF cost rate.

19 Q. They're pretty variable, those earnings
20 predictions that you're using for the growth rate,
21 aren't they?

22 A. I wouldn't say that.

23 Q. Okay. I won't argue with you about it. I
24 have another question that ties back to that difference

1 between the book value and the stock value.

2 As you see, a good deal of confidence -- in
3 your experience, if there's a good deal of confidence
4 in the Company and where it's headed, at least relative
5 to the other risks in the market, does that tend to
6 produce a stock price that's higher or lower than the
7 book value?

8 A. So you're saying if the investment community
9 is confident in their operations and their operations
10 going forward, is the price going to go up or down; is
11 that what you're saying?

12 Q. Relative to the book value, is it going to be
13 more of a higher to book value?

14 A. It should go higher, but you could also say
15 that if they're -- but yes, generally higher, yeah.

16 Q. And if you look at a stock that -- where the
17 stock price is below book value, would that be
18 cautionary?

19 A. Yes.

20 Q. Okay. I don't have any other questions.

21 Thank you.

22 CROSS EXAMINATION BY MR. GRANTMYRE:

23 Q. You testified that, you know, looking at
24 earnings per share is the best way on a DCF -- the

1 earnings per share growth is the best way to predict
2 future growth for the DCF; is that correct?

3 A. That's right.

4 Q. And, actually, you're actually calculating
5 the growth in dividends; is that correct?

6 A. That's true. But if you look into the
7 academic literature, there isn't one, not one that I
8 know of, that states that dividends per share or book
9 value per share is even a consideration in using the
10 DCF. So -- and I haven't seen any evidence to the
11 contrary in this case.

12 Q. But isn't it your testimony that investors
13 look at earnings per share, that's the earnings per
14 share growth, that's the primary factor they look at to
15 determine investments?

16 A. That's right.

17 Q. Now, let's go back to your Schedule DWD-1R,
18 page 4, which is the -- on your rebuttal testimony,
19 which is the American States Water.

20 A. Yes.

21 Q. Now, you will admit that, at the top, they
22 have P -- P to -- price to earnings ratio of 33.2?

23 A. That's right.

24 Q. And don't investors look at price to earnings

1 ratio when they're buying a stock?

2 A. I would think so, yes. Any relevant
3 information.

4 Q. And, you know, relative PE ratio, 1.0,
5 investors may look at that also?

6 A. They may.

7 Q. And on the left-hand side, you know, 221 to
8 223 projections, you know, stock price, wouldn't they
9 look at projections of stock price?

10 A. They may.

11 Q. And also, isn't there a lot of historical
12 information here as to earnings per share, quarterly
13 dividends throughout this report?

14 A. Sure there are.

15 Q. And if those -- all of this information is
16 important to investors, why do you not use historical
17 as part of your DCF analysis?

18 A. Sure. That's a good question. Now, if
19 you're looking at an analyst, right, if you're looking
20 at analyst projections, the analysts have unfettered
21 access to company executives, et cetera, on the
22 operations of the firm. They also have the benefit of
23 looking at historical information. So if you're really
24 thinking about it, if you take the -- if you look at

1 both the analysts and historical, you're
2 double-counting the historical, because the
3 professionals that look at these stocks and make these
4 projections are already incorporating the historical
5 and projected outlooks of the Company. And
6 furthermore, there's significant academic literature in
7 my testimony that says projected is best.

8 MR. GRANTMYRE: We have no further
9 questions, except, if Mr. Bennink's going to ask
10 him about that last Public Staff exhibit, we would
11 reserve the right to ask questions on that.

12 CHAIRMAN FINLEY: All right.
13 Mr. Bennink, redirect?

14 MR. BENNINK: First of all,
15 Mr. Chairman, let me ask, will this exhibit be -- I
16 assume it will be identified as Public Staff
17 D'Ascendis Direct Cross Examination Exhibit
18 Number 6.

19 CHAIRMAN FINLEY: Why don't you mark it
20 as your exhibit?

21 MR. BENNINK: We don't want it as our
22 exhibit.

23 MR. GRANTMYRE: We'll take it.

24 CHAIRMAN FINLEY: No. If you didn't

1 introduce it and he didn't introduce it, you can
2 ask questions on it, but it won't be introduced.
3 It's up to you.

4 MR. BENNINK: We won't ask any questions
5 about it.

6 CHAIRMAN FINLEY: All right. Are there
7 other redirect questions?

8 MR. BENNINK: No questions.

9 CHAIRMAN FINLEY: Questions by the
10 Commission on the rebuttal testimony?

11 (No response.)

12 CHAIRMAN FINLEY: Doesn't look like
13 there are any questions of the Commission, so we
14 will accept the rebuttal exhibits into evidence at
15 this point.

16 MR. BENNINK: Thank you.

17 (Whereupon, D'Ascendis Rebuttal Exhibit
18 Number 1, Schedules DWD-1R through
19 DWD-R10 were admitted into evidence.)

20 CHAIRMAN FINLEY: You may be excused.
21 Thank you for coming.

22 THE WITNESS: Thank you. Have a good
23 day, guys.

24 CHAIRMAN FINLEY: Who's next? Call your

1 witness.

2 MR. BENNINK: Carolina Water Service
3 calls Deborah Clark, please.

4 DEBORAH CLARK,
5 having first been duly sworn, was examined
6 and testified as follows:

7 DIRECT EXAMINATION BY MR. BENNINK:

8 Q. Ms. Clark, would you state your name and
9 business address for the record, please?

10 A. Yes. My name is Deborah Clark, and our
11 business address is 4944 Parkway Plaza Boulevard,
12 Charlotte, North Carolina 28217.

13 Q. And you're appearing here today to testify on
14 behalf of Carolina Water Service, correct?

15 A. Yes.

16 Q. Did you prefile direct testimony consisting
17 of a cover page and six pages of written testimony in
18 this docket on September 4, 2018?

19 A. Yes, sir.

20 Q. And did you also append to that testimony,
21 two exhibits, Appendix 1 containing Exhibits 1 through
22 4 [sic] and, Appendix 2 containing Exhibits A1 through
23 A3?

24 A. That is correct.

1 MR. BENNINK: Mr. Chairman, we would
2 like to ask that those exhibits be identified as
3 marked.

4 CHAIRMAN FINLEY: The exhibits are
5 identified as marked.

6 (Clark Appendix Number 1, Exhibit
7 Numbers 1 through 4; and Clark Appendix
8 Number 2, Exhibit Numbers A1 through A3
9 were marked for identification.)

10 Q. Ms. Clark, if you were asked the same
11 questions in your written testimony today, would your
12 answers be the same?

13 A. They would, yes.

14 Q. Do you have any additions or corrections to
15 make to that testimony?

16 A. No, sir.

17 MR. BENNINK: Mr. Chairman, we would ask
18 that that testimony be copied into the record as if
19 given orally from the stand.

20 CHAIRMAN FINLEY: Ms. Clark's prefiled
21 testimony of six pages of September 4, 2018, is
22 copied into the record as if given orally from the
23 stand.

24 (Whereupon, the prefiled direct

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testimony of Deborah Clark was copied
into the record as if given orally from
the stand.)

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-354, SUB 360

In the Matter of
Application by Carolina Water Service, Inc. of North Carolina
for Authority to Adjust and Increase Rates for
Water and Sewer Utility Service in All of Its Service Areas in
North Carolina, Except Corolla Light and Monteray Shores Service
Area

Pre-filed Direct Testimony
of
DEBORAH CLARK
Communications Coordinator

On Behalf Of
CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA

September 4, 2018

FILED
SEP 05 REC'D
Clerk's Office
N.C. Utilities Commission

1 **Q. Please state your name, occupation and business address for**
2 **the record.**

3 A. My name is Deborah Clark. I am employed as the Communications
4 Coordinator for Carolina Water Service, Inc. of North Carolina ("CWSNC"
5 or "Company"), 4944 Parkway Plaza Boulevard, Suite 375, Charlotte, North
6 Carolina 28217.

7 **Q. Please summarize your professional background.**

8 A. I have been employed by CWSNC since August 1, 2017. I have a
9 Bachelor of Science degree in Communications from East Tennessee State
10 University. I also possess a Master of Public Administration degree from
11 East Carolina University. Finally, I was awarded a Master of Human
12 Resource Development degree from Clemson University.

13 Prior to joining CWSNC, I was the Director of Communications for
14 two North Carolina cities—Concord and Greenville. Also, I served as a
15 Public Engagement Coordinator with Duke Energy.

16 During my 20-year career as a communications professional, I have
17 been responsible for developing and implementing strategic and other
18 communications programs focused on traditional (i.e., print); electronic (i.e.,
19 video, cable access, or radio); and social media (i.e., Facebook, Twitter,
20 websites) methods providing meaningful information proactively to
21 customers.

22 **Q. Please explain your job responsibilities at CWSNC.**

1 A. My role with CWSNC is to proactively serve and engage with our
2 customers to ensure they receive the highest level of customer experience
3 and to develop strategies and plans to effectuate this level of service.

4 **Q. What is the purpose of your direct testimony?**

5 A. The purpose of my direct testimony is to explain CWSNC's success
6 with its increased efforts to engage with and improve each customer's
7 overall interaction and experience with CWSNC.

8 **Q. How has CWSNC improved its customer engagement**
9 **throughout North Carolina?**

10 A. Customer engagement has improved through the development and
11 implementation of very intentional and innovative community outreach
12 approaches. To enhance our customers' experiences, we implemented
13 multiple communication channels from Facebook, Twitter, Instagram, and
14 our Water Drop podcasts, to bill inserts, phone calls, and face-to-face
15 meetings. For example, I designed eight WordPress sites (i.e., free web
16 pages) for our customers in several communities to provide updates on
17 projects, water saving tips, hurricane preparedness tips, frozen pipes
18 prevention tips, drought information, and CWSNC employee spotlights (see
19 exhibit A). Also, I routinely attend meetings with Homeowner Associations
20 (HOAs) and Property Owner Associations (POAs) statewide, including
21 Sugar Mountain, Connestee Falls, Belvedere Plantation, Carolina Trace,

1 Brandywine Bay, Fairfield Harbor, Nags Head, Elk River, Bradfield Farms,
2 Danby / Lamplighter Village, Riverpointe, the Pointe, Stone Hollow, Bear
3 Paw Resort, The Ridges at Mountain Harbor, Fairfield Mountain, and
4 Sapphire Valley. Topics discussed during the meetings include planned
5 capital projects, timeframes and schedules of other projects, conservation
6 tips and sustainability ideas, and other issues of significance. (Exhibits 1-5)
7 See Appendix 1 for description.

8 HOAs also receive articles from CWSNC for inclusion in their newsletters.
9 This includes a plethora of stories ranging from updates on projects,
10 services, and CWSNC employee updates (i.e. "who works in my
11 community"), to techniques for water conservation. (Exhibits A1-3) See
12 Appendix 2 for description.

13 I have connected with every established and active HOA and POA within
14 North Carolina. This involved contacting approximately 130 communities.
15 Routine articles and information that proactively address water
16 conservation, drought management, hurricane preparedness, avoiding
17 freezing pipes, outage notices, and facts ("did you know?") are published to
18 the CWSNC website, social media accounts, and through written
19 documents. (Exhibits B1-8) See Appendix 3 for description.

20 In addition, I often address and resolve billing, service and other complex
21 customer concerns that requires in-depth communication and problem-
22 solving proficiency. Examples include my assistance with the CWSNC

1 Customer Courtesy Leak Adjustment Program (where water losses due to
2 leaks in the customers' infrastructure resulting in large bills is corrected), to
3 helping customers obtain irrigation meters and understand their billing
4 information.

5 Furthermore, I have the pleasure of leading our community service
6 program, which includes activities such as food drives for both Loaves and
7 Fishes and Second Harvest Foodbank; delivering snacks for women and
8 children at Safe Alliance—a domestic violence shelter; adopting Angel
9 Trees and Silver Bells for the Salvation Army Christmas program; adopt-a-
10 street campaigns; supporting Grandfather Mountain Stewardship
11 Foundation's water education program; Special Olympics of Western North
12 Carolina; and local charity races and events statewide in an effort to
13 promote safe, clean, and reliable water.

14 **Q. Please explain why CWSNC determined that it needed to**
15 **increase its customer engagement and experience activity?**

16 A. Broadly, customers have expressed concern over CWSNC's level of
17 customer communication. For example, multiple customers complained of
18 a lack of communication, no social media presence, and untimely
19 responses from customer service representatives. CWSNC determined it
20 needed to improve its customer engagement and experience activity.

1 **Q. How has CWSNC measured the degree of success of the**
2 **Company's communication and outreach efforts in terms of benefits**
3 **to customers and customer satisfaction?**

4 A. CWSNC's measured degrees of success include: (1) the
5 development and implementation of the social media applications and the
6 number of followers, the number of stories and articles posted, and visits to
7 our sites; (2) the number of CWSNC--developed WordPress websites
8 requested by HOAs or POAs; (3) the significant number of customer issues
9 received and successfully resolved involving billing issues, irrigation meter
10 connections, reimbursements for unused water, and other customer service
11 complaints; and (4) the number of HOA and POA meetings attended.
12 Feedback I have received from customers indicates they appreciate the
13 communication efforts and continued delivery of relevant content through
14 email, phone calls, social media, or at face-to-face meetings within their
15 communities.

16 **Q. How is your work and this testimony relevant to this rate case**
17 **proceeding?**

18 A. CWSNC understands that adequate service to customers includes
19 active engagement, positive experiences, and clear communication, in
20 addition to the operational obligations discharged by a regulated public
21 utility. CWSNC's increased efforts to improve customer engagement and
22 awareness about service protocols and rates is an essential component of

5
1 the service provided by this Company. CWSNC is fully committed to
2 excellent customer relationships and providing adequate, efficient, and
3 reasonable service consistent with the requirements of G.S. 62-131(b). In
4 summary, meaningful and effective customer engagement and experience
5 is an essential element to achieving this goal.

6 **Q. Is this testimony true and accurate to the best of your**
7 **knowledge, information, and belief?**

8 A. Yes, it is.

9 **Q. Does this conclude your testimony?**

10 A. Yes.

1 BY MR. BENNINK:

2 Q. All right. Ms. Clark, do you have a summary
3 of your testimony?

4 A. I do.

5 Q. Please proceed.

6 A. My name is Deborah Clark, and I have been
7 employed as the communications coordinator for Carolina
8 Water Service Incorporated of North Carolina since
9 August 1st of 2017. I have a bachelor of science
10 degree in communications from East Tennessee State
11 University, a master of public administration degree
12 from East Carolina University, and a master of human
13 resource development degree from Clemson University.

14 During my 20-year career as a communications
15 professional, I have been responsible for developing
16 and implementing strategic and other communications
17 programs focused on traditional, for example, print;
18 electronic, for example, video, cable access, or radio;
19 and social media, Facebook, Twitter, and the
20 development of websites, methods providing meaningful
21 information proactively to customers.

22 My direct testimony outlines my role with
23 CWSNC, which is to proactively serve and engage with
24 our customers to ensure they receive the highest level

1 of customer experience and to develop strategies and
2 plans to effectuate this level of service. I testify
3 that customer engagement has improved through the
4 development and implementation of very intentional and
5 innovative community outreach approaches. To enhance
6 our customers' experiences, we implemented multiple
7 communication channels that range from Facebook,
8 Twitter, Instagram, and our Water Drop podcasts, to
9 bill inserts, phone calls and face-to-face meetings.

10 For example, I designed eight WordPress
11 websites, these are free web pages for our customers in
12 several communities to provide updates on projects,
13 water saving tips, hurricane preparedness tips, frozen
14 pipes prevention tips, drought information, and CWSNC
15 employee spotlights. Also, I routinely attend meetings
16 with homeowner associations and property owner
17 associations statewide. These include Sugar Mountain,
18 Connestee Falls, Belvedere Plantation, Carolina Trace,
19 Brandywine Bay, Fairfield Harbor, Nags Head, Elk River,
20 Bradfield Farms, Danby/Lamplighter Village,
21 Riverpointe, The Pointe, Stone Hollow, Bear Paw Resort,
22 The Ridges at Mountain Harbor, Fairfield Mountain, and
23 Sapphire Valley. Topics discussed during the meetings
24 included planned capital projects, time frames and

1 schedules of other projects, and tips regarding
2 conservation and sustainability.

3 HOAs also receive articles from CWSNC for
4 inclusion in their newsletters. This includes a
5 plethora of stories ranging from updates on projects,
6 services, and CWSNC employee updates, to techniques for
7 water conservation as well. CWSNC understands that
8 adequate service to customers includes active
9 engagement, positive experiences, and clear
10 communication, in addition to the operational
11 obligations discharged by regulated public utility.
12 CWSNC's increased efforts to improve customer
13 engagement and awareness about service protocols and
14 rates is an essential component of the service provided
15 by this company. CWSNC is fully committed to excellent
16 customer relationships and providing adequate,
17 efficient and reasonable service consistent with the
18 requirements of G.S. 62-131(b).

19 In summary, meaningful and effective customer
20 engagement and experience is an essential element to
21 achieving this goal.

22 MR. BENNINK: The witness is available
23 for cross examination.

24 CHAIRMAN FINLEY: Cross examination?

1 MR. ALLEN: No questions.

2 MS. FORCE: No questions.

3 MS. HOLT: No questions.

4 CHAIRMAN FINLEY: Questions by the
5 Commission. It appears that there are no questions
6 of Ms. Clark by the Commission.

7 COMMISSIONER BROWN-BLAND: Just a
8 general one.

9 EXAMINATION BY COMMISSIONER BROWN-BLAND:

10 Q. Ms. Clark, as you just mentioned, you
11 participated in a lot of meetings with the homeowners
12 and property owners associations.

13 Can you give us a feel for how -- if they
14 have, if those meetings have improved the Company's
15 relationships in those areas, and do you have any
16 feedback that supports what you're about to testify
17 you've seen?

18 A. Yes, ma'am. I just attended an HOA annual
19 meeting in Skyleaf, which is in the Sugar Mountain,
20 Banner Elk area, to provide information to the
21 customers which went very well. And I have maintained
22 many relationships. I saw Mr. Vince Roy here earlier.
23 I attend their meetings. I will be there on
24 October 25th for that meeting. I have several of the

1 HOA presidents, especially in the Fairfield and
2 Brandywine communities, that were in constant contact
3 during the hurricane for updates as I received them
4 from our operations.

5 So we've established quite a few really good
6 relationships. Another one would be Bob Templeton with
7 Elk River. I talk to Bob about weekly on just
8 providing updates. I also attended the Village of
9 Sugar Mountain council meeting. I send the Village
10 manager any updates as I receive them so they can put
11 them on the Village website for the residents.

12 So we're making strides and will continue to
13 do so to enhance our customer experience.

14 Q. So you started a relatively short time ago
15 with this company, and when you began to have these
16 meetings, did you -- since, from the customers, you
17 know, as a new person coming in and introducing
18 yourself to them, and Company's new direction or
19 strategy, did you sense from them skepticism or
20 hostility?

21 A. I wouldn't say that it was hostility or
22 skepticism. I think they were very open to receiving
23 information. I just don't think that they were aware
24 of what I could offer to them. And once I made that

1 known, then they've taken full advantage of that. I
2 get a lot of phone calls, and e-mails, and messaging
3 from the HOA presidents. I even have relationships,
4 like I said, with Vince Roy. There's Mr. Frank Carol
5 of Belvedere who I call just to have conversation and
6 make sure he's doing well.

7 So I think we've done a pretty good job of
8 establishing those relationships and will continue to
9 do so as we move forward.

10 Q. And in receiving the customer feedback, as
11 you go along, has the Company been able to make changes
12 or decisions based on customer ideas, customer
13 feedback?

14 A. I believe so. Like with the WordPress, the
15 free websites I mentioned, many of the smaller HOAs did
16 not have a website for their communities, so we set one
17 up for them to use. So that seems to have been really
18 acceptable to them. Also, I will say that, with our
19 social media, I keep the metrics of that. We started
20 with no followers on Twitter, and we're up to almost
21 100. And during the Hurricane Florence episode, a lot
22 of the Brandywine and the Fairfield Harbor residents
23 used the messaging part of Facebook to ask questions,
24 because it was instant. So I feel that we're making

1 good strides in our communication efforts with our
2 customers, so yes.

3 Q. And do you have a staff, or are you just a
4 person of one?

5 A. I'm a person of one, but I like to think of
6 myself as a mighty one.

7 Q. So you are -- at this point, you do all the
8 responding or directing questions around to where they
9 need to go?

10 A. And that is correct. And I would like to say
11 that I've worked closely with the Public Staff to
12 address some of the issues that come into them, and we
13 have a pretty good relationship answering those as
14 well.

15 Q. All right. Thank you.

16 A. Yes, ma'am.

17 CHAIRMAN FINLEY: Questions on the
18 Commission's questions?

19 MR. BENNINK: I've got just a couple.

20 REDIRECT EXAMINATION BY MR. BENNINK:

21 Q. Ms. Clark, you've been employed by Carolina
22 Water Service now for approximately 14 months; is that
23 correct?

24 A. That is correct.

1 Q. And was your position a new position?

2 A. It was a new position.

3 Q. So was there anyone on the Carolina Water
4 Service staff before you that did the kind of job
5 functions that you're doing today?

6 A. No, sir.

7 Q. At least not to the extent that you're doing
8 them?

9 A. That is correct.

10 Q. So this has been a new process implemented by
11 the Company since August of 2017?

12 A. Yes, sir.

13 MR. BENNINK: That's all. Thank you.

14 CHAIRMAN FINLEY: All right. Thank you.
15 Ms. Clark, we will receive the appendices that have
16 been identified. Mr. Bennink, I've got an Appendix
17 3 up here for Ms. Clark.

18 MR. BENNINK: I've only got Appendix 1
19 and Appendix 2. Let me -- kind of confer with
20 Ms. Clark?

21 CHAIRMAN FINLEY: Yes.

22 MR. BENNINK: Mr. Chairman, as I scan
23 the testimony, I see references to two appendices,
24 1 and 2. I don't see a reference to a third, and I

1 don't have it, so we're only asking for Appendices
2 1 and 2.

3 CHAIRMAN FINLEY: All right. They're
4 admitted.

5 (Clark Appendix Number 1, Exhibits 1
6 through 4 and Clark Appendix Number 2,
7 Exhibits A1 through A3 were admitted
8 into evidence.)

9 CHAIRMAN FINLEY: Call your next
10 witness.

11 MS. SANFORD: Carolina Water calls
12 Dante DeStefano.

13 DANTE DESTEFANO,
14 having first been duly sworn, was examined
15 and testified as follows:

16 DIRECT EXAMINATION BY MS. SANFORD:

17 Q. I was about to say good morning, but I'm a
18 little late for that.

19 Would you please state your name, and
20 business address, and occupation for the record?

21 A. Yes. My name is Dante DeStefano. My
22 business address is 4944 Parkway Plaza Boulevard,
23 Charlotte, North Carolina.

24 Q. Mr. DeStefano, did Richard Linneman cause to

1 be prefiled in this case, direct testimony consisting
2 of 20 pages and 5 appendices?

3 A. Yes.

4 Q. On September 4, 2018?

5 A. That's correct.

6 Q. You have replaced Mr. Linneman in the
7 Carolina Water Service organization; is that correct?

8 A. That's correct.

9 Q. And do you adopt his testimony today?

10 A. I do.

11 Q. Do you have any changes or corrections to be
12 made in his testimony or his exhibits?

13 A. I'd like to identify one adjustment on
14 page 16 of Mr. Linneman's testimony, lines 18 through
15 21 toward the bottom of the page. The quote is
16 regarding, "EDIT not protected by normalization but
17 related to plant property and equipment, proposed
18 flowback over a 20-year period." After reviewing the
19 Company's records and talking with some Company
20 accounting personnel, I determined that the Company
21 does not have any unprotected plant balance to be
22 amortized, so that comment is unnecessary.

23 Q. Okay. Thank you. If I asked you the same
24 questions today, would your answers be the same, except

1 as modified but subsequent agreement with the Public
2 Staff?

3 A. That's correct.

4 MS. SANFORD: Chairman Finley, I request
5 that Mr. DeStefano's testimony be copied into the
6 record as if given orally from the stand and that
7 his exhibits be marked.

8 CHAIRMAN FINLEY: Is this the -- this is
9 the Linneman testimony that's been adopted?

10 MS. SANFORD: Yes, sir.

11 CHAIRMAN FINLEY: The 20 pages of
12 September 4, 2018, are copied into the record as if
13 given orally from the stand, and the five
14 appendices are admitted into evidence. And there's
15 one exhibit I have here; is that right?

16 MS. SANFORD: I think they're all in the
17 form of appendices with some constituents.

18 CHAIRMAN FINLEY: All right. Mark --
19 the appendices then for the moment are marked for
20 identification as premarked in the file.

21 MS. SANFORD: Okay. Thank you very
22 much.

23 (Linneman Exhibit Number 1, as adopted
24 by Dante DeStefano, was marked for

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identification.)
(Whereupon, the prefiled direct
testimony of Richard Linneman, as
adopted by Dante DeStefano, was copied
into the record as if given orally from
the stand.)

FILED

0260

SEP 05 REC'D

Clerk's Office
N.C. Utilities Commission

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-354, SUB 360

In the Matter of
Application by Carolina Water Service, Inc. of North Carolina
for Authority to Adjust and Increase Rates for
Water and Sewer Utility Service in All of Its Service Areas in
North Carolina, Except Corolla Light and Monteray Shores Service
Area

Pre-filed Direct Testimony
of
RICHARD LINNEMAN
Financial Planning and Analysis Manager

On Behalf Of
CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA

September 4, 2018

1 **Q. Please state your name, occupation and business address for**
2 **the record.**

3 A. My name is Richard Linneman. I am employed as the Financial
4 Planning and Analysis Manager for Carolina Water Service, Inc. of North
5 Carolina ("CWSNC" or "Company"), 4944 Parkway Plaza Boulevard,
6 Suite 375, Charlotte, North Carolina 28217.

7 **Q. Please summarize your professional background.**

8 A. I have been employed by CWSNC since November 2016. I
9 graduated from Coastal Carolina University in Conway, South Carolina, with
10 a Bachelor of Science degree in Finance. I am also a Certified Rate of
11 Return Analyst. Prior to joining CWSNC, I was the Director of Financial
12 Planning and Analysis for Leslie's Poolmart, Inc., the world's largest retailer
13 of swimming pool supplies and chemicals. During my five years in that
14 position, I was responsible for forecasting, budgeting, financial analysis,
15 strategic planning, acquisitions, and market valuations.

16 **Q. Please explain your job responsibilities at CWSNC.**

17 A. My primary responsibilities include forecasting, budgeting, and
18 financial analysis. I am also responsible for the oversight of gathering data
19 and preparation of rate cases, filing applications for rate cases, and
20 providing data request responses for support of rate case filings.

21 **Q. Please describe Carolina Water Service, Inc. of North Carolina.**

1 A. CWSNC is a wholly-owned subsidiary of Utilities, Inc. ("UI").
2 CWSNC is an investor-owned public utility pursuant to North Carolina
3 General Statute ("G.S.") 62-3, does business as a regulated water and
4 sewer utility in North Carolina, and is subject to the regulatory oversight of
5 the North Carolina Utilities Commission ("Commission" or "NCUC"). The
6 Company has provided water and sewer service in North Carolina for
7 53 years and applies in this case for an adjustment in water and sewer rates
8 and charges for all of its service areas in North Carolina, excluding the
9 Corolla Light and Monteray Shores sewer service area.

10 The Company is the second-largest Commission-regulated water
11 and sewer public utility in North Carolina. CWSNC presently serves
12 approximately 34,871 water customers and 21,531 sewer customers in
13 North Carolina and operates approximately 93 water systems and 38 sewer
14 systems in the State. The Company's service territory spans 38 counties in
15 North Carolina, from Bear Paw in Cherokee County to Corolla in Currituck
16 County. Consequently, CWSNC, as a regulated public utility, has a
17 continuing responsibility to upgrade the Company's widely-dispersed utility
18 infrastructure and make necessary improvements to ensure its ability to
19 continue to consistently provide adequate, efficient, and reasonable service
20 to its customers as required by G.S. 62-131(b).

21 The Company also has an obligation to comply with changing
22 environmental, health, and safety regulations and to fulfill its overall

1 obligation to provide quality, dependable service pursuant to its certificate
2 of public convenience and necessity. To that end, CWSNC has invested
3 more than \$21 million in capital improvements during the two-year period of
4 time extending from 2017 to 2018. In addition, the Company continues to
5 fund required operations and expense ("O&M") increases to ensure quality
6 and compliant service.

7 **Q. Please describe UI.**

8 A. UI is relatively unique within the water and sewer industry in certain
9 respects. From its inception 53 years ago, UI has concentrated on the
10 purchase, formation, and expansion of smaller water and/or sewer utility
11 systems. Most often, these are the types of systems that cause state
12 regulators and health authorities an inordinate amount of time and concern,
13 due to problems related to product quality, customer service, financial
14 stability and rates.

15 At the present time, UI has over 16 subsidiary operating
16 companies—including CWSNC—which provide water and sewer utility
17 service to approximately 197,732 customers in 16 states.

18 **Q. How do CWSNC's customers benefit from the Company's**
19 **affiliation with UI?**

20 A. The affiliation with UI has many benefits for CWSNC customers.
21 One of the primary benefits is that CWSNC has access to a large pool of

1 human resource capabilities upon which to draw. There are experts in
2 various critical areas, such as construction, engineering operations,
3 accounting, data processing, billing, regulation, and customer service.
4 UI has the highest level of combined expertise and experience, allowing it
5 to provide service in a more cost-effective manner.

6 While operating only water and sewer systems, UI personnel can
7 meet the challenges of the rapidly changing utility industry. Because the UI
8 companies are focused on the water and sewer industry, our companies
9 enjoy some unique advantages, one of which is that capital is available for
10 improvements and expansion at a reasonable cost. With increasingly more
11 stringent health, safety, and environmental standards, ready access to
12 capital will prove vital to continued quality service in the water and sewer
13 utility business.

14 In addition, the UI group of companies has national purchasing
15 power, resulting in lower costs to ratepayers. Expenditures for insurance,
16 vehicles, and meters reflect examples of purchases where national
17 contracts provide tangible benefits to ratepayers.

18 **Q. What is the purpose of your direct testimony?**

19 A. The purpose of my direct testimony is to explain why CWSNC has
20 requested Commission approval to increase its water and sewer rates. The
21 Company filed its Application for a general rate increase ("Rate Case
22 Application") on April 27, 2018. I discuss some of the factors that have

1 contributed to the need for these increases and their impact on CWSNC's
2 customers. I also discuss the terms regarding the cost of debt, the overall
3 cost of capital, and rate of return on rate base. In addition, I will sponsor
4 the Company's financial exhibits, including pro forma income statements
5 and balance sheets.

6 **Q. When did CWSNC receive its last general rate increase?**

7 A. CWSNC's last general rate case was decided by NCUC Order
8 ("2017 Rate Case Order") entered on November 8, 2017, in Docket No.
9 W-354, Sub 356.

10 CWSNC is both obligated and committed to facilitate and maintain
11 the continued achievement of its goals and high standards regarding safety,
12 operational excellence and customer service. Therefore, the Company's
13 capital investments in utility plant in service and O&M expense—which
14 provide necessary benefits to customers and which are dedicated to public
15 use—are on-going and must be recovered in rates.

16 By its Rate Case Application, which was filed in this docket on
17 April 27, 2018, CWSNC proposes to continue to operate four Rate Divisions
18 for ratemaking purposes as follows:

19 CWSNC Uniform Water

20 CWSNC Uniform Sewer

21 Bradfield Farms/Fairfield Harbour Water¹

¹ Bradfield Farms is in Mecklenburg County and Fairfield Harbour is in Craven County.

1 Bradfield Farms/Fairfield Harbour Sewer

2 **Q. Please describe the four Rate Divisions and how they will**
3 **operate.**

4 A. The CWSNC Uniform Water and Sewer Rate Divisions will consist
5 of all water and sewer systems currently owned and operated by the
6 Company, except for the Bradfield Farms and Fairfield Harbour service
7 areas. The Bradfield Farms and Fairfield Harbour water and sewer service
8 areas have been combined into separate Water and Sewer Rate Divisions
9 for purposes of this case, with uniform water and sewer rates within each
10 Rate Division. CWSNC's ultimate goal, in future general rate cases, is to
11 move Bradfield Farms and Fairfield Harbour into the CWSNC Uniform
12 Water and Sewer Rate Divisions.

13 **Q. Please describe the Company's proposed rate design in this**
14 **case.**

15 A. CWSNC proposes no rate changes for customers in the Company's
16 Corolla Light/Monteray Shores service area. As for the Corolla
17 Light/Monteray Shores service area, CWSNC's proposal to not increase
18 (but hold constant) the water and sewer rates for those affected customers
19 is consistent with the ratemaking and rate design approved by the
20 Commission in the Company's last three general rate cases (Docket Nos.
21 W-354, Subs 336, 344 and 356) and will continue the orderly process of
22 moving the Corolla Light/Monteray Shores service area toward full inclusion

1 in the Company's uniform water and sewer rates in future general rate
2 cases.

3 **Q. What is the test year for this rate case?**

4 A. The test year for this general rate case is the year ended
5 December 31, 2017. This is the most recent twelve months of data
6 available.

7 **Q. Did CWSNC cause a notice of rate increase of its petition to be
8 mailed to its customers?**

9 A. Yes. CWSNC caused the prescribed Notices to Customers, as
10 approved by the North Carolina Utilities Commission, to be mailed to all its
11 affected customers in a timely manner.

12 **Q. Please describe the rates which CWSNC's customers are
13 currently being charged for water and sewer utility service.**

14 A. By Order dated November 8, 2017, the current water and sewer rates
15 and charges for CWSNC's customers were approved by the Commission in
16 Docket No. W-354, Sub 356. The current Schedules of Rates, which were
17 attached to the Commission's November 8, 2017 Order as Appendices A-1
18 through A-14, are incorporated herein by reference.

19 **Q. What rates does CWSNC propose in this case?**

20 A. The proposed water and sewer rates charges for CWSNC's
21 customers are attached to my testimony as Exhibit 1.

1 **Q. Were the financial schedules attached to CWSNC's Rate Case**
2 **Application prepared by you and/or under your direction?**

3 A. Yes, the schedules attached to the Rate Case Application were
4 prepared by me.

5 **Q. Are those financial schedules incorporated as part of your**
6 **testimony?**

7 A. Yes. They are incorporated herein by reference.

8 **Q. Please describe those schedules.**

9 A. The Rate Case Application includes the financial statements for
10 CWSNC. The referenced Schedules are as follows:

11 Schedule A – Balance Sheet

12 Schedule B – Income Statement

13 Schedule C – Rate Base and Rate of Return

14 Schedule D – Test Year / Present Revenues

15 Schedule E – Proposed Revenues

16 **Q. Please explain how test year expenses were adjusted.**

17 A. As previously stated, the Company's test year is the twelve-month
18 period ended December 31, 2017. Pro forma adjustments were made to
19 the test year expenses based on known and measurable changes to actual
20 expenses.

1 **Q. Were known and measurable pro forma adjustments also made**
2 **to the Company's income statement (Schedule B) and its rate base**
3 **statement (Schedule C)?**

4 A. Yes, as detailed therein.

5 **Q. Why is CWSNC requesting rate relief at this time?**

6 A. CWSNC's current balance sheet and income statement are
7 contained in the Company's Rate Case Application. CWSNC's balance
8 sheet is attached to the Application as Schedule A and the Company's
9 income statement is attached to the Application as Schedule B. The
10 Company's current rate base and rate of return is shown on Schedule C of
11 the Application.

12 Without satisfactory rate relief, CWSNC's ability to continue to
13 provide safe, reliable and efficient water and sewer utility services to its
14 customers and to meet its financial obligations will be impaired and made
15 more difficult. In addition, capital will likely become costlier.

16 More specifically, under present rates, CWSNC is not able to meet
17 its operating costs and earn a reasonable return on its investment in the
18 Company's system. During the test year, CWSNC experienced the
19 following overall rate of return for its combined water and sewer operations:
20 4.60%. The Company's test year overall returns were 4.33% for water
21 operations and 7.07% for sewer operations. These rates of return are well
22 below CWSNC's currently-authorized overall rate of return on rate base of

1 7.84%, which is based on an authorized rate of return on common equity of
2 9.60%, established by the Commission in its 2017 Rate Case Order in
3 Docket No. W-354, Sub 356.

4 **Q. What rates of return and capital structure does the Company**
5 **propose and request in this case?**

6 A. After pro forma adjustments as set forth in its Rate Case Application,
7 CWSNC proposed an overall rate of return of 8.91% for its combined water
8 and sewer operations. This overall rate of return of 8.91% is based upon a
9 capital structure consisting of 47.11% long-term debt and 52.89% common
10 equity and cost rates of 6.00% for long-term debt and 11.50% for common
11 equity.

12 **Q. Please describe the primary reasons which underlie the**
13 **Company's need for rate relief.**

14 A. The primary reasons for CWSNC's requested rate increase involve
15 increases in expenses and plant additions. Significant capital investment
16 has occurred since the last rate case for CWSNC. The Rate Case
17 Application also includes approximately \$6,420,000 of anticipated post-test
18 year additions for projects which are currently in progress—some of which
19 are intended to be completed by the close of the hearing in this case.

20 The new rates applied for by CWSNC are necessary because the
21 Company has been unable to achieve the level of earnings specified by the
22 Commission in the last general rate case for CWSNC. The failure to

1 achieve the authorized level of earnings was caused by increased operating
2 costs to upgrade the level of service, increased operating costs and capital
3 investments required to comply with service obligations (including the
4 regulatory lag encountered in the Company's inability to timely recover such
5 costs through rates), and changes in consumption, all occurring since the
6 last rate increase.²

7 **Q. Please describe the revenue increases requested in this case,**
8 **including details regarding the Company's underlying investment in**
9 **utility plant, capital structure, and debt and equity costs.**

10 A. The Rate Case Application was prepared and submitted pursuant to
11 the provisions of G.S. 62-133 based upon a requested return on the
12 Company's rate base.³ The proposed tariffs are designed to produce
13 additional gross revenues on a companywide basis of \$4,405,535, a
14 13.52% increase over the total revenue level generated by the rates
15 currently in effect for CWSNC. For the CWSNC Uniform Water Rate
16 Division, the proposed tariffs are designed to produce additional gross
17 revenues of \$2,485,611, a 14.64% increase over the total revenue level
18 generated by the rates currently in effect for that Rate Division. For the

² Regarding customer consumption patterns, CWSNC, like the water utility industry in general, continues to experience a consistent decline in consumption. This decline in consumption, combined with regulatory lag resulting from use of traditional historical test year ratemaking principles, impairs CWSNC's opportunity to achieve its Commission-authorized rate of return on equity.

³ By its Application, the Company has requested that the Commission allow it to recover total water service revenues of \$20,955,365 and total sewer service revenues of \$15,905,155 on a companywide basis.

1 CWSNC Uniform Sewer Rate Division, the proposed tariffs are designed to
2 produce additional gross revenues of \$1,022,180, a 7.99% increase over
3 the total revenue level generated by the rates currently in effect for that
4 Rate Division. For the Bradfield Farms/Fairfield Harbour Water Rate
5 Division, the proposed tariffs are designed to produce additional gross
6 revenues of \$511,341, a 47.64% increase over the total revenue level
7 generated by the rates currently in effect for that Rate Division. For the
8 Bradfield Farms/Fairfield Harbour Sewer Rate Division, the proposed tariffs
9 are designed to produce additional gross revenues of \$386,403, a 22.03%
10 increase over the total revenue level generated by the rates currently in
11 effect for that Rate Division. CWSNC requires increased revenues at this
12 level to earn a fair return on its companywide investment of \$114,815,658.

13 The proposed tariffs also include a provision allowing for a
14 pass-through of the cost of water and sewer service, including applicable
15 taxes and fees, required to serve the needs of customers being served by
16 CWSNC in a particular service area, when that water or sewer service is
17 purchased from another supplier. This pass-through provision is authorized
18 by G.S. 62-133.11.

19 **Q. Has the Company included costs for anticipated post-test year**
20 **plant additions as part of its rate case application?**

21 **A. Yes.** As previously stated, the rate case application includes
22 approximately \$6,420,000 of anticipated post-test year additions.

1 **Q. Has CWSNC been authorized to implement Water and Sewer**
2 **System Improvement Charge Mechanisms pursuant to G.S. 62-133.12**
3 **and Commission Rules R7-39 and R10-26?**

4 A. Yes. Pursuant to G.S. 62-133.12 and NCUC Rules R7-39 and
5 R10-26, the Commission found it to be in the public interest to authorize
6 CWSNC, as part of the Company's 2014, 2015, and 2017 general rate
7 cases in Docket Nos. W-354, Subs 336, 344 and 356, to implement Water
8 and Sewer System Improvement Charge ("WSIC/SSIC") Mechanisms
9 applicable to the Company's customers. By these statutorily and
10 Commission-authorized Mechanisms, the Company is allowed to recover
11 the annual incremental depreciation expense and capital costs of eligible
12 water and sewer system improvements completed and placed in service
13 between rate cases.

14 **Q. Has CWSNC in fact implemented the Commission-authorized**
15 **WSIC/SSIC Mechanisms?**

16 A. Yes. The WSIC/SSIC Mechanisms were implemented pursuant to
17 Commission authorization consistent with applicable State law and NCUC
18 Rules.

19 **Q. Please explain what changes will occur regarding the**
20 **Company's authorized WSIC/SSIC Mechanisms after a decision by the**
21 **Commission in this case.**

1 A. Consistent with NCUC Rules R7-39(k) and R10-26(k), CWSNC's
2 Commission-authorized WSIC and SSIC surcharges will be reset to zero as
3 of the effective date of new base rates established in this general rate case.
4 Thereafter, only the incremental depreciation expense and capital costs of
5 new eligible water and sewer system improvements that have not previously
6 been reflected in the Company's rates will be recoverable through the
7 WSIC/SSIC Mechanisms on a going-forward basis.

8 By law, the cumulative maximum charges between rate cases that
9 the Company may recover using its Commission-authorized WSIC/SSIC
10 Mechanisms cannot exceed five percent of the total service revenues that
11 the Commission ultimately approves in this general rate case.

12 **Q. Do CWSNC's Commission-authorized WSIC/SSIC Mechanisms**
13 **apply to all water and sewer utility customers served by the Company**
14 **in North Carolina?**

15 A. Because CWSNC proposes no rate changes for customers in the
16 Company's Corolla Light/Monteray Shores sewer service area, the SSIC
17 Mechanism does not apply to those customers. The WSIC/SSIC
18 Mechanisms otherwise apply to all other customers served by CWSNC.

19 **Q. Please explain the components of the Federal Tax Cuts and**
20 **Jobs Act and the impact to the Company.**

1 A. On December 22, 2017, President Donald Trump signed into law the
2 Federal Tax Cuts and Jobs Act ("Federal Tax Act"). The most impactful
3 portion of the Federal Tax Act was the reduction of the federal corporate tax
4 rate from 35% to 21%. This portion not only impacts the current tax rate for
5 corporations but also impacts the deferred income taxes recorded on the
6 Company's books prior to the tax law. The second significant component
7 of the Federal Tax Act is the fact that contributed plant is now treated as a
8 form of income and subject to the corporate income tax.

9 **Q. How does the Company propose to implement and address the**
10 **reduction of the federal income tax rate for corporations?**

11 A. CWSNC has adjusted the federal corporate income tax rate to 21%
12 in this rate case for revenue requirement calculations. Thus, the Company's
13 proposed rates in this proceeding reflect and incorporate the current federal
14 corporate income tax rate of 21%. Nevertheless, due to the fact that the
15 Federal Tax Act was a singular event occurring outside of the Company's
16 historic test period, CWSNC asserts that it should not be treated as a
17 stand-alone event since many changes occur over the course of time. For
18 that reason, CWSNC believes the Federal Tax Act should not automatically
19 trigger a refund to customers of revenues collected from January 1, 2018,
20 until a final order is received in this proceeding (the "Review Period").

21 Instead, CWSNC asserts that the Commission should consider all
22 items within the Company's revenue requirement and, if the actual return

1 earned by CWSNC during the Review Period exceeds the authorized return
2 considering the new 21% federal corporate tax rate, then, and only at that
3 point, should the Company's refund obligation be determined and ordered
4 by the Commission. Should a refund be required, the Company suggests
5 that such refund should be instituted as a negative surcharge to the
6 customers' bills over a 12-month period.

7 **Q. Please describe the impact to the deferred taxes on the**
8 **Company's books?**

9 A. Prior to January 1, 2018, deferred taxes were recorded on the
10 Company's books at the federal tax rate of 35% to normalize the impact of
11 future tax liability or benefit. Due to the reduction of the corporate income
12 tax rate to 21% on January 1, 2018, the tax liability is expected to be paid
13 back at the new lower federal income tax rate. Because of the lower
14 corporate tax rate, the deferred taxes have been adjusted on the books as
15 of December 31, 2017. The Company is proposing the following as how to
16 treat these excess deferred income taxes ("EDIT"). For EDIT protected
17 under the Internal Revenue Service ("IRS") normalization rules, CWSNC
18 proposes to apply the flow back in accordance with those rules. For EDIT
19 not protected by normalization rules, but related to property, plant, and
20 equipment ("PP&E"), the Company proposes flow back over a 20-year
21 period. Finally, for EDIT not protected by normalization rules nor related to
22 PP&E, the Company proposes flow back over a 5-year period.

1 **Q. Please explain the impact of the Federal Tax Cuts and Jobs Act**
2 **on contributed plant.**

3 A. Due to the Federal Tax Act, contributed plant ("CIAC") is now
4 considered income and is subject to the federal income tax. The Company
5 proposes that the tax associated with CIAC contributed after January 1,
6 2018 be included as rate base to be recovered through rates. CWSNC
7 takes this position for the following reasons. First, should the tax be passed
8 on to the developers that are contributing the plant, the Company believes
9 this will stifle future growth which, in turn, would have a negative impact on
10 current customers since this business operates with the majority of its costs
11 being fixed. If growth is stifled, it will eliminate the possible benefit of current
12 customers having the fixed costs spread across a larger customer base.
13 Secondly, the Company believes it is a benefit to its customers to have
14 developers contribute the plant since the contributed plant is not included in
15 rate base, thus lowering the Company's revenue requirement. Since
16 customers receive the benefit of the contributed plant, the Company
17 believes they should also bear the cost of the tax associated with the
18 contributed plant. Support for this recommended treatment is evident in the
19 Florida Public Service Commission's ruling in Docket No. 20180025-WS,
20 which was closed on April 6, 2018, in which they ordered the termination of
21 CIAC Gross-Up tariffs and in turn ruled that the income taxes on contributed
22 plant be placed into rate base by netting debit deferred taxes against credit

1 deferred taxes. Should the netting of deferred taxes result in a debit
2 deferred tax balance then this balance would be included in rate base.

3 **Q. Please explain the Company's proposed Consumption**
4 **Adjustment Mechanism ("CAM").**

5 A. In its Application, CWSNC requested authority to implement a
6 "consumption band" water and wastewater rate adjustment mechanism
7 within each of the Company's four Rate Divisions for non-purchased water
8 and wastewater commodity customers. The CAM is a mechanism that
9 balances the risk and impact on ratepayers and shareholders of levels of
10 water and wastewater consumption that are either significantly higher or
11 significantly lower than those levels of consumption that were used to set
12 the Company's base rates.

13 CWSNC proposed the CAM in the Application to protect both the
14 Company as well as its customers. The water and sewer industry operates
15 with a cost structure that is mostly fixed; however, the revenue is generated
16 in large portion by the variable consumption component of rates. Several
17 factors out of the control of the Company can impact the consumption
18 component of service revenues, including, but not limited to, conservation
19 efforts and weather. The proposed CAM helps to alleviate the negative
20 impact to the Company of declining consumption and protects customers
21 from over-collection in an increasing consumption scenario. The proposed
22 CAM would operate to review the annual consumption after the close of the

1 year. Should the actual consumption be more than 1% less than what was
2 used in designing rates within the rate case, then a surcharge would be
3 placed on the customers' bills for a period not to exceed 12 months to make
4 the Company whole. Conversely, should the actual consumption be more
5 than 1% higher than the consumption used to design rates within the rate
6 case, then a negative surcharge would be applied to the customers' bills for
7 a period not to exceed 12 months.

8 Accordingly, CWSNC requests that the Commission find and
9 conclude that it is in the public interest to approve implementation of the
10 Company's proposed water and wastewater CAM as part of its Rate Case
11 Order in this proceeding. CWSNC requests that the Commission approve
12 the water and wastewater CAM based on the NCUC's inherent regulatory
13 authority to do so in a rate case and recognizing that a rulemaking
14 proceeding would be required to develop and adopt the terms of such a
15 mechanism. Absent approval of a water and wastewater CAM, the
16 Company and its customers would continue to needlessly experience the
17 vicissitudes of significant variances in consumption over a significant
18 period. CWSNC respectfully submits that approval now of the opportunity
19 to true-up those variances, in a reasonable and prudent fashion, is lawful
20 and in the best interests of customers and the Company.

21 Alternatively, the Company respectfully requests that the
22 Commission find it reasonable, necessary, and appropriate to direct the

1 parties to develop a rate design that is based on a 60:40% ratio of base
2 facilities to volumetric charges for water. This would be a change from the
3 current ratio of approximately 50:50%, base to volumetric. The proposed
4 ratio is needed to more closely align cost recovery with actual costs
5 incurred. With the current ratio of 50:50% the recovery to actual costs
6 incurred is not properly aligned. Currently, the Company is experiencing an
7 actual cost ratio of approximately 80:20% fixed to variable, yet rates are
8 designed with a 50:50% ratio for fixed and variable. This misalignment
9 hinders the Company's ability to earn its fair and reasonable return should
10 consumption decline. The consumption trend across the industry is
11 currently one of decline due to conservation efforts, more efficient fixtures,
12 etc. The current rate design reduces the Company's ability to promote
13 conservation efforts without negatively impacting its ability to earn a fair and
14 reasonable return.

15 **Q. Is this testimony true and accurate to the best of your**
16 **knowledge, information, and belief?**

17 **A. Yes.**

18 **Q. Does this conclude your testimony?**

19 **A. Yes.**

1 BY MS. SANFORD:

2 Q. Do you have a summary?

3 A. Yes, I do.

4 Q. Please proceed.

5 A. Company witness Richard Linneman's direct
6 testimony provides a description of the services
7 provided by Carolina Water Service North Carolina; its
8 parent company, Utilities, Inc., or UI; and the benefit
9 to customers of the Company's relationship to its
10 parent UI. The testimony explains the drivers leading
11 the Company to file the current rate request, the
12 general structure of the filing's rate divisions and
13 tariff design, and the test year and pro forma
14 adjustments. Mr. Linneman describes the Company's
15 utilization of the WSIC/SSIC mechanisms since the last
16 rate case, the testimony summarizes the impacts to the
17 company of the federal Tax Cuts and Jobs Act, or Tax
18 Act, based on some of its particular provisions, such
19 as the lowering of the federal income tax rate,
20 remeasurement of deferred income taxes, and taxability
21 of CIAC, or CIAC. Mr. Linneman summarizes the
22 Company's proposed regulatory treatment for the changes
23 emanating from the Tax Act. He also explains the
24 company's proposed consumption adjustment mechanism, or

1 CAM, why it is needed, and its benefits to Company and
2 customers, and identifies an alternative rate design
3 proposal should a CAM not be implemented.

4 MS. SANFORD: The witness is available
5 for cross.

6 MR. ALLEN: No questions.

7 CROSS EXAMINATION BY MS. FORCE:

8 Q. Good afternoon.

9 A. Good afternoon.

10 Q. My name is Margaret Force, I'm with the
11 Attorney General's office. And you just made a
12 correction to your testimony that I'm not sure whether
13 it's better to address in rebuttal or indirect
14 testimony. But you're correcting your direct
15 testimony, and so I guess I'll ask the question.

16 On page 16, you said that the Company's
17 position is that there's -- my questions are all going
18 to be about the tax changes.

19 A. Sure.

20 Q. And perhaps I should save this until last,
21 but I'm afraid I'll forget the question by then.

22 I think you just said that there is no un --
23 it gets into some real lingo, but that you're not --
24 there's no unprotected assets, in terms of the excess

1 deferred income taxes, according to the Company?

2 A. So just to clarify -- and if you can see, on
3 page 16, there's two sentences there. The one I
4 mentioned that can be omitted, and then the following
5 sentence mentioned two different components of
6 unprotected EDIT. One is plant related and one is
7 non-plant related.

8 The plant related, in my review, and
9 discussing with Company personnel, the Company has no
10 plant-related piece to be considered in this
11 proceeding. The Company does have unprotected
12 non-plant component that may be considered in the
13 proceeding.

14 Q. Oh, okay. So looking ahead to Public Staff
15 witness Boswell's testimony, she identifies -- I don't
16 have the precise number, but something like a million
17 dollars of unprotected excess deferred income taxes.

18 Are you familiar with that?

19 A. I'm familiar with that. That would be that
20 non-plant unprotected piece.

21 Q. Okay. So you're not saying that there isn't
22 any?

23 A. No. I'm saying that -- yeah, there's two
24 components of unprotected classifications. And the

1 plant piece, we don't have any, and the non-plant piece
2 is what's represented, I believe, in Ms. Boswell's
3 exhibits.

4 Q. So as to the amount of unprotected, whether
5 it's plant or not, are you still saying 20 years for
6 return of that, or is there a different number that you
7 would use?

8 A. Mr. Linneman's testimony utilized a
9 five-year -- or proposed a five-year period for that
10 component, and I make -- you know, I further that
11 proposal or expand on that proposal, I guess, in my
12 rebuttal testimony.

13 Q. Okay. So and as far as that goes, are you --
14 well, we can come back to that in your rebuttal.

15 A. Sure.

16 Q. That's fine. I think I followed you.

17 And just in terms of running through the tax
18 impact, are you familiar with the Commission's order in
19 that generic docket M-100, Sub 148 that came out a
20 couple of weeks ago?

21 A. I believe I am, yes.

22 Q. As I understand that -- I should quote it,
23 but the tax issues will be addressed for Carolina Water
24 Service in this rate case; since this was pending, they

1 didn't go ahead and address them in that docket; does
2 that sound --

3 A. Yes. My understanding is the Company
4 requested to consolidate the tax proceeding -- the
5 considerations from the tax proceeding in its base rate
6 case since it was already pending, and that that was
7 approved.

8 Q. Okay. That's a better way of saying that.
9 You articulated it better. So I want to go through
10 five aspects of the tax change -- or tax changes and
11 how that shows up and see if I can figure out what the
12 numbers are that you're providing, or where the Company
13 stands on it.

14 As I understand, the rate case has already
15 addressed the change in the operating expenses
16 deduction for the difference in tax rate from
17 35 percent to 21 percent going forward in rates; is
18 that right?

19 A. Correct. The Company's proposed revenue
20 requirement includes the lower tax rate.

21 Q. Okay. And then when we're talking about that
22 lower tax rate, since January 1, 2018, when the tax
23 rate took effect, has Carolina Water been booking an
24 amount as a, what do you call it, a regulatory asset or

1 liability? I was corrected last time.

2 A. Yeah. The Company has an estimate -- an
3 estimate for the deferral per the Commission's original
4 order.

5 Q. About how much is that; do you know at this
6 point?

7 A. I believe it's expected to be about
8 \$1.26 million for the calendar year. I don't know
9 offhand what the number might be today.

10 Q. Okay. So if rates take effect before the end
11 of the year, it would be something less than that, I
12 guess?

13 A. Yeah. Depending on, you know, how the final
14 calculation looks, yes.

15 Q. Okay. And is it still the Company's -- your
16 direct testimony, I think, was arguing that that's
17 something that should not be returned to ratepayers; am
18 I right about that, or is that something you --

19 A. I believe that was -- Mr. Linneman made
20 comments along those lines regarding the -- I'm trying
21 to find the page. Bear with me. He called it -- he
22 referred to it as the review period. And the comment
23 there was that the Commission should consider all the
24 different components of the Company's revenue

1 requirement when assessing -- when making adjustments.
2 And since the Company is currently in a rate case,
3 we're, I guess, effectively doing that, in a sense. So
4 that was the thought process in the testimony.

5 Q. Okay. But as to that amount that's
6 accumulated by the time the new rates take effect, is
7 the Company proposing to keep that money or to return
8 it to ratepayers?

9 A. At this point, the Company -- and I get into
10 this a little bit more detail in my rebuttal testimony,
11 but in Mr. Linneman's testimony and the direct
12 testimony, the Company was proposing to look at the
13 return the Company was earning, and the revenue
14 requirement requested, and the final revenue
15 requirement, I believe, from this proceeding, and
16 compare that to the revenue level before the tax rate
17 change and make an assessment based on that.

18 Q. Do you want me to wait for your rebuttal
19 testimony to ask what the proposal is? I'm getting a
20 little confused about where the Company stands on this.
21 I can do that. All right. I'll hold off and ask that.

22 A. Uh-huh.

23 Q. You're going to come back for rebuttal?

24 A. Sure, yes.

1 Q. And as far as the -- maybe you've already
2 answered this question. Another area is the state
3 income tax, excess deferred income taxes.

4 As I understand it, that was something that
5 was addressed in the last general rate case for
6 Carolina Water. Am I getting beyond --

7 A. I -- I believe that's the case, yes.

8 Q. Okay. In the area of excess deferred income
9 taxes, the proposal for the protected amount of that,
10 that's something that the federal regulations -- tax
11 regulations identify, and you would be following the
12 number of years for return of that money that's set out
13 in the federal requirements; am I right about that?

14 A. Correct. The protected piece is subject to
15 normalization considerations, so there are specific
16 criteria or specific recommended calculation process,
17 and we're following the recommended process for our
18 situation.

19 Q. Okay. And as far as the unprotected, so the
20 part that's not dictated by the federal requirements, I
21 think we talked about that first, then, your proposal
22 is going to be addressed in your rebuttal testimony
23 too?

24 A. Yeah. So in the direct testimony, that was

1 the reference to a flow-back of five-year period. And
2 again, I kind of expanded and extrapolated that a
3 little bit more in the rebuttal testimony, that
4 proposal.

5 Q. Okay. I'll save my question on that for the
6 rebuttal testimony, then.

7 A. Okay.

8 Q. Can you help me -- I guess I don't have any
9 more questions. I appreciate it.

10 A. That's fine.

11 MS. HOLT: I reserve cross for rebuttal.

12 CHAIRMAN FINLEY: Okay. Redirect?

13 MS. SANFORD: No, sir, we don't have
14 any. But I do have a correction and an apology to
15 make. You were absolutely right. I had a page out
16 of place. That exhibit reference was Exhibit 1
17 with five appendices. So I just want to properly
18 label it. And we have no questions for redirect.

19 CHAIRMAN FINLEY: Questions by the
20 Commission? Commissioner Clodfelter?

21 EXAMINATION BY COMMISSIONER CLODFELTER:

22 Q. Mr. DeStefano, I have in front of me, and you
23 might want to do the same, Mr. Linneman's testimony,
24 direct testimony. And particularly on page 12, he

1 testifies -- and there's an earlier answer a couple of
2 pages back that relates to this also -- that one of the
3 drivers of this rate case application is about
4 \$6.4 million of post-test year additions to the plant
5 in service. That would be the test year ending last
6 year, so that would be during the current year.
7 \$6.4 million of additions to plant, either this year
8 are on the horizon. I'm just curious how that syncs
9 with the Company's WSIC/SSIC plan.

10 Are any of that \$6.4 million eligible for
11 WSIC/SSIC recovery? Are they included in your
12 three-year plan that was filed in May? Help me fit
13 those two -- help me fit that number to the WSIC/SSIC
14 plan. That's what I'm really asking, okay?

15 A. Okay. And just to clarify, and maybe for
16 future questions, I started two weeks ago, so my
17 knowledge on some of the prior filings is a little
18 limited. So I'll do my best to try to answer --

19 Q. That's fine.

20 A. -- that -- those kind of questions. And I
21 have not, in detail, reviewed the WSIC filing and the
22 three-year plan, so I don't know -- I haven't matched
23 the projects up with this list. But my general
24 understanding is that these projects were non-WSIC/SSIC

1 projects. And I can -- so subject to confirming that,
2 but my belief is that the vast majority of these
3 dollars would be non-WSIC/SSIC.

4 Q. They're not eligible?

5 A. Correct.

6 Q. For some reason or another, they're not
7 eligible?

8 A. That's my understanding.

9 Q. And I take it from your answer you're not
10 able to give me a detailed analysis of what they are.

11 Is that in the application? And if it is in
12 the application, can you refer me to the schedule or
13 the exhibit in the application where I can examine the
14 components that make up that \$6.4 million?

15 A. I'll have to refer back to the record. I
16 don't have that information in front of me.

17 Q. I tell you what I will do. I'll leave my
18 question. I appreciate your situation. I'm going to
19 leave it alone for now. I think your counsel knows
20 what I'm interested in finding out, and we'll find it
21 out either through another witness, or I'll ask you
22 again on rebuttal, or we can get a late-filed exhibit,
23 or some way just to, again, help me tie those two
24 things together.

1 A. Sure. I'll see what I can do during a break.

2 COMMISSIONER CLODFELTER: Thank you.

3 That's all I have.

4 CHAIRMAN FINLEY: Other questions by the
5 Commission?

6 (No response.)

7 CHAIRMAN FINLEY: All right. We will
8 admit into evidence Exhibit 1 consisting of five
9 appendices.

10 (Linneman Exhibit Number 1 was admitted
11 into evidence.)

12 CHAIRMAN FINLEY: And for the moment,
13 you may be excused, Mr. DeStefano.

14 THE WITNESS: Thank you.

15 CHAIRMAN FINLEY: Don't go too far,
16 though. Who's next?

17 MS. SANFORD: That concludes our direct
18 case.

19 CHAIRMAN FINLEY: What about -- okay.
20 That's the direct case. Who's next?

21 MR. LITTLE: The Public Staff will call
22 Gina Casselberry.

23 CHAIRMAN FINLEY: All right.

24 GINA CASSELBERRY,

1 having first been duly sworn, was examined

2 and testified as follows:

3 DIRECT EXAMINATION BY MR. LITTLE:

4 Q. Ms. Casselberry, will you state your name,
5 your business address, and position for the record?

6 A. My name is Gina Casselberry. My business
7 address is 430 North Salisbury Street, Raleigh,
8 North Carolina. I'm a utilities engineer with the
9 Public Staff water division.

10 Q. Did you cause to be prefiled in this docket,
11 on or about October 3rd, testimony in
12 question-and-answer form consisting of 21 pages and 23
13 exhibits?

14 A. I did.

15 Q. And on October 11, 20 -- of this year, did
16 you file supplemental testimony consisting of 18 pages?

17 A. I did.

18 Q. There weren't any exhibits attached to your
19 supplemental testimony, correct?

20 A. No.

21 Q. Do you have any additions or corrections to
22 your testimony?

23 A. No.

24 Q. And if I asked you the questions in your

1 direct -- in your testimony filed on October 3rd and on
2 October 11th, would your answers to those questions be
3 the same?

4 A. Yes.

5 MR. LITTLE: Your Honor, I request that
6 the testimony of Ms. Casselberry filed on
7 October 3rd consisting of 18 pages and 23 exhibits
8 be copied into the record as if given orally from
9 the stand, and the 23 exhibits premarked. And I
10 also request that the supplemental testimony filed
11 on October 11th consisting of 21 pages and no
12 exhibits be copied into the record as given orally
13 from the stand.

14 CHAIRMAN FINLEY: Okay. The direct
15 prefiled testimony of October 3, 2018, that's the
16 18 pages? How many pages is it?

17 THE WITNESS: 21 pages.

18 CHAIRMAN FINLEY: That's what I got. 21
19 pages is copied into the record as if given orally
20 from the stand. And the supplemental testimony of
21 October 11, 2018, of 18 pages is copied into the
22 record as if given orally from the stand. And the
23 23 exhibits of October 3rd is marked for
24 identification as premarked in the filing.

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MR. LITTLE: Thank you.
(Casselberry Exhibit Numbers 1 through
23 were marked for identification.)
(Whereupon, the prefiled direct
testimony and prefiled supplemental
testimony of Gina Casselberry was copied
into the record as if given orally from
the stand.)

0296

FILED

OCT 04 REC'D

Clerk's Office
N.C. Utilities Commission

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

**CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA
DOCKET NO. W-354, SUB 360**

**TESTIMONY OF GINA Y. CASSELBERRY
ON BEHALF OF THE PUBLIC STAFF**

OCTOBER 3, 2018

1 **Q. PLEASE STATE FOR THE RECORD YOUR NAME, BUSINESS**
2 **ADDRESS, AND PRESENT POSITION.**

3 **A.** My name is Gina Y. Casselberry. My business address is 430 North
4 Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am an
5 Advanced Utilities Engineer with the Public Staff's Water, Sewer and
6 Telephone Division.

7 **Q. BRIEFLY STATE YOUR QUALIFICATIONS AND EXPERIENCE**
8 **RELATING TO YOUR PRESENT POSITION WITH THE PUBLIC**
9 **STAFF.**

10 **A.** I graduated from Michigan Technology University receiving a Bachelor
11 of Science Degree in Civil Engineering. I have been with the Public
12 Staff's Water Division since February, 1992. I have presented
13 recommendations in rate increase proceedings, new franchise and
14 transfer proceedings, and other matters before the Commission for the
15 past twenty-six years, including Carolina Water Service, Inc. of North
16 Carolina's last five general rate cases.

1 **Q. WHAT ARE YOUR DUTIES IN YOUR PRESENT POSITION?**

2 A. My duties with the Public Staff are to monitor the operations of
3 regulated water and sewer utilities with regard to service and rates.
4 Included in these duties are field investigations to review, evaluate, and
5 recommend changes, when needed, in the design, construction, and
6 operations of regulated water and sewer utilities; presentation of expert
7 testimony in formal hearings; and presentation of information, data,
8 and recommendations to the Commission.

9 **Q. PLEASE DESCRIBE THE SCOPE OF YOUR INVESTIGATION IN**
10 **THIS CASE.**

11 A. On April 27, 2018, Carolina Water Service, Inc. of North Carolina
12 (CWSNC or Company) filed an application with the Commission to
13 increase its rates for providing water and sewer utility service in all of
14 its service areas in North Carolina, except the Corolla Light and
15 Monteray Shores Service Area (CL/MS). My investigation included
16 review of customer complaints, contact with the Division of Water
17 Resources (DWR), Water Quality and Public Water Supply, review of
18 company records, and analysis of revenues at existing and proposed
19 rates. I have also assisted Public Staff Accountant Lynn Feasel in
20 reviewing expenses and plant in service.

1 Q. BRIEFLY DESCRIBE THE COMPANY'S APPLICATION IN THIS
2 CASE.

3 A. CWSNC is proposing to increase the water and sewer rates for its
4 four rate divisions approved in the last general rate case: CWSNC
5 Uniform Water, CWSNC Uniform Sewer, Treasure Cove/Bradfield
6 Farms/Fairfield Harbour (TC/BF/FH) Water, and Bradfield
7 Farms/Fairfield Harbour (BF/FH) Sewer. CWSNC is also proposing
8 uniform water and sewer rates for Elk River Development. The test
9 year for this rate case is the 12-month period ending December 31,
10 2017.

11 In addition, CWSNC is requesting authority to implement a
12 "consumption band" water and wastewater rate adjustment
13 mechanism within each of the Company's rate divisions. CWSNC
14 contends that the proposed mechanism would balance the risk and
15 impact on ratepayers and shareholders of levels of water and
16 wastewater consumption that are either significantly higher or lower
17 than those levels of consumption that were used to set the rates.

18 Q. PLEASE DESCRIBE CWSNC'S SERVICE AREAS.

19 A. CWSNC operates 92 water utility systems and 39 sewer utility
20 systems, some of which serve multiple subdivisions. These water
21 and sewer utility systems are spread throughout North Carolina.
22 CWSNC serves primarily residential customers, but it also serves a
23 limited number of retail and commercial customers. Casselberry

1 Exhibit Nos. 1 and 2 list the water and sewer systems operated by
2 CWSNC. As of the twelve month period ending December 31, 2017,
3 CWSNC served 30,437 water customers and 20,233 wastewater
4 customers, including CL/MS. There are also 3,774 water availability
5 customers in the Carolina Forest, Woodrun, Linville Ridge, Sapphire
6 Valley, Connestee Falls, and Fairfield Harbour service areas, and
7 1,401 sewer availability customers in Sapphire Valley, Connestee
8 Falls, and Fairfield Harbour.

9 **Q. WHAT ARE CWSNC'S PRESENT AND PROPOSED RATES?**

10 A. CWSNC's present and proposed rates for water and sewer utility
11 service are shown in Casselberry Exhibit No. 3.

12 **Q. WHAT EFFECTS WOULD THE PROPOSED RATES HAVE ON**
13 **RESIDENTIAL CUSTOMERS?**

14 A. If the rates requested by CWSNC are approved, the average
15 residential bill (< 1" inch meter) would increase, based on the
16 average monthly usage in gallons shown, as follows:

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WATER OPERATIONS

		Average			
<u>Service Area</u>	<u>Usage</u>	<u>Existing</u>	<u>Proposed</u>	<u>Percentage</u>	
Uniform Flat Rate		\$47.45	\$54.67	15.22%	
Uniform Metered Rate	3,680	\$52.78	\$60.80	15.20%	
Carolina Trace	3,680	\$32.57	\$36.29	11.42%	
Carolina Forest	3,680	\$36.18	\$39.90	10.28%	
High Vista Estates	3,680	\$36.40	\$40.12	10.22%	
Riverpointe	3,680	\$47.62	\$51.34	7.81%	
Whispering Pines	3,680	\$32.65	\$36.37	11.39%	
White Oak/Lee Forest	3,680	\$32.83	\$36.55	11.33%	
Winston Plantation	3,680	\$32.83	\$36.55	11.33%	
Winston Pointe	3,680	\$32.83	\$36.55	11.33%	
Woodrun	3,680	\$36.18	\$39.90	10.28%	
Yorktown	3,680	\$42.88	\$46.60	8.68%	
Zemosa Acres	3,680	\$43.83	\$47.55	8.49%	
Elk River	3,680	\$35.31	\$60.80	72.19%	
Fairfield Harbour/ Treasure Cove/ Bradfield Farms	4,115	\$25.27	\$38.33	51.68%	

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SEWER OPERATIONS

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		Average			
<u>Service Area</u>	<u>Usage</u>	<u>Existing</u>	<u>Proposed</u>	<u>Percentage</u>	
Uniform Flat Rate		\$ 56.57	\$ 61.65	8.98%	
Uniform Metered Sewer	3,180	\$ 55.86	\$ 60.88	8.99%	
White Oak Plantation/Lee Forest/Winston Point	3,180	\$ 52.08	\$ 55.38	6.34%	
Kings Grant	3,180	\$ 48.83	\$ 52.13	6.76%	
College Park	3,180	\$ 54.88	\$ 58.18	6.01%	
Mt. Carmel	3,180	\$ 62.22	\$ 65.52	5.30%	
Fairfield Mountain	3,180	\$106.25	\$109.55	3.11%	
Elk River	3,180	\$ 32.92	\$ 60.88	84.93%	
Fairfield Harbour/ Bradfield Farms		\$41.40	\$ 50.81	22.73%	
Bulk Sewer		\$40.40	\$ 50.81	22.77%	
Hawthorne at the Green		\$40.40	\$ 49.81	23.29%	

1 Q. HAVE YOU REVIEWED THE OPERATIONAL STATUS OF THE
2 WATER AND SEWER SYSTEMS WITH THE WATER QUALITY
3 AND PUBLIC WATER SUPPLY SECTIONS OF THE DIVISION OF
4 WATER RESOURCES (NORTH CAROLINA DEPARTMENT OF
5 ENVIRONMENTAL QUALITY)?

6 A. Yes. I contacted all of the regional offices. None of the regional
7 office personnel expressed any major concerns with the systems
8 serving CWSNC customers or identified any major issues
9 concerning water quality.

10 Q. HAS THE PUBLIC STAFF RECEIVED ANY CUSTOMER
11 COMPLAINTS AS A RESULT OF THE CUSTOMER NOTICES IN
12 THIS PROCEEDING?

13 A. Yes. Customer hearings and complaints will be addressed in
14 Casselberry supplemental testimony.

15 Q. BRIEFLY EXPLAIN YOUR BILLING ANALYSIS.

16 A. I determined the end-of-period (EOP) customers by comparing the
17 EOP customers from Item 26 in the Company's Form W-1 filing with
18 the billing data for each service area, for each meter type, for the
19 twelve months ended December 31, 2017. I also compared total
20 consumption from Item-26 filed with the Company's application with
21 total consumption billed for each service area, for each meter type
22 for the twelve months ended December 31, 2017. The results of my
23 billing analysis are shown in Casselberry Exhibit Nos. 4, 5, 6, and 7.

1 Q. DID YOU CALCULATE CUSTOMER GROWTH FACTORS FOR
2 WATER AND SEWER SERVICE?

3 A. Yes. I computed a composite customer growth factor (CGF) for
4 residential customers with meters less than one inch for water and
5 sewer service. My calculations are shown in Casselberry Exhibit
6 Nos. 8 and 9.

7 Q. DID YOU MAKE AN ADJUSTMENT FOR CUSTOMER GROWTH?

8 A. Yes. I adjusted chemicals expense and sludge hauling for CWSNC
9 uniform sewer operations; and I adjusted sewer consumption at
10 present and proposed rates for customers with meters less than one
11 inch. Since CWSNC's uniform water service, TC/BF/FH water
12 service, and BF/FH sewer service all had CGF's less than one
13 percent, I did not make any adjustments to expenses or consumption
14 for the three of them.

15 Q. WHAT ARE THE ANNUAL SERVICE REVENUES UNDER
16 PRESENT AND PROPOSED RATES?

17 A. CWSNC's uniform water and sewer, TC/BF/FH's water, and BF/FH's
18 sewer present and proposed service revenues for the twelve months
19 ended December 31, 2017, are shown below:

SERVICE REVENUES

Water Utility Service:

	<u>Present</u>	<u>Proposed</u>
CWSNC Uniform	\$16,931,032	\$19,432,356
TC/BF/FH	\$ 1,043,134	\$ 1,560,921

Sewer Utility Service:

	<u>Present</u>	<u>Proposed</u>
CWSNC Uniform	\$12,685,778	\$13,696,365
BF/FH	\$ 1,769,755	\$ 2,163,100

For the calculations, see Casselberry Exhibit Nos. 10, 11, 12, 13, 14, 15, 16 and 17.

Q. HAVE YOU RECOMMENDED ANY ADJUSTMENTS TO EXPENSES RELATED TO WATER AND SEWER OPERATIONS?

A. Yes, I have provided Public Staff Accountant Feasel with recommendations for purchased water and sewer treatment, chemical expenses, testing expenses, and maintenance and repair expenses.

PURCHASED WATER

Based on my review of invoices, I determined the appropriate amount for purchased water is \$1,383,893. I made an upward adjustment of \$6,854 to account for a missing invoice associated with Woodrun Subdivision. I made an upward adjustment of \$9,115 for purchased water associated with Yorktown Subdivision; \$7,398 was reclassified from other maintenance expenses, and I added \$1,717

1 to account for a missing invoice. I removed \$39,913 for purchased
2 water associated with Riverbend Estates. CWSNC is the emergency
3 operator for Riverbend, and, therefore, the expense for purchased
4 water should not be included in CWSNC's general rate case. I also
5 reduced purchased water by \$77,016 for water losses greater than
6 20 percent. After my adjustments, I recommend \$1,282,933 as the
7 appropriate amount for purchased water. My adjustments are shown
8 in Casselberry Exhibit Nos. 18 and 19.

9 PURCHASED SEWER TREATMENT

10 Based on my review of invoices, I determined the appropriate
11 amount for purchased sewer treatment is \$680,168. I made an
12 upward adjustment of \$573 for the increased cost of sewer treatment
13 in The Ridges at Mountain Harbour Subdivision. After my
14 adjustment, I recommend \$680,742 as the appropriate amount for
15 purchased sewer treatment. My adjustments are shown in
16 Casselberry Exhibit No. 20.

17 CHEMICAL EXPENSES

18 **CWSNC Uniform Water and Sewer**

19 CWSNC expensed \$568,425 for chemicals associated with water
20 and sewer systems. The Company allocated chemical expenses
21 based on actual customers. The Company allocated \$356,307 to
22 water operations and \$212,118 to sewer operations. I have
23 reallocated chemical expenses based on the cost for chemicals

1 directly assigned to water operations and directly assigned to sewer
2 operations. I allocated \$224,688 for water operations and \$343,737
3 for sewer operations. I also adjusted chemical expenses for CWSNC
4 sewer operations to reflect customer growth, \$347,986 ($\$343,737 \times$
5 1.01236). I recommend chemical expenses of \$224,644 for water
6 operations and \$347,986 for sewer operations.

7 **TC/BF/FH Water and BF/FH Sewer**

8 CWSNC expensed \$59,785 for chemical expenses for water and
9 sewer operations. The Company allocated \$29,291 to water
10 operations and \$30,493 to sewer operations, based on actual
11 customers. I reallocated chemical expenses based on the cost for
12 chemicals directly assigned to water operations and directly
13 assigned to sewer operations. I recommend chemical expenses of
14 \$32,714 for water operations and \$27,071 for sewer operations.

15 **TESTING EXPENSES**

16 My recommendation for testing expenses reflects current testing
17 costs and tests, represented over the required frequency (monthly,
18 annually, and every three, six, or nine years) for each test under the
19 Safe Drinking Water Act and CWSNC's and BF/FH's wastewater
20 permits. I recommend testing expenses of \$169,389 for water
21 operations and \$278,954 for sewer operations for CWSNC systems;
22 and \$7,736 for water operations and \$21,922 for sewer operations

1 for TC/BF/FH systems. My calculations are shown in Casselberry
2 Exhibit Nos. 21 and 22.

3 MAINTENANCE AND REPAIR (M&R) EXPENSES

4 **CWSNC UNIFORM WATER**

5 I made the following adjustments to total M&R expenses for
6 operating water systems under CWSNC's uniform water rates.

7 Maintenance Supplies

8 CWSNC expensed \$38,200 for supplies associated with operating
9 its water systems. I removed \$4,357 for expenses associated with
10 Riverbend Estates Subdivision. CWSNC is the emergency operator
11 and expenses related to operating this system should not be included
12 in CWSNC's general rate case. I recommend \$33,843 as the
13 appropriate amount for maintenance supplies.

14 Maintenance Repair

15 CWSNC expensed \$235,195 for water maintenance and repairs. I
16 removed \$2,976 for expenses associated with Riverbend Estates. I
17 reclassified \$65,225 for the installation of a stainless steel well
18 screen in Belvedere Subdivision to plant in service. I recommend
19 \$166,994 as the appropriate amount for repair expenses.

20 Main Breaks

21 CWSNC expensed \$16,903 for repairing water mains. I removed
22 \$5,300 for expenses associated with Sapphire Valley which were

1 outside the 2017 test year. I recommend \$11,603 as the appropriate
2 amount for repairing water mains.

3 Permits and fees

4 CWSNC expensed \$65,500 for permits and fees associated with its
5 water systems. I reclassified \$3,140 to TC/BF/FH. I removed \$770
6 associated with Riverbend Estates, which was included twice. I also
7 removed \$910 for permits associated with Blue Ridge Manor, which
8 is not a system under CWSNC's uniform water rates. I recommend
9 \$60,680 as the appropriate amount for permits and fees for
10 CWSNC's water systems.

11 Other Maintenance Expenses

12 CWSNC expensed \$212,553 for other maintenance expenses
13 associated with water operations. I removed \$7,398 from other
14 maintenance expenses for purchased water associated with
15 Yorktown Subdivision, which was already included in purchased
16 water. I also removed \$2,815 for expenses associated with
17 Riverbend Estates. I removed \$1,330 for testing expenses which are
18 already included in testing, and I removed \$1,503 to correct an error
19 in recording an invoice. I recommend \$199,507 as the appropriate
20 amount for other maintenance expenses.

1 Uniforms

2 I removed \$68 for expenses associated with Riverbend Estates. I
3 recommend \$8,464 as the appropriate amount for uniform expenses.

4 **CWSNC UNIFORM SEWER.**

5 I made the following adjustments to total M&R expenses for
6 operating sewer systems under CWSNC's uniform sewer rates.

7 Permits and Fees

8 CWSNC expensed \$69,111 for permits and fees for its wastewater
9 treatment plants. I removed \$1,310 for Belvedere's annual permit
10 which was included twice. I recommend \$67,801 as the appropriate
11 amount for permits and fees.

12 Sewer Rodding Expenses

13 CWSNC expensed \$271,908 for maintaining its sewer mains. I
14 reclassified \$33,675 from sewer rodding expenses to sludge
15 removal. I recommend \$238,233 as the appropriate amount for
16 sewer rodding expenses.

17 Sludge Hauling

18 Sludge Hauling can vary from year to year depending on whether or
19 not a digester, clarifier, or equalization tank is pumped out in addition
20 to routine sludge hauling. In order to determine a representative
21 level for sludge hauling, I reviewed the Company's books and
22 records for 2015, 2016 and 2017, and calculated a three-year

1 average. For systems where a change in the process had occurred,
2 I adjusted the three-year average accordingly. My calculations are
3 shown in Casselberry Exhibit No. 23, including the \$33,675
4 reclassified from sewer rodding. I determined a representative level
5 of \$445,526 for sludge hauling. I also adjusted sludge hauling for
6 customer growth, \$445,526 ($\$445,526 \times 1.01236$). I recommend
7 \$451,033 as the appropriate level for hauling sludge.

8 **TC/BF/FH Water**

9 Permits and fees

10 As I previously testified. I reclassified \$3,140 for permits and fees
11 from CWSNC uniform water to permits and fees for BF/FH/TC. I
12 recommend \$3,140 as the appropriate level for permits and fees.

13 **BF/FH Sewer**

14 Sludge Hauling

15 Based on BF/FH's three-year average for hauling sludge, I
16 recommend \$64,774 as a representative level. My calculations are
17 shown in Casselberry Exhibit No. 23.

18 **Q. WHAT IS YOUR RECOMMENDATION CONCERNING METERED**
19 **SEWER RATES FOR SAPPHIRE VALLEY, BRADFIELD FARMS**
20 **AND FAIRFIELD HARBOUR?**

21 **A.** In CWSNC's last general rate case, Docket No. W-354, Sub 356, the
22 Public Staff recommended that CWSNC consider implementing

1 metered sewer rates for customers in its Sapphire Valley service
2 area, its Fairfield Harbour service area, and Bradfield Farms
3 Subdivision, and reserved the right to independently propose
4 metered sewer rates for these systems. As part of the settlement
5 agreement, CWSNC supported the recommendation and agreed to
6 undertake such consideration in conjunction with its next general rate
7 case. In this proceeding, CWSNC decided not to implement metered
8 sewer rates for customers in those service areas. The Public Staff
9 still maintains the position that in order to be fair to all uniform sewer
10 customers, sewer customers in Sapphire Valley, who also have
11 metered water, should be charged the same rate as all of the other
12 uniform metered sewer customers. Since sewer customers in
13 Sapphire Valley were incorporated into CWSNC's uniform sewer rate
14 division, they should be charged the same rate as other metered
15 sewer customers within that rate division. In addition, customers with
16 multiple units behind a master meter should be billed the same way
17 as the other master metered customers, which specifies that
18 commercial customers, including condominiums or other property
19 owner associations who bill their members directly, shall have a
20 separate account set up for each meter and each meter shall be
21 billed separately based on the size of the meter and usage
22 associated with the meter as stated in the schedule of rates for water
23 and sewer service.

1 It is also the Public Staff's position that since BF/FH are in their own
2 separate rate division and all of the customers in that rate division have
3 flat sewer rates and the Public Staff received only one complaint
4 concerning the flat rate, the Public Staff agrees with the Company that
5 the flat rate should remain for the BF/FH rate division. However, in the
6 future, should the rate division for BF/FH be eliminated and customers
7 are incorporated into the CWSNC uniform sewer rate division, they too
8 should be charged the metered sewer rate for customers who also
9 have metered water. It is my understanding that the Company agrees
10 with the Public Staff's recommendation that customers in Sapphire
11 Valley should be billed the uniform metered sewer rate and that
12 customers in BF/FH should be billed a flat sewer rate in this general
13 rate case.

14 **Q. WHAT IS YOUR RECOMMENDATION CONCERNING THE NEWLY**
15 **METERED RESIDENTIAL CUSTOMERS IN LINVILLE RIDGE**
16 **SUBDIVISION AND THE RIDGES AT MOUNTAIN HARBOUR?**

17 **A.** Since CWSNC's last general rate case, water meters have been
18 installed for all of the residential customers in Linville Ridge and The
19 Ridges at Mountain Harbour (The Ridges). Both systems are located
20 in the mountains and are considered seasonal mountain systems,
21 since many of the customers are only there during the summer months
22 and holidays. I have evaluated the consumption for the other seasonal
23 mountain systems and determined that the average residential

1 monthly consumption is 1,920 gallons. It is my understanding that
2 CWSNC has agreed that using 1,920 gallons as the estimated
3 consumption for calculated revenue is reasonable and acceptable for
4 Linville Ridge and The Ridges.

5 The Ridges is a purchased sewer system. CWSNC purchases
6 sewage treatment from Clay County Water and Sewer District. Clay
7 County charges a flat bi-monthly rate of \$1,621.24. Based on the
8 billing data provided, there are 44 single family equivalent (SFE's).
9 The base facility charge per SFE is \$18.42 (\$1621.24/2 months/44
10 SFE). I recommend the following base facility charges:

11	Residential customers	
12	< 1 inch meter	\$ 18.42
13	Commercial customers:	
14	< 1 inch meter	\$ 18.42
15	2 inch meter	\$147.36

16 It is my understanding that CWSNC agrees with the Public Staff's
17 recommended base facility charges for The Ridges.

18 **Q. WHAT IS THE PUBLIC STAFF'S POSITION ON CWSNC'S**
19 **PROPOSED CONSUMPTION ADJUSTMENT MECHANISM**
20 **(CAM)?**

21 **A.** It is the Public Staff's position that any new rate mechanism, such as
22 a CAM, should be authorized by the North Carolina General

1 Assembly before being considered by the Commission for
2 rulemaking. During the 2017-2018 Session, House Bill 752 could
3 have added language to N.C. Gen. Stat. § 62-133 authorizing
4 customer usage tracking and rate adjustments. However, on April
5 26, 2017, after passing the House on April 25, 2017, it was referred
6 to the Committee on Rules and Operations of the Senate and is still
7 in Committee. It is the Public Staff's opinion that the General
8 Assembly had an opportunity to authorize this mechanism during its
9 existing session, but chose not to, even though it made other
10 changes to Chapter 62 involving water and wastewater utilities. In
11 light of the General Assembly's decision to not authorize a CAM, the
12 Public Staff does not believe the Commission should intervene and
13 create the CAM requested by CWSNC.

14 In addition, the Public Staff has serious concerns about the 1%
15 threshold proposed by CWSNC. For example, if the average usage
16 is 5,000 gallons per month then the mechanism would be triggered
17 by a variance of 50 gallons per month, which is approximately 50
18 seconds per day longer in the shower (assuming a low flow
19 showerhead of 2.0 gallons per minute) or approximately one
20 additional flush per day (assuming 1.6 gallons per flush under the
21 federal plumbing standards for new toilets). An alternative rate
22 mechanism should not be triggered by such an insignificant deviation
23 in normal customer usage.

1 Additionally, as described in Mr. Lineman's direct testimony,
2 utilization of actual consumption does not account for customer
3 growth. In a year of decreased usage, customer growth could offset
4 the lower usage revenues. In a year of increased usage, growth
5 would contribute to the Company potentially earning above and
6 beyond the Commission's approved rate of return. The proposed
7 CAM would allow CWSNC to increase rates for decreased usage
8 even if customer growth caused the Company to otherwise collect its
9 full revenue requirement. For example, in this rate case (2017)
10 customer growth was 0.938 percent for CWSNC's uniform water rate
11 division and 0.466 for the TC/BF/FH rate division. Typically in the
12 past, I did not adjust consumption or expenses related to
13 consumption for customer growth less than one percent. However,
14 any mechanism that benefits the Company by ensuring it collects its
15 full revenue requirement should also benefit customers by crediting
16 customers with revenue resulting from increased usage due to
17 customer growth.

18 **Q. WHAT IS THE PUBLIC STAFF'S POSITION CONCERNING**
19 **CWSNC'S ALTERNATIVE SHOULD THE COMMISSION DENY**
20 **THE COMPANY'S REQUEST TO IMPLEMENT A CAM?**

21 **A. Mr. Linneman testified that as an alternative to a CAM, CWSNC's is**
22 **requesting that the Commission direct the parties to develop a rate**
23 **design that is based on a 60:40 percent ratio of base charge to usage**

1 charge for water versus the current ratio of approximately 50:50
2 percent, which is accurate. Based on EOP residential customers for
3 uniform rates, with meters less than one inch, and actual
4 consumption for the test year period ending December 31, 2017, (not
5 include Elk River nor purchased water customers) the current ratio is
6 47:53 base charge to usage charge. Mr. Linneman further stated
7 that the actual cost ratio is approximately 80:20 fixed costs to
8 variable costs and that the current rate design reduces the
9 Company's ability to promote conservation without negatively
10 impacting its ability to earn a fair and reasonable rate of return.

11 The Public Staff opposes using CWSNC's alternative to a CAM in
12 this proceeding. It is the Public Staff's opinion that CWSNC should
13 have made it known to the Commission, the Public Staff, and its
14 customers that they intended to substitute a CAM with an alternate
15 rate design, should the Commission deny their request. As a result,
16 the Company did not provide the Public Staff sufficient time to further
17 investigate the matter nor were customers notified that an alternate
18 rate design was being considered and what effect the new rate
19 design would have on the proposed rates particularly the base
20 charge, which has been a contentious issue at customer hearings.
21 Therefore, the Public Staff recommends that the ratio remain in the
22 range of 45:55 base charge to usage charge, which is consistent with
23 what has been recommended in the past.

1 Q. WHAT IS YOUR RECOMMENDATION CONCERNING CWSNC'S
2 PROPOSED RATES?

3 A. The Public Staff's will file supplemental testimony in regard to service
4 revenues and its recommended rates.

5 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

6 A. Yes.

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-354, SUB 360

In the Matter of
Application by Carolina Water Service,)
Inc. of NC for Authority to Adjust and)
Increase Rates for Water and Sewer)
Utility Service in All Service Areas in)
North Carolina)
)

Supplemental
TESTIMONY OF
GINA Y. CASSELBERRY
PUBLIC STAFF – NORTH
CAROLINA UTILITIES
COMMISSION

FILED

OCT 12 REC'D

Clerk's Office
N.C. Utilities Commission

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA
DOCKET NO. W-354, SUB 360

SUPPLEMENTAL TESTIMONY OF GINA Y. CASSELBERRY
ON BEHALF OF THE PUBLIC STAFF

OCTOBER 11, 2018

1 Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL
2 TESTIMONY?

3 A. The purpose of my supplemental testimony is to discuss customer
4 complaints and witness testimony at public hearings.

5 Q. HAS THE PUBLIC STAFF RECEIVED ANY CUSTOMER
6 COMPLAINTS AS A RESULT OF THE CUSTOMER NOTICES IN
7 THIS PROCEEDING?

8 A. Yes. The Public Staff reviewed approximately 64 position
9 statements from Carolina Water Service, Inc. of North Carolina
10 (CWSNC) customers. The service areas represented are Abington
11 (1), Amber Acres North (1) and petition with 27 signatures, Bradfield
12 Farms (3) including a resolution objecting to the rate increase from
13 the Bradfield Farms Homeowners Association, Board of Directors
14 and petition with approximately 263 signatures, Brandywine Bay (9),
15 Carolina Pines (1), Carolina Trace (13), Connetsee Falls (3), Elk
16 River (1), Fairfield Harbour (12), Fairfield Mountain (2), Linville Ridge

1 (1), Nags Head (1), Queens Harbor (1) including a petition with
2 approximately 100 signatures, The Ridges at Mountain Harbor (4),
3 The Villages at Sugar Mountain (1), Wood Haven/Pleasant Hill (2)
4 and unspecified service areas (8). All of the customers objected to
5 the magnitude of the increase. Their primary concerns were the high
6 rate of return, the increase in the rates compared to inflation, the
7 impact of the new federal tax act and their rates compared to local
8 municipalities. Many stated that the company provided no
9 justification for the rate increase and questioned the high base facility
10 charge. Customers in Linville Ridge and The Ridges at Mountain
11 Harbor (The Ridges) requested metered rates now that all of the
12 customers have meters. Most of the customers in Carolina Trace
13 complained that only the base charge for water was increasing.
14 Customers in Abington, Fairfield Harbor, Brandywine Bay, and
15 Queens Harbor complained as to the hardness of the water and
16 discoloration. Hearings were held across the state for customer
17 testimony, which voiced similar complaints.

18 **General Concerns**

19 **Rate of Return:**

20 The rate of return is addressed in Public Staff Economist, Bob
21 Hinton's testimony.

1 Annual Inflation

2 The revenue requirement used in calculate rates is based on the
3 Public Staff's audit of actual expenses. See Public Staff Accountant,
4 Lynn Feasel's testimony.

5 Federal Tax Act

6 The impact of new law concerning state and federal taxes is
7 discussed in Public Staff Accountant Michelle Boswell's testimony.

8 Comparison between Private Utilities and Municipalities:

9 It is inappropriate to compare the rates of private Commission-
10 regulated utilities like CWSNC to municipalities or county systems for
11 the following reasons:

- 12 1. Economies of Scale: The operational costs per customer are
13 lower for customers of municipalities because of economies
14 of scale, as there are tens of thousands of customers versus
15 thousands of customers among whom the costs are divided.
16 CWSNC serves approximately 30,000 water customers and
17 20,000 sewer customers; and operates 92 water systems and
18 38 sewer systems across 38 counties spanning from the
19 mountains to the coast. Charlotte Water, for example, is a
20 regional supplier of drinking water and has over 834,000
21 customers in one county, a much larger customer base from
22 which to recover its fixed costs.

- 1 2. Water Source: The majority of CWSNC's water production is
2 through a series of wells, utilizing ground water. The majority
3 of municipalities, at least in North Carolina, utilize surface
4 water. For example, the City of Sanford has an abundant
5 water supply from a single surface water source, the Cape
6 Fear River. The Water Treatment Plant is located in close
7 proximity to the headwaters of the Cape Fear River.
8 Depending on the size of the service area, CWSNC may have
9 dozens of wells throughout the service area. A single well
10 might pump 20 gallons per minute (28,800 gallons per day),
11 whereas the treatment facility in Sanford produces on
12 average seven million gallons per day. The water source is
13 different. The economy of scale is overwhelming. The type of
14 treatment, equipment, personnel and operating expenses are
15 different.
- 16 3. Regulation: Private utilities are regulated by the State of North
17 Carolina. The general statutes allow a utility the right to
18 recover its operational expenses and a reasonable rate of
19 return. Municipal or county systems are not regulated by the
20 Utilities Commission and may subsidize the operating
21 expenses of their utility systems through taxation.

- 1 4. Capital projects: Private utilities fund capital projects through
2 private investors or loans. Municipalities and county systems
3 may qualify for low interest tax free bonds and other loans to
4 fund capital projects.
- 5 5. Rate of Return: Under the general statutes, private utilities
6 have the right to earn a rate of return on their investment and
7 to recover their operating expenses.

8 Justification for the Rate Increase:

9 One of the main reasons cited by CWSNC for the rate increase is to
10 recover its investment for capital improvements. Within the last
11 six months, CWSNC spent approximately \$4,472,131 on capital
12 projects. In August and September, I inspected capital projects to
13 insure that they were complete and in service, which is discussed in
14 more detail under customer hearings.

15 Base Facility Charge:

16 As I stated in my testimony, filed on October 3, 2018, the Public Staff
17 opposes the Company's alternative rate design, which would
18 increase the ratio, base charge to usage charge, from 47:53 to 60:40.
19 It is the Public Staff's opinion that higher base charges do not
20 encourage conservation. The Public Staff recommended that the
21 ratio remain in the range of 45:55 base charge to usage charge,
22 which is consistent with what has been recommended in the past.

1 Metered Rates for Linville Ridge and The Ridges:

2 As I stated in my testimony, filed on October 3, 2018, the Public Staff
3 is recommending uniform metered water rates for Linville Ridge
4 and The Ridges. The Public Staff is also recommending purchased
5 sewer rates for The Ridges. It is the Public Staff's understanding that
6 the Company agrees with the Public Staff's recommendation.

7 Carolina Trace:

8 Carolina Trace is a purchased water system. The supplier is the City
9 of Stanford (City). The usage rate is established based on the
10 supplier's rate. The existing usage charge is \$2.21 per 1,000 gallons.
11 Under the general statutes, utility companies may petition the
12 Commission for a pass through outside of a general rate case. This
13 allows a company to directly pass on to customers the increased cost
14 of purchased water. In this proceeding, there is no change in the
15 City's usage charge, and therefore, CWSNC is proposing the same
16 usage charge as the existing usage rate. However, since Carolina
17 Trace is in the uniform water rate division, should the base charge
18 for uniform rates increase, the new rate would apply to Carolina
19 Trace as well.

20 Service and Water Quality Complaints

21 Service and water quality issues are addressed with customer
22 hearings.

Customer Hearings

New Bern Hearing

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Ten customers testified at the hearing in New Bern: Ted Warnock, Simon Lock, Diana Viglianese, Jim Brown, Mike Shannon, Ralph Tridico, Irvin Joffee, Michael Kaplan, John Gumbel and Benny Thompson. The subdivisions represented included Fairfield Harbour (8), Brandywine Bay (1) and Carolina Pines (1). All of the customers at the hearing opposed the magnitude of the increase. Many filed information regarding rate comparatives to municipalities, opposed the high rate of return, the increase compared to inflation and questioned the need for an increase considering the new federal tax act, which I addressed in the previous section. Customers were also concerned with the ever increasing base facility charge. Several customers indicated that CWSNC provided no justification for the increase. Customers in Fairfield Harbour and Brandywine Bay were dissatisfied with the quality of the water. They stated that the water was too hard and as a result corroded their appliances and left stains in their sinks and toilet bowls.

On August 28, 2018, I inspected capital projects for the Fairfield Harbour service area. CWSNC spent approximately \$376,909 to replace three lift stations. The lift stations consist of a wet well, a pit valve well, control panel and stand by generator. All three lift stations

1 were in service and operating properly. On August 29, 2018, I also
2 inspected the water system at Brandywine Bay and the wastewater
3 treatment plants (WWTPs) at Brandywine Bay/Spooner Creek and
4 Hestron Park. The water system was in good condition and the
5 chemical feed pumps were operating properly. The WWTPs at
6 Brandywine Bay and Hestron Park are old but were operating
7 efficiently. There was no odor emanating from either plant and the
8 effluent was very clear. The retention lagoons at Brandywine
9 Bay had plenty of free board for extra storage. I was informed by
10 CWSNC's that in the near future, CWSNC intends to replace the
11 WWTP at Brandywine Bay, reroute sewage from Hestron Park to the
12 new plant, and then remove the plant at Hestron Park.

13 On September 18, 2018, CWSNC filed its Report on Customer
14 Comments from Public Hearings in New Bern and Wilmington.
15 In regard to a central treatment system for hardness in Fairfield
16 Harbour, in Docket W-778, Sub 88, prior to the merger with CWSNC,
17 the Public Staff requested that CWS Systems, Inc. (CWSS)
18 investigate the cost to install a central treatment system for hardness
19 for the Fairfield Harbour service area. On April 28, 2011, CWSS filed
20 its report with the Commission. Based on the report submitted, the
21 estimated cost was \$912,000, not including engineering or required
22 permits. To the best of my recollection, there were two major factors

1 the Fairfield Harbour Property Owners Association (FHPOA) Board
2 was considering: 1) most of the residential customers already had
3 individual water softeners and 2) how would the cost of the system
4 impacted rates. However, on June 22, 2011, the Board filed a letter
5 with the Commission stating that due to the upcoming Board election,
6 the Board decided to defer their decision to a later date. For the two
7 reasons stated above, the Public Staff does not recommend a central
8 treatment system for hardness at this time. In regard to the ever
9 increasing base charge, the Public Staff's position was stated in the
10 above section.

11 Wilmington Hearing

12 One customers testified at the hearing in Wilmington, David
13 Holsinger, representing Belvedere Subdivision. Mr. Holsinger
14 expressed his surprise that CWSNC filed another rate increase so
15 soon after the last one. He stated that when the system was flushed
16 it left his clothing dingy. CWSNC stated that it has a flushing program
17 in place and are looking for ways to improve it. I have no further
18 recommendations.

19 Charlotte Hearing

20 Ten customers testified at the hearing in Charlotte: Patricia
21 Marquardt, William Colyer, Noline Howell, Griffin Rice, Margaret
22 Quan, Deborah J. Atkinson, Nicholas Stephen Kirkley,

1 Tom Moody, Karen Cynowa and Mike Tepedino. The subdivisions
2 represented included Hemby Acres (1), Bradfield Farms (7) and
3 Yachtsman/Queens Harbor (2). All of the customers at the hearing
4 opposed the magnitude of the increase. Their primary concerns
5 were the increase in rates compared to inflation, the high rate of
6 return, rate reduction due to the new federal tax act, rates compared
7 to other municipalities, and that there was no justification for the
8 increase. In Yachtmans/Queens Harbour, Mr. Moody complained of
9 hard water and that when his water softener broke it left calcium rings
10 on his fixture and in his toilet bowl; and Ms. Cynowa suggested the
11 water contained carcinogens. Ms. Marquardt opposed the flat sewer
12 rate in Hemby Acres.

13 The rate of return, inflation, the new federal tax act, and the
14 comparison to other municipalities is addressed in general concerns.
15 In regard to Hemby Acres, Union County provides water service to
16 customers in Hemby Acres. CWSNC has been unable to negotiate
17 an agreement with the County to acquire metered readings. As a
18 result, CWSNC continues to charge a flat sewer rate.

19 Treasure Cove, Bradfield Farms and Fairfield Harbour (TC/BF/FH)
20 are in the same rate division for water and Bradfield Farms and
21 Fairfield Harbour (BF/FH) are in the same rate division for sewer. As
22 I have previously testified, CWSNC spent approximately \$376,909 to

1 replace three lift stations in Fairfield Harbour. The improvements
 2 were not necessarily in Bradfield Farms but are included in rate base
 3 for the BF/FH sewer rate division. The same would apply for Fairfield
 4 Harbour had the improvements been done in Bradfield Farms.
 5 A greater number of customer lowers the cost of capital
 6 improvements by spreading the cost over a larger customer base.
 7 This is referred to as "economy of scale". Queens Harbor and
 8 Hemby Acres are systems within CWSNC's uniform water and sewer
 9 rate divisions. In the last six months, CWSNC spent approximately
 10 \$154,330 on capital projects in the Charlotte area; primarily
 11 stationary generators, replacing a hydro-tank and purchasing a
 12 portable generator. The projects were not specifically in Queens
 13 Harbor or Hemby Acres but the same theory applies. In addition, the
 14 system would have access to a portable generator if necessary.

15 On October, 4, 2018, CWSNC filed its Report on Customer
 16 Comments from Public Hearing in Charlotte, North Carolina, Held on
 17 September 19, 2018. I have read the report and I do not have any
 18 additional comments or recommendations.

19 Boone Hearing

20 Four customers testified at the hearing in Boone: Harvey Bauman,
 21 Sid Eibl Von Rospeunt, George Hall and Tim Presnell. The
 22 subdivisions represented included Elk River (2), Hounds Ear (1) and

1 Ski Mountain (1). All of the customers at the hearing opposed the
2 magnitude of the increase. Their primary concerns were that there
3 was no justification for the increase and the ever increasing base
4 facility charge, especially since most of them were season
5 customers.

6 On September 25, 2018, I inspected Elk River, Sugar Mountain and
7 Hounds Ear. CWSNC spent approximately \$153,240 on capital
8 projects in Elk River. The project consists of installing dual stainless
9 steel air-headers, blowers, concrete pads, miscellaneous plumbing
10 and installing a new standby generator with control panel.
11 The project was complete and operational during my inspection.
12 CWSNC spent approximately \$127,186 on an infiltration problem in
13 Sugar Mountain. The project consist of replacing approximately
14 1,000 feet of sewer main, five manholes and repaving the road.
15 CWSNC is also in the process of relocating a water main in Hounds
16 Ear at the request of the NC Department of Transportation. The
17 project will not be completed in time to be included in this general
18 rate case. Earlier in the year, CWSNC did work on the splitter box
19 at the WWTP and added a standard by generator and controls.

20 In reference to the base charge and seasonal customers, in order for
21 customers to have water and sewer service available year round, the
22 water and sewer facility must remain operational year round. The

1 base charge covers those costs to keep the systems operating such
2 as testing, purchased power, maintenance and repairs, chemicals,
3 sludge removal, salaries and other general fixed costs.

4 Asheville Hearing

5 Five customers testified at the hearing in Asheville: Jack Zinselmeier,
6 Phil Reitano, Gerard Worster, Chuck Van Rens, and Connie Brown.
7 The subdivisions represented included Fairfield Mountain/Apple
8 Valley (2), Mt. Carmel (2) and Woodhaven (1). All of the customers
9 at the hearing opposed the magnitude of the increase. Their primary
10 concerns were the rate of return, the rate of inflation in comparison to
11 the increase in the rates, and that there were no improvements to
12 justify the increase. Mr. Worster opposed the magnitude of the
13 collection charge for Mt. Carmel, as well as Ms. Brown. There were
14 two service complaints, a patch in Fairfield Mountain, which took too
15 long to pave; and a lift station in Mt. Carmel, which required pumping
16 out every Saturday.

17 The rate of return is addressed in Public Staff Economist, Bob Hinton
18 testimony. The patch was the same patch as in the last general rate
19 case and was addressed in that proceeding. Ms. Brown spoke with
20 Company personal after the hearing and the problem with the lift
21 station will be addressed.

1 On September 26, 2018, I inspected Mt. Carmel and High Vista.
2 I inspected Sapphire Valley and Connestee Falls on September 27,
3 2018, and on September 28, 2018, I inspected Fairfield
4 Mountain/Apple Valley. The purpose of my inspection was to verify
5 that the projects were complete and in service. During the last six
6 months, CWSNC spent approximately \$1,858,234 on capital projects
7 in the Asheville area. The projects are listed below:

8 **Mt. Carmel** \$174,135 Complete and in service
9 Rehabilitation of an existing lift station, to include replacing
10 approximately 200 feet of sewer main, three manholes, repaving and
11 replacing a portion of an existing concrete driveway.

12 **High Vista** \$402,205 Complete and in service
13 Replaced approximately 3,200 feet of 6-inch ductile water main and
14 repaving the roadway.

15 **Sapphire Valley** Pending 90 percent complete
16 Installed a Booster Pack with variable frequency drive (VFD) pumps.
17 Installed approximately 2,000 feet of 6-inch water main, which
18 interconnects the water system into one continuous loop, increasing
19 the efficiency of the system and providing continuous pressure
20 throughout the loop.

1 **Sapphire Valley** Follow-up from last year.
2 Replaced a booster station with new VFD pumps. Rehabilitated 5
3 well houses and replaced four water mains traversing a stream,
4 preventing infiltration and damage in the event of a flash flood.

5 **Connestee Falls** \$879,411 Complete and in service
6 Replaced three lift stations with new wet wells, new valve pit wells,
7 new control panels, an emergency bypass and standby generator
8 capability.

9 In addition, CWSNC has begun the construction of Connestee's new
10 wastewater treatment facility. The facility will include a 360,000
11 gallon per day (gpd) plant treatment plant, treatment building, blower
12 building, chemical storage building and office.

13 **Fairfield Mountain** \$402,484 Complete and in service
14 The installation of a Radium Ion Exchange Treatment System, to
15 include two ion exchange water softeners, a 25,000 gallon tank for
16 backwash, pumps and miscellaneous plumbing. CWSNC also
17 replaced a hydro tank with two flex-lite pressure tanks.

18 **Raleigh Hearing**

19 Five customers testified at the hearing in Raleigh: William S. Glance,
20 Vince Roy, Judith Bassett, Vicki Smith and Ben Farmer. The
21 subdivisions represented included Carolina Trace (2), Amber Acres
22 (2) and Jordan Woods (1). All of the customers at the hearing

1 last general rate case and is overall good. It is also the Public Staff's
2 opinion that water quality meets the standards set forth by the Safe
3 Drinking Water Act and is satisfactory.

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

5 **A. Yes.**

1 BY MR. LITTLE:

2 Q. Ms. Casselberry, you do have a summary of
3 your testimony?

4 A. I do.

5 On April 27, 2018, Carolina Water Service,
6 Inc. of North Carolina filed an application with the
7 Commission to increase its rates for providing water
8 and sewer utility service in all its service areas in
9 North Carolina except Corolla Light and Monteray Shores
10 service area. My investigation included review of
11 customer complaints, contact with the Division of Water
12 Resources, Water Quality and Public Water Supply,
13 review of Company records, and an analysis of revenues
14 at existing and proposed rates. I have also assisted
15 Public Staff accountant Lynn Feasel in reviewing
16 expenses and plant in service.

17 CWS is proposing to increase the water and
18 sewer rates for all of its four rate divisions approved
19 in the last general rate case. That would be Uniform
20 Water, CWSNC Uniform Sewer, Treasure Cove/Bradfield
21 Farms/Fairfield Harbor Water, and Bradfield
22 Farms/Fairfield Harbor Sewer. CWSNC is also proposing
23 uniform water and sewer rates for Elk River
24 development. The test year for this rate case is the

1 12-month period ending December 31, 2017.

2 In addition, CWSNC is requesting authority to
3 implement a consumption band water and wastewater rate
4 adjustment mechanism within each of the Company's rate
5 divisions. CWSNC contends that the proposed mechanism
6 would balance the risk and the impact on ratepayers and
7 shareholders for levels of water and wastewater
8 consumption that are either significantly higher or
9 lower than those levels of consumption that were used
10 to set the rates.

11 I provided Public Staff accountant Feasel
12 with recommendations for purchase water and sewer
13 treatment, chemical expenses, testing expenses, and
14 maintenance and repair expenses. The Public Staff is
15 recommending uniform metered sewer rates for Fairfield
16 Sapphire Valley, uniform metered water rates for
17 Linville Ridge, and The Ridges at Mountain Harbor, and
18 purchase sewer rates for The Ridges.

19 It's my understanding that CWSNC agrees with
20 the Public Staff's recommendations for Fairfield
21 Sapphire Valley, Linville Ridge, and The Ridges. The
22 Public Staff also was recommending metered uniform
23 rates for water and sewer for Elk River development.

24 In regards to CAM, it is the Public Staff's

1 position that any new rate mechanism, such as CAM,
2 should be authorized by the North Carolina General
3 Assembly before being considered by the Commission for
4 rulemaking. The Public Staff opposes CWSNC's
5 alternative to CAM in this proceeding and recommends
6 that the ratio remain in the range of 45, 55 base
7 charge to UC charge, which is consistent with what has
8 been recommended in the past.

9 This concludes my summary.

10 Q. Is that the end of your testimony?

11 A. My summary, yes.

12 MR. LITTLE: The witness is available
13 for cross.

14 CHAIRMAN FINLEY: Any cross?

15 MR. ALLEN: No questions.

16 MS. FORCE: No questions.

17 CHAIRMAN FINLEY: Cross by the Company?

18 MS. SANFORD: Yes, sir.

19 CROSS EXAMINATION BY MS. SANFORD:

20 Q. Just a few questions, Ms. Casselberry. And I
21 might skip around a little bit. I'll direct you to the
22 pages I'm looking at. Let's talk about the CAM for a
23 minute, and that may be just about all we talk about.

24 I understand you to say, expressing the

1 Public Staff's position, that you think that the legal
2 authority should be the product of a decision by the
3 General Assembly for authorization of a CAM; is that
4 correct?

5 A. Yes.

6 Q. Can you say if there -- if the issue of the
7 legal authority was put aside -- we just assume for
8 purposes of my question that the Commission does have
9 authority or is granted authority -- would the Public
10 Staff support an consumption adjustment mechanism under
11 those circumstances?

12 A. I do not believe the Public Staff would
13 support a mechanism of that nature.

14 Q. So it's beyond the legal authority, it's also
15 just the fundamentals of the mechanism?

16 A. I believe it's the Public Staff's position
17 that we don't support CAM.

18 Q. Okay. The Company has asked, as an
19 alternative to the CAM, for a rate design that is, I
20 think, 60/40 base facilities to volumetric; is that
21 correct?

22 A. Yes.

23 Q. Can you tell us, what is the basis of the
24 Public Staff's opposition to that? Particularly, if

1 you have discounted the CAM as an option for dealing
2 with declining consumption.

3 A. We feel that the higher the consumption rate
4 is, the more it will help with conservation. In
5 addition, that the base charges are getting extremely
6 high, and it's becoming difficult for Carolina
7 customers to pay that base charge, as we heard in
8 testimony across the state. And we feel that
9 40 percent base is a reasonable amount to recover their
10 fixed cost and the 60 percent would be applied to the
11 usage.

12 Q. Let's talk about the CAM and growth, customer
13 growth -- the relationship between customer growth and
14 this consumption adjustment mechanism.

15 You state, on page 19, lines 3 and 4, in a
16 year of decreased usage, customer growth could offset
17 the lower usage revenues; is that right?

18 A. What line?

19 Q. Lines 3 and 4, I believe. Yes. Top of page
20 19.

21 A. Correct.

22 Q. Okay. But wouldn't it be -- if there were
23 growth, wouldn't that mean that, in a year of decrease
24 usage -- I mean -- I'm sorry.

1 Wouldn't that mean that the surcharge under
2 the CAM would be muted or mitigated in that existing
3 customers would receive a smaller increase than they
4 would if there were not growth?

5 A. If the consumption decreases, then -- would
6 you repeat your question?

7 Q. I will see if I can.

8 A. Double-negative.

9 Q. Right. Right. I'm trying to understand the
10 objection to -- and trying to explore your
11 understanding of how it would work.

12 If -- you indicated, if there's decreased
13 usage, then customer growth could offset the lower
14 usage revenues, but wouldn't the impact of customer
15 growth be simply to reduce the amount of the
16 consumption adjustment mechanism, because it's spread
17 out over more customers?

18 A. Well, it would matter how much the increase
19 was and how much the consumption was, and then you
20 would have to match that up. So, in some scenarios, it
21 might balance out. In other scenarios, the customer
22 growth might not offset the decrease in consumption, or
23 it might increase the increase in consumption. So
24 you'd have to evaluate it year by year to see, you

1 know, what the growth is compared to what the
2 consumption is.

3 So there's a number of different scenarios
4 that you may have, depending on the growth and
5 depending on whether or not consumption is increasing
6 or decreasing, or whether or not the growth is
7 decreasing. So each single year would have to be
8 evaluated for both components to see how that balances
9 out.

10 Q. And so we've had a lot of conversation about
11 the case that preceded this one. Some of us have been
12 in this room a lot lately talking about some of these
13 same issues. And so we have all heard, from both of
14 these companies, expressions of concern about the
15 overall trend of a decline in consumption. And
16 understanding that the Public Staff opposes a
17 consumption adjustment mechanism, and you've told us
18 why you object to the increase in the ratio of fixed to
19 volumetric.

20 What do you suggest that companies can do to
21 have what I think they generally describe as the
22 opportunity to earn their return with respect to this
23 declining consumption factor, which is a key component
24 of setting the rates, or the rate design?

1 A. Well, I think, in Carolina Water's case, I'm
2 not familiar with any kind of meter replacement plan or
3 program that they have, and many of their systems are
4 over 30 years old, and they still have the same meters
5 that they had when they originally acquired the system,
6 other than maybe some that broke and that they're
7 replaced. And so I -- it's possible that a lot of
8 the -- some of the consumption loss that they're seeing
9 is due to the age of their meters. And that I would
10 recommend that, you know, some kind of plan for a meter
11 replacement would be one way to recoup some of the lost
12 consumption.

13 Q. Okay. Thank you.

14 A. In this case, this is the first -- 2018 would
15 be the first case for when Carolina consolidated its
16 customers. And right now it's a little bit too early.
17 There's no historical data as to what the actual
18 consumption is at this point in time. And so we don't
19 really have a historical record or -- to look at to
20 determine whether or not we've hit that threshold where
21 it's not going to go down anymore or if it's still
22 going to decline.

23 So I would think a couple more years would
24 give us a better historical viewpoint as to whether or

1 not we've actually hit that, you know, stabilization
2 place where consumption is maybe varying, you know,
3 100 gallons per month up or down. But we're not quite
4 there since we just consolidated all of the other
5 systems into uniform rates.

6 Q. Okay. Thank you.

7 What -- in your opinion, what is the proper
8 or correctly stated ratio of fixed to variable costs?

9 A. For water, I would -- I think we calculated
10 in the last rate case, it was -- if my memory serves me
11 right, it was around 75 percent.

12 Q. 75 percent fixed?

13 A. Yes. And I'd have to double-check, but I
14 think I filed a late-filed exhibit, and if I remember
15 right, it was right around 75 percent.

16 Q. What about sewer?

17 A. Sewer is more 80 percent. And they do
18 recover 100 percent of their fixed costs, because we
19 set that ratio 80/20.

20 Q. 80/20. Okay.

21 A. And I suppose, if we increase that for water,
22 then we definitely have to look at, you know, the risk
23 to the Company. If they're recovering 75 percent of
24 their fixed cost for water and 100 percent of their

1 fixed cost for sewer, then the risk goes down, you
2 know, quite a bit, because they're recovering, you
3 know, a good portion of their fixed cost and there's
4 little left to vary, as far as, you know, recouping all
5 of their revenue.

6 Q. And so what's the current ratio in the
7 Company's rates with respect to, let's say, water?

8 A. In water right now, it's approximately -- I
9 calculate it at 47 percent, the base charge, and
10 53 percent, the usage. However, I did recommend
11 something lower, because the Public Staff would like to
12 take that ratio closer to the 40/60 split versus, you
13 know, going up higher on that. But, currently, it's
14 47/53.

15 Q. 47/53.

16 Do you proposed, in rate design, when we get
17 to that part, to take that ratio lower --

18 A. Yes.

19 Q. -- In this case to -- I think you just said
20 it; would you say it again?

21 A. Well, I would say closer to 40 percent, but
22 we'll have to look at the revenues and the rates. And
23 I haven't designed the rates yet, so that's something
24 we would take into consideration.

1 Q. And tell me why you would do that when we've
2 talked about the fixed charges, the fixed cost, rather,
3 being at such a significantly higher level?

4 A. Well, it's the Public Staff's position that
5 higher usage charges promote conservation, and that
6 when you keep increasing the base charge and the
7 consumption charge keeps lower and lower, then people
8 have a tendency to use more water, and they have less
9 control over water bill. So the higher the base charge
10 goes, then they can't really adjust their lifestyle to
11 lower their bill because 75 or 80 percent, or in your
12 case, 60 percent, of that fixed cost is a fixed cost,
13 and so it doesn't really matter how much water they
14 use. So if they really want to conserve and try to
15 keep that bill lower for their family, they don't
16 really have that option.

17 Q. All right. And I think we know, from some of
18 our earlier cases, earlier Carolina Water cases, don't
19 we, that customers sort of perceive that as -- in the
20 categories of winners and losers with respect to a
21 higher base rate versus a higher volumetric proportion
22 of it? Haven't we heard from customers on both sides
23 of that when we've done -- when we've adjusted those
24 ratios?

1 A. I would say that's true because of the
2 seasonal customers. There's a lot of seasonal
3 customers out in the mountains, your Sapphire Valley
4 that's now there, and your -- that's been included in
5 uniform rates, and Fairfield Mountain. And those
6 customers are seasonal, they're usually just there in
7 the summer. And, so, yes, for them, the base charge in
8 the winter months when they're not there versus the
9 consumption, and then you have uniform, the residential
10 customers, is the other way around.

11 Q. Right.

12 A. So --

13 Q. I'm sorry, I didn't mean to interrupt you.

14 A. No. Yeah. We always had that -- you know,
15 the seasonal customers versus the nonseasonal customers
16 or the year-round customers.

17 Q. And if you were a family with a lot of usage,
18 you know, the classic example, I guess, have a lot of
19 children or something, and the volumetric -- weighting
20 to the volumetric is probably not going to be as
21 suitable for them; is that correct?

22 A. That's correct.

23 Q. Okay. I have one more question going back
24 to the --

1 A. However, that's not necessarily true, because
2 if the consumption charge is higher, then even though
3 they use a lot of water, they have an opportunity to
4 not use so much. Where if the base charge is set at
5 60 percent, then their opportunity to use less water
6 goes down versus if the base charge was much lower,
7 then the consumption charge is higher. And so if they
8 try and use less water, then their bill will go down.

9 So it gives the customer more flexibility.
10 At least the residential customer that's full-time
11 versus the seasonal. And, you know, usually that's
12 their second home, and they're a seasonal customer.
13 And they do have to pay the base charge to cover a
14 portion of the base charge to keep those facilities
15 operating in the wintertime when they are not there.
16 And yes, it might be 75 percent, but they should at
17 least pay a percentage of that in order to keep their
18 facilities operating year round if they choose to go to
19 their second home, you know, sometime during the winter
20 or Christmas.

21 Q. Right. And would you agree that this
22 conversation speaks to the balancing act that is rate
23 design, because we have customers' desires to minimize
24 their bills, perhaps to minimize their usage, perhaps

1 not, and we have the Company's need for a rate design
2 that allows them the opportunity to spread the costs
3 and have the opportunity to recover their authorized
4 return?

5 A. Yes, I would agree with that.

6 Q. It's difficult, isn't it?

7 One more question, going back to the
8 conversation -- or to your comments about meters
9 earlier, indicating that you think perhaps an issue or
10 a problem could have to do with older meters.

11 Would the Public Staff support a meter
12 replacement program with AMR -- I will ask it two
13 ways -- with AMR meters, and I'll ask it with AMI
14 meters?

15 A. I would have to refer to counsel to answer
16 that question.

17 Q. Okay. It's a fair answer.

18 MS. SANFORD: I have no more questions.
19 Thank you.

20 CHAIRMAN FINLEY: All right. We're
21 going to take a lunch break and come back at 2:30.

22 (The hearing was adjourned at 1:00 p.m.
23 and set to reconvene at 2:30 p.m. on
24 Tuesday, October 16, 2018.)

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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 appears in the foregoing hearing were duly sworn; that the testimony of said witnesses was 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 this; 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.

2018 OCT 18 PM 3:13
This the 18th day of October, 2018.

NOTARY PUBLIC
JOANN BUNZE

Joann Bunze



JOANN BUNZE, RPR

Notary Public #200707300112

FILED

OCT 19 2018

**Clerk's Office
N.C. Utilities Commission**