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1 PLACE: Dobbs Building, Raleigh, North Carolina
2 DATE: Monday, October 20, 2015
3 TIME: 9:30 a.m. - 10:50 a.m.
4 DOCKET NO: W-354, Sub 344
5 BEFORE: Chairman Edward S. Finley, Jr., Presiding
6 Commissioner Bryan E. Beatty
7 Commissioner Susan W. Rabon
8 Commissioner ToNola D. Brown-Bland
9 Commissioner Don M. Bailey
10 Commissioner Jerry C. Dockham
11 Commissioner James G. Patterson
12

FILED

OCT 23 2015

Clerk's Office
N.C. Utilities Commission

IN THE MATTER OF:

14 Application of Carolina Water Service, Inc., of North
15 Carolina, 2335 Sanders Road, Northbrook, Illinois
16 60062, for Authority to Adjust and Increase Rates for
17 Water and Sewer Utility Service in All of Its Service
18 Areas in North Carolina.
19

20 VOLUME 8
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22
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NORTH CAROLINA UTILITIES COMMISSION

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

2

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P R O C E E D I N G S

CHAIRMAN FINLEY: Let's come to order, please. Good morning. Let's come to order and go on the record. My name is Edward Finley and with me this morning are Commissioners Bryan E. Beatty, Susan W. Rabon, Don M. Bailey, Jerry C. Dockham, and James G. Patterson. Commissioner Brown-Bland hopes to be here. She's on her way but she's tied up in unusual traffic on US 40. We hope she makes it by the time we finish.

The Commission now calls for hearing in this Docket W-354, Sub 344, In The Matter of Application by Carolina Water Service, Inc., of North Carolina, 2335 Saunders Road, Northbrook, Illinois, for Authority to Increase Rates for Water and Sewer Utility Service in All of Its Service Areas in North Carolina.

On March 31, 2015, Carolina Water Service filed an Application with the Commission seeking authority to increase its rates for providing water and sewer utility service in all of its service areas in North Carolina.

On April 30, 2015, the Commission issued its Order Establishing General Rate Case and Suspending Rates. Pursuant to this Order, the Commission declared this proceeding to be a general rate case

1 pursuant to G.S. 62-137 and suspended the proposed new
2 rates for up to 270 days pursuant to G.S. 62-134.

3 On May 13, 2015, Carolina Water filed a
4 letter stating that given the timing of its general
5 rate case filing, the evidentiary hearing would
6 normally have been set for a date near the end of
7 August or early September 2015; however, at the
8 Company's request, the evidentiary hearing was
9 extended.

10 On May 15, 2015, Corolla Light Community
11 Association, Inc., filed a Petition to Intervene in
12 this matter. This petition was granted by Commission
13 Order issued May 19, 2015.

14 On May 22, 2015, the Commission issued its
15 Order Scheduling Hearing and Requiring Customer
16 Notice.

17 Several consumer Statements of Position have
18 been filed in this docket.

19 Public hearings in the matter, for purposes
20 of taking non-expert public witness testimony, were
21 held in Jacksonville, Currituck County, Raleigh,
22 Charlotte, Boone and Asheville.

23 On August 21, 2015, Carolina Water filed the
24 direct testimony and exhibits of Pauline Ahern and

1 David Liskoff.

2 On August 27, 2015, Carolina Water filed the
3 revised testimony of David Liskoff regarding Appendix
4 1 -- Appendix A-1 of his direct testimony.

5 On September 2, 2015, the Public Staff and
6 CWS jointly filed the Stipulation between them
7 regarding cost of capital and capital structure
8 issues.

9 On October 2, 2015, the Commission issued
10 its Order Rescheduling Evidentiary Hearing and
11 Extending Filing Dates rescheduling the evidentiary
12 hearing in this matter for this date and time.

13 On October 9, 2015, the parties filed a
14 Joint Motion on the recommended procedural dates and
15 request to excuse witnesses. The Commission issued an
16 Order on October 13, 2015, Rescheduling the
17 Evidentiary Hearing for October 20, 2015, Adopting the
18 Procedural Schedule proposed by the Stipulating
19 Parties and Excusing Company Witnesses Liskoff and
20 Ahern and appearing at -- from appearing at today's
21 evidentiary hearing.

22 On October 15, 2015, the Public Staff
23 prefiled the testimony and exhibits of Public Staff
24 Witnesses Windley Henry; Katherine A. Fernald; Fenge

1 Zhang, I hope I pronounced that right; Gina Y.
2 Casselberry; and Calvin C. Craig, III. Also on
3 October 15, 2015, the Public Staff filed the
4 Stipulation of Carolina Water and the Public Staff
5 reflecting the settlement as to all of the issues of
6 the Stipulating Parties.

7 On October 16, 2015, the Public Staff filed
8 a Motion asking that all of its witnesses be excused
9 from today's hearing and that all of their prefiled
10 testimony and exhibits be copied into the record and
11 received into evidence.

12 On October 19, 2015, the Commission issued
13 an Order Granting in Part and Denying in Part the
14 Public Staff's Motion to Excuse Witness from appearing
15 today.

16 Pursuant to State Statutes, I remind all
17 members of the Commission of their duty to avoid
18 conflicts of interest, and inquire whether any member
19 of the Commission has a known conflict of interest
20 with regard to the matter coming before the Commission
21 this morning?

22 (No response.)

23 There appear to be no conflicts so we will
24 proceed. I now call on the parties to announce their

1 appearances beginning with the Applicant.

2 MR. BENNINK: Good morning, Mr. Chairman and
3 Members of the Commission. My name is Robert H.
4 Bennink, Jr., of the Bennink Law Office. I'm
5 appearing here today on behalf of Carolina Water
6 Service, Inc., of North Carolina. With me at counsel
7 table is Matthew Klein, the Company's President; and
8 Martin J. Lashua, the Company's Vice President for
9 Operations.

10 MR. BRADY ALLEN: Good morning, Mr. Chairman
11 and Commissioners. My name is Brady Allen and with me
12 is Dwight Allen and we're with the Allen Law Offices
13 and we're representing the Corolla Light Community
14 Association, Inc.

15 MS. HOLT: Good morning. I'm Gina Holt with
16 the Public Staff here on behalf of the Using and
17 Consuming Public, and with me at counsel table is
18 Public Staff Engineer, Gina Casselberry.

19 CHAIRMAN FINLEY: Are there preliminary
20 matters that the Commission needs to address before we
21 get started with the hearing?

22 MR. BENNINK: None from us.

23 MS. HOLT: (Shakes head from side to side)

24 CHAIRMAN FINLEY: Ms. Casselberry (sic),

1 have you identified any public witnesses that might
2 have shown up to testify this morning?

3 MS. HOLT: No, we haven't.

4 CHAIRMAN FINLEY: I don't believe there are
5 any. Let's proceed. Mr. Bennink.

6 MR. BENNINK: Mr. Chairman, pursuant to the
7 Order of the Commission, we would like to move into
8 evidence the testimony that we prefiled in this case.
9 And that would be the prefiled direct testimony and
10 exhibits of David Liskoff filed on August 21, 2015.
11 That testimony and exhibits that we filed for
12 Mr. Liskoff consisted of a cover page, 14 pages of
13 written testimony and Exhibits 1 through 3, a total of
14 48 pages. We also filed on August 21st the prefiled
15 testimony and exhibits of Witness Pauline M. Ahern.
16 That testimony consisted of a cover page, a table of
17 contents, the testimony itself and Attachment A, which
18 was Ms. Ahern's resume, consisting of a total of 74
19 pages. And then Ms. Ahern had exhibits consisting of
20 a cover page, table of contents and Ahern Exhibits 1
21 through 10 consisting of a total of 41 pages. So we
22 would ask that the prefiled testimony of Witnesses
23 Liskoff and Ahern be copied into the record as if
24 given orally from the stand and that their exhibits be

1 identified as filed and admitted into evidence.

2 CHAIRMAN FINLEY: Without objection, the
3 direct prefiled testimony of Witnesses Liskoff and
4 Ahern are copied into the record as though given
5 orally from the stand; that their exhibits are marked
6 for identification as premarked in the filing and are
7 admitted into evidence.

8 Liskoff Exhibits 1 through 3

9 (Identified and Admitted)

10 (WHEREUPON, the prefiled direct
11 testimony of DAVID LISKOFF is
12 copied into the record as if given
13 orally from the stand.)
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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-354, SUB 344

In the Matter of
Application by Carolina Water Service, Inc. of North Carolina
for Authority to Increase Rates for
Water and Sewer Utility Service in All of Its Service Areas in
North Carolina

Pre-filed Direct Testimony
of
DAVID LISKOFF
Senior Financial Analyst
Utilities, Inc.

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

August 21, 2015

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AUG 21 2015

1 **Q. Please state your name, occupation and business address for**
2 **the record.**

3 A. My name is David Liskoff. I am employed as a Senior Financial
4 Analyst at Utilities, Inc. ("UI"), 5701 Westpark Drive, Charlotte, North
5 Carolina 28217.

6 **Q. Please summarize your professional background?**

7 A. I have been employed by UI since January 2013. I graduated from
8 Canisius College in Buffalo, New York, with a Bachelor of Science degree
9 in Finance and an MBA. I had twenty-eight years of experience as a
10 regulatory analyst, financial analyst and accountant prior to joining Utilities,
11 Inc.

12 **Q. Please explain your job responsibilities at Utilities, Inc.**

13 A. My primary responsibilities include the gathering of data and the
14 preparation of the rate case filing template, the preparation of the filing
15 application and the submission of testimony, exhibits and data requests to
16 support rate applications.

17 **Q. Please describe Carolina Water Service, Inc. of North Carolina.**

18 A. Carolina Water Service, Inc. of North Carolina ("CWSNC" or
19 "Company") is a wholly-owned subsidiary of UI. CWSNC is an investor-
20 owned public utility pursuant to G.S. 62-3, does business as a regulated

1 water and wastewater utility in North Carolina, and is subject to the
2 regulatory oversight of this Commission. The Company presently serves
3 approximately 20,094 water customers and 12,443 wastewater customers,
4 including 983 customers in Corolla Light and Monteray Shores ("OBX") and
5 749 customers in Nags Head who are sewer-only. The Company's service
6 territory spans 31 counties in North Carolina, from Nags Head in Dare
7 County to Bear Paw in Cherokee County. CWSNC has applied for an
8 adjustment in water and wastewater rates and charges for all of its service
9 areas in North Carolina.

10 **Q. Please describe UI.**

11 A. UI is unique within the water and sewer industry in many respects.
12 From its inception 50 years ago, UI has concentrated on the purchase,
13 formation and expansion of smaller water and/or sewer utility systems.
14 Most often these are the types of systems that cause state regulators and
15 health authorities an inordinate amount of both time and concern, due to
16 problems related to product quality, customer service, financial stability and
17 rates.

18 At the present time, UI has over 73 subsidiary operating companies
19 that provide water and sewer utility service to approximately 272,965
20 customers in 15 states.

1 Q. How do CWSNC's customers benefit from the Company's
2 affiliation with UI?

3 A. The affiliation with UI has many benefits for CWSNC customers.
4 One of the primary benefits is that CWSNC has access to a large pool of
5 human resources upon which to draw. There are experts in various critical
6 areas, such as construction, engineering operations, accounting, data
7 processing, billing, regulation, customer service, etc. UI has the highest
8 level of combined expertise and level of experience, allowing it to provide
9 service in a more cost effective manner.

10 While operating only water and sewer systems, UI personnel have
11 the ability to meet the challenges of the rapidly changing utility industry.
12 Because the UI companies are focused on the water and sewer industry,
13 our companies enjoy some unique advantages, one of which is that capital
14 is available for improvements and expansion at a reasonable cost. With
15 increasingly more stringent health and environmental standards, ready
16 access to capital will prove vital to continued quality service in the water and
17 sewer utility business.

18 In addition, the UI group of companies has national purchasing
19 power that results in lower costs to ratepayers. Expenditures for insurance,
20 vehicles, chemicals and meters are a few examples of purchases where
21 national contracts provide tangible benefits to ratepayers.

1 **Q. What is the purpose of your direct testimony?**

2 A. The purpose of my direct testimony is to explain why CWSNC has
3 requested Commission approval to increase its water and sewer rates. I
4 discuss some of the factors that have contributed to the need for these
5 increases and their impact on CWSNC customers. I also discuss the terms
6 regarding the cost of debt, the overall cost of capital and rate of return on
7 rate base. In addition, I will sponsor the Company's financial exhibits,
8 including pro forma income statements and balance sheets.

9 **Q. When did CWSNC receive its last general rate increase?**

10 A. CWSNC's last general increase in rates was granted in Docket No.
11 W-354, Sub 336 on March 10, 2014, based upon a twelve-month test year
12 ended June 30, 2012. However, rates for sewer utility service provided to
13 customers in the Company's Corolla Light/Monteray Shores and
14 Nags Head service areas were not changed in the Sub 336 rate case. Thus,
15 sewer rates for Nags Head customers were last increased effective
16 February 10, 2011, pursuant to an Order of the Commission in Docket No.
17 W-354, Sub 324. Sewer rates for Corolla Light/Monteray Shores customers
18 were last increased effective March 22, 2011, pursuant to an Order of the
19 Commission in Docket No. W-354, Sub 327.

20 **Q. What is the test year for this rate case?**

1 A. The test year for this general rate case is the year ended
2 December 31, 2014. This is the most recent twelve months of data
3 available.

4 **Q. Why is CWSNC requesting rate relief at this time?**

5 A. CWSNC's current balance sheet and income statement are shown
6 in the Company's General Rate Case Application. The Company's balance
7 sheet is attached to the Application as Schedule A and the Company's
8 income statement is attached to the Application as Schedule B. The
9 Company's current rate base and rate of return is shown on Schedule C of
10 the Application.

11 Under present rates, CWSNC is not able to meet its operating costs
12 and earn a reasonable return on its investment in the Company's system.
13 During the test year, CWSNC (excluding OBX and Nags Head) experienced
14 the following overall rate of return for its combined water and sewer
15 operations: 4.47%. The Company's test year overall returns were 5.45%
16 for OBX sewer only; and 4.96% for Nags Head sewer only. These rates of
17 return are well below CWSNC's current Commission-authorized overall rate
18 of return on rate base of 8.18%, which is based on an authorized rate of
19 return on common equity of 9.75%, established by the Commission in its
20 2014 Rate Case Order in Docket No. W-354, Sub 336. After pro forma

1 adjustments, CWSNC will experience an overall rate of return of 8.54% for
2 its combined water and sewer operations, OBX sewer only, and Nags Head
3 sewer only. This overall rate of return of 8.54% is based upon a capital
4 structure consisting of 48.97% long-term debt and 51.03% common equity
5 and cost rates of 6.6% for long-term debt and 10.4% for common equity.

6 The proposed new rates applied for by CWSNC are necessary
7 because the Company has been unable to achieve the level of earnings
8 authorized by the Commission in the Company's last general rate case.
9 The failure to achieve this level of earnings was primarily caused by capital
10 investments required to comply with service obligations occurring since
11 CWSNC's last rate increase in March 2014 (and February 2011, and March
12 2011, for the Company's Nags Head and Corolla Light and Monteray
13 Shores service areas, respectively).

14 Without satisfactory rate relief, CWSNC's ability to continue to
15 provide safe, reliable and efficient water and sewer utility services to its
16 customers and to meet its financial obligations will be impaired and made
17 more difficult. In addition, capital will become more costly.

18 **Q. Did CWSNC cause a notice of rate increase of its petition to be**
19 **mailed to its customers?**

20 **A. Yes. CWSNC caused the prescribed Notices to Customers, as**

1 approved by the North Carolina Utilities Commission, to be mailed to all of
2 its customers.

3 **Q. What are CWSNC customers currently charged for water and**
4 **sewer utility service?**

5 A. The current water and sewer rates and charges for CWSNC
6 customers are attached to my testimony as Exhibit 1.

7 **Q. What rates does CWSNC propose in this case?**

8 A. The proposed water and sewer rates charges for CWSNC customers
9 are attached to my testimony as Exhibit 2.

10 **Q. Were the financial schedules attached to CWSNC's application**
11 **for rate relief prepared by you and/or under your direction?**

12 A. Yes, the schedules attached to the General Rate Case Application
13 were prepared by me.

14 **Q. Are the financial schedules incorporated as part of your**
15 **testimony?**

16 A. Yes. They are incorporated herein by reference.

17 **Q. Please describe these schedules.**

18 A. The General Rate Case Application includes the financial statements
19 for CWSNC. The subsections are as follows:

- 1 Schedule A – Balance Sheet
2 Schedule B – Income Statement
3 Schedule C – Rate Base and Rate of Return
4 Schedule D – Test Year / Present Revenues
5 Schedule E – Proposed Revenues

6 **Q. Please explain how test year expenses were adjusted.**

7 A. As previously stated, The Company's test year is the twelve-month
8 period ended December 31, 2014. Pro forma adjustments were made to
9 the test year expenses based on known and measurable changes to actual
10 expenses.

11 **Q. Were known and measurable pro forma adjustments also made**
12 **to the Company's income statement (Schedule B) and its rate base**
13 **statement (Schedule C)?**

14 A. Yes, as detailed therein.

15 **Q. Please describe the primary reasons which underlie the**
16 **Company's need for rate relief.**

17 A. The primary reasons for CWSNC's requested rate increase involve
18 an increase in expenses and an increase in plant additions. The rates
19 applied for by CWSNC are necessary because the Company has been

1 unable to achieve the level of earnings specified by the Commission in the
2 Company's last general rate case. The failure to achieve this level of
3 earnings was caused by increased operating costs to upgrade the level of
4 service, increased operating costs and capital investments required to
5 comply with service obligations, and changes in consumption, all occurring
6 since CWSNC's last rate increase in March 2014 (and early-2011 for the
7 Company's Nags Head and Corolla Light and Monteray Shores service
8 areas). Significant capital investment has occurred since the last rate case.
9 The rate case application includes approximately \$6,435,700 of anticipated
10 post-test year additions for projects which are currently in progress and are
11 intended to be complete by the close of the hearing in this case.

12 **Q. Please describe the revenue increases requested in this case,**
13 **including details regarding the Company's underlying investment in**
14 **utility plant, capital structure, and debt and equity costs.**

15 A. This application has been prepared and submitted pursuant to the
16 provisions of G.S. 62-133 based upon a requested return on the Company's
17 rate base.¹ CWSNC has requested new rates that will produce an overall
18 rate of return on the Company's rate base of 8.54%. The Company's

1 By its Application, the Company has requested that the Commission allow it to recover total water service revenues of \$11,179,316 for CWSNC (excluding OBX and Nags Head), and total sewer service revenues of \$6,702,968 for CWSNC (excluding OBX and Nags Head), \$1,409,348 for OBX (sewer), and \$720,376 for Nags Head (sewer).

1 Application incorporates a proposed return on common equity of 10.4%; a
2 cost of long-term debt of 6.6%; and a capital structure consisting of 48.97%
3 long-term debt and 51.03% common equity.

4 The proposed tariffs are designed to produce additional gross
5 revenues on a company-wide basis of \$3,642,251, a 22.25% increase over
6 the total revenue level generated by the rates currently in effect for CWSNC,
7 including OBX and Nags Head. The proposed tariffs are designed to
8 produce additional gross revenues of \$3,211,054, a 21.89% increase over
9 the total revenue level generated by the rates currently in effect for CWSNC,
10 exclusive of OBX and Nags Head; additional gross revenues of \$305,290,
11 a 27.65% increase over the total revenue level generated by the rates
12 currently in effect for OBX (sewer only); and \$125,907, a 21.18% increase
13 over the total revenue level generated by the rates currently in effect for
14 Nags Head (sewer only).

15 CWSNC, exclusive of OBX and Nags Head, needs increased
16 revenues at this level in order to earn a fair return on its investment of
17 \$50,465,137. OBX needs increased revenues at this level in order to earn
18 a fair return on its investment of \$6,190,694. Nags Head needs increased
19 revenues at this level in order to earn a fair return on its investment of
20 \$2,202,485.

1 Q. Has the Company included costs for anticipated post-test year
2 plant additions as part of its rate case application?

3 A. Yes. The rate case application includes approximately \$6,435,700
4 of anticipated post-test year additions.

5 Q. Has CWSNC been authorized to implement a water and sewer
6 system improvement charge mechanism pursuant to G.S. 62-133.12
7 and Commission Rules R7-39 and R10-26?

8 A. Yes. The Commission found it to be in the public interest to authorize
9 CWSNC, as part of the Company's 2014 general rate case in Docket No.
10 W-354, Sub 336, to implement a Water and Sewer System Improvement
11 Charge ("WSIC/SSIC") Mechanism applicable to all of its customers, except
12 those customers who reside in the Company's Nags Head and Linville
13 Ridge service areas because those customers were not subject to the 2014
14 Rate Case Order. By this statutorily and Commission-authorized
15 Mechanism, the Company is allowed to recover the annual incremental
16 depreciation expense and capital costs of eligible water and sewer system
17 improvements completed and placed in service between rate cases.

18 Q. Has CWSNC in fact implemented the Commission-authorized
19 WSIC/SSIC Mechanism?

1 A. Yes. Effective April 1, 2015, the Company was granted approval by
2 the Commission in Docket No. W-354, Sub 336A to implement specific
3 water and sewer system improvement surcharge rate adjustments
4 applicable to all of its customers with the exception of customers in its
5 Corolla Light/Monteray Shores, Nags Head and Linville Ridge service
6 areas, where specific surcharges were either not requested (Corolla
7 Light/Monteray Shores) or were not authorized (Nags Head and Linville
8 Ridge).

9 Q. Please explain what changes will occur regarding the
10 Company's authorized WSIC/SSIC Mechanism subsequent to a
11 decision by the Commission in this case.

12 A. Consistent with NCUC Rules R7-39(k) and R10-26(k), CWSNC's
13 Commission-authorized WSIC and SSIC surcharges will be reset at zero as
14 of the effective date of new base rates established in this general rate case.
15 Thereafter, only the incremental depreciation expense and capital costs of
16 new eligible water and sewer system improvements that have not previously
17 been reflected in the Company's rates will be recoverable through the
18 WSIC/SSIC Mechanism on a going-forward basis.

19 By law, the cumulative maximum charges between rate cases that
20 the Company may recover through the use of its Commission-authorized

1 WSIC/SSIC Mechanism cannot exceed five percent of the total service
2 revenues that the Commission ultimately approves in this general rate case.

3 **Q. Will CWSNC's Commission-authorized WSIC/SSIC Mechanism**
4 **now apply to all water and sewer utility customers served by the**
5 **Company in North Carolina?**

6 A. Yes. All of CWSNC's customers, including those customers served
7 by the Company in its Nags Head and Linville Ridge service areas, are
8 subject to the application in this general rate case. Therefore, the
9 Company's Commission-authorized WSIC/SSIC Mechanism will, on a
10 going forward basis, now apply to all water and sewer customers served by
11 CWSNC, including Nags Head and Linville Ridge customers.

12 **Q. Has CWSNC developed and filed an Ongoing Three-Year**
13 **WSIC/SSIC Plan as part of the Company's request in this case?**

14 A. Yes. On July 1, 2015, CWSNC filed its Ongoing Three-Year
15 WSIC/SSIC Plan as required by Commission Rules R7-39(m) and
16 R10-26(m).. A copy of that Plan is attached to this testimony as Exhibit 3
17 and is incorporated herein by reference. The Company proposes and
18 describes in detail ten (10) WSIC projects, including estimates of the cost
19 of the improvements and dates when the improvements will be placed into
20 service, that it will implement at an investment cost of almost \$875,000

1 during the initial period of the Three-Year Plan; i.e., the 2015-2016
2 timeframe. CWSNC will invest a total of almost \$1.8 million of capital in
3 WSIC projects during the entire three-year period. CWSNC listed no sewer
4 system improvement projects in its Ongoing Three-Year Plan, but will
5 update this Plan, as necessary, if the Company subsequently determines
6 that one or more SSIC projects should be submitted for review and
7 approval.

8 **Q. Is this testimony true and accurate to the best of your**
9 **knowledge, information and belief?**

10 A. Yes, it is.

11 **Q. Does this conclude your testimony?**

12 A. Yes, it does.

Ahern Direct Exhibits 1 through 10

(Identified)

(WHEREUPON, the prefiled direct testimony of PAULINE M. AHERN is copied into the record as if given orally from the stand.)

Carolina Water Service, Inc. of North Carolina
Docket No. W-354, Sub 344

BEFORE THE
NORTH CAROLINA UTILITIES COMMISSION

DIRECT TESTIMONY

OF

PAULINE M. AHERN, CRRA
PARTNER
SUSSEX ECONOMIC ADVISORS, LLC

ON BEHALF OF

CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA

AUGUST 21, 2015

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Attachment A – Resume of Pauline M. Ahern, CRRA

1 **Introduction**

2 **Q. PLEASE STATE YOUR NAME, OCCUPATION AND**
3 **BUSINESS ADDRESS.**

4 A. My name is Pauline M. Ahern. I am a Partner with Sussex
5 Economic Advisors, LLC. My business address is 161
6 Worcester Road, Suite 503, Framingham, MA 01701. My
7 mailing address is 3000 Atrium Way, Suite 241, Mount
8 Laurel, NJ 08054.

9 **Q. PLEASE SUMMARIZE YOUR PROFESSIONAL**
10 **EXPERIENCE AND EDUCATIONAL BACKGROUND.**

11 A. I have offered expert testimony on behalf of investor-owned
12 utilities before twenty-nine state regulatory commissions in
13 the United States as well as one provincial regulatory
14 commission in Canada on rate of return issues, including but
15 not limited to common equity cost rate, fair rate of return,
16 capital structure issues, relative investment risk and credit
17 quality issues. I am a graduate of Clark University,
18 Worcester, MA, where I received a Bachelor of Arts degree
19 with honors in Economics. I have also received a Master of
20 Business Administration with high honors and a
21 concentration in finance from Rutgers University.

22 On behalf of the American Gas Association ("A.G.A."),
23 I calculate the A.G.A. Gas Index, which serves as the

1 benchmark against which the performance of the American
2 Gas Index Fund ("AGIF") is measured monthly. The A.G.A.
3 Gas Index and AGIF are a market capitalization weighted
4 index and mutual fund, respectively, comprised of the
5 common stocks of the publicly traded corporate members of
6 the A.G.A.

7 I am a member of the Society of Utility and Regulatory
8 Financial Analysts ("SURFA") where I serve on its Board of
9 Directors, having served two terms as President, from
10 2006 – 2008 and 2008 – 2010. Previously, I held the
11 position of Secretary/Treasurer from 2004 – 2006. In 1992, I
12 was awarded the professional designation "Certified Rate of
13 Return Analyst" ("CRRRA") by SURFA, which is based upon
14 education, experience and the successful completion of a
15 comprehensive written examination.

16 I am also an associate member of the National
17 Association of Water Companies, serving on its
18 Finance/Accounting/Taxation and Rates and Regulation
19 Committees; a member of the American Finance and
20 Financial Management Associations; a member of Edison
21 Electric Institute's Cost of Capital Working Group; and, a
22 member of A.G.A.'s State Affairs Committee.
23

1 **Purpose**

2 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT**
3 **TESTIMONY?**

4 A. The purpose of my direct testimony is to provide testimony
5 on behalf of Carolina Water Service Inc., of North Carolina
6 ("CWSNC" or "the Company") relative to the appropriate
7 overall rate of return, including capital structure ratios, long-
8 term debt cost rate and the investor-required common equity
9 cost rate which CWSNC should be afforded the opportunity
10 to earn on its sewer jurisdictional rate base.

11 **Q. HAVE YOU PREPARED EXHIBITS WHICH SUPPORT**
12 **YOUR RECOMMENDED COMMON EQUITY COST RATE?**

13 A. Yes. They have been marked for identification as Ahern
14 Direct Exhibits 1 through 10.

15 **Q. WHAT IS YOUR RECOMMENDED OVERALL RATE OF**
16 **RETURN?**

17 A. I recommend that the North Carolina Utilities Commission
18 ("the NCUC" or "the Commission") authorize the Company
19 the opportunity to earn an overall rate of return of 8.54%
20 based upon the consolidated capital structure of Utilities, Inc.
21 ("UI" or "the Parent") at December 31, 2014, which consisted
22 of 48.99% long-term debt and 51.01% common equity, at a
23 long-term debt cost rate of 6.60% and my recommended

1 common equity cost rate of 10.40%. A common equity cost
2 rate of 10.40% results in an overall rate of return of 8.54%
3 when applied to the common equity ratio of 51.01% as will
4 be discussed below and as summarized on page 1 of Ahern
5 Direct Exhibit 1.

6 **Summary**

7 **Q. PLEASE SUMMARIZE YOUR RECOMMENDED COMMON**
8 **EQUITY COST RATE.**

9 A. My recommended common equity cost rate of 10.40% is
10 summarized on page 3 of Ahern Direct Exhibit 1. Because
11 CWSNC's common stock is not publicly traded, a market-
12 based common equity cost rate cannot be directly observed
13 for the Company. Consequently, I have assessed the
14 market-based common equity cost rates of companies of
15 relatively similar, but not necessarily identical, risk, i.e., a
16 proxy group, for insight into a recommended common equity
17 cost rate applicable to CWSNC. Using companies of
18 relatively similar risk as proxies is consistent with the
19 principle of fair rate of return established in the *Hope*¹ and
20 *Bluefield*² cases, adding reliability to the informed expert
21 judgment necessary to arrive at a recommended common

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 equity cost rate. However, no proxy group can be selected
2 to be identical in risk to CWSNC. Therefore, the proxy
3 group's results must be adjusted, if necessary, to reflect the
4 unique relative investment (financial and / or business) risk
5 of the Company.

6 My recommendation results from the application of
7 market-based cost of common equity models, the
8 Discounted Cash Flow ("DCF") approach, the Risk Premium
9 Model ("RPM") and the Capital Asset Pricing Model
10 ("CAPM"), to the market data of the proxy group of eight
11 water companies whose selection will be discussed below.
12 In addition, I also applied the DCF, RPM and CAPM to the
13 market data of domestic, non-price regulated companies
14 comparable in total risk to the eight water companies.

15 The results derived from each are as follows:

1	Discounted Cash Flow Model	8.52%
2	Risk Premium Model	10.74
3	Capital Asset Pricing Model	9.41
4		
5	Cost of Equity Models Applied to	
6		
7	Comparable Risk, Non-Price	
8	Regulated Companies	<u>10.63%</u>
9		
10	Indicated Common Equity	
11	Cost Rate	10.02%
12		
13	Business Risk Adjustment	<u>0.40%</u>
14		
15	Indicated Common Equity Cost Rate	10.42%
16		
17	Recommended Common Equity Cost Rate	<u>10.40%</u>

18 After reviewing the cost rates based upon these
19 models, I conclude that a common equity cost rate of
20 10.02% is indicated before any adjustment for CWSNC's
21 greater business risk relative to the proxy group of eight
22 water companies as I discuss in more detail below. Thus,
23 the indicated common equity cost rate based upon the eight
24 water companies needs to be adjusted upward by 0.40% to
25 reflect CWSNC's greater business risk. After adjustment,
26 the common equity cost rate is 10.42%, which when rounded
27 to 10.40%, is my recommended common equity cost rate. A
28 common equity cost rate of 10.40% is, in my opinion,
29 reasonable, if not conservative, for CWSNC

1 General Principles

2 Q. WHAT GENERAL PRINCIPLES HAVE YOU CONSIDERED
3 IN ARRIVING AT YOUR RECOMMENDED COMMON
4 EQUITY COST RATE OF 10.40%?

5 A. In unregulated industries, the competition of the marketplace
6 is the principal determinant of the price of products or
7 services. For regulated public utilities, regulation must act
8 as a substitute for marketplace competition. Assuring that
9 the utility can fulfill its obligations to the public while
10 providing safe and reliable service at all times requires a
11 level of earnings sufficient to maintain the integrity of
12 presently invested capital as well as permitting the attraction
13 of needed new capital at a reasonable cost in competition
14 with other firms of comparable risk. This is consistent with
15 the fair rate of return standards established by the
16 U.S. Supreme Court in the *Hope* and *Bluefield* cases.
17 Consequently, marketplace data must be relied upon in
18 assessing a common equity cost rate appropriate for
19 ratemaking purposes. Therefore, my recommended
20 common equity cost rate is based upon marketplace data for
21 a proxy group of utilities as similar in risk as possible to
22 CWSNC, based upon selection criteria that will be discussed
23 subsequently. The use of the market data for a proxy group

1 adds reliability to the informed expert judgment used in
2 arriving at a recommended common equity cost rate. Also,
3 the use of multiple common equity cost rate models adds
4 reliability when arriving at a recommended common equity
5 cost rate.

6 **Business Risk**

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

10 **A.** Business risk is important to the determination of a fair rate
11 of return because the greater the level of risk, the greater the
12 rate of return investors demand, consistent with the basic
13 financial principle of risk and return. Business risk is the
14 riskiness of a company's common stock without the use of
15 debt and/or preferred capital. Examples of the general
16 business risks faced by all utilities, i.e., electric, natural gas
17 distribution and water utilities, include, but are not limited to,
18 the quality of management, the regulatory environment,
19 customer mix and concentration of customers, service
20 territory economic growth, capital intensity and size, all of
21 which have a direct bearing on earnings. An individual utility
22 may face different levels of one or more particular risks.

23 **Q. WHAT BUSINESS RISKS DOES THE WATER UTILITY**

1 **INDUSTRY IN GENERAL FACE TODAY?**

2 A. Water is essential to life and unlike electricity or natural gas,
3 water is the only utility product which is intended for
4 customers to ingest. Consequently, water quality is of
5 paramount importance to the health and well-being of
6 customers and is therefore subject to additional and
7 increasingly strict health and safety regulations. Beyond
8 health and safety concerns, water utility customers also have
9 significant aesthetic concerns regarding the water delivered
10 to them and regulators pay close attention to these concerns
11 because of the strong feelings they arouse in consumers.
12 Also, unlike many electric and natural gas utilities, water
13 utilities serve a production function in addition to the delivery
14 functions served by electric and gas utilities.

15 Water utilities obtain supply from wells, aquifers,
16 surface water reservoirs or streams and rivers. Throughout
17 the years, well supplies and aquifers have been
18 environmentally threatened, with historically minor
19 purification treatment giving way to major well rehabilitation,
20 extensive treatment or replacement. Simultaneously, safe
21 drinking water quality standards have tightened
22 considerably, requiring multiple treatments prior to water
23 delivery. Supply availability is also limited by drought, water

1 source overuse, runoff, threatened species and habitat
2 protection, and other operational, political and environmental
3 factors. In addition, the United States Environmental
4 Protection Agency ("EPA"); as well as individual state and
5 local environmental agencies, is continually monitoring
6 potential contaminants in the water supply and promulgating
7 or expanding regulations when necessary. Increasingly
8 stringent environmental standards necessitate additional
9 capital investment in the distribution and treatment of water,
10 exacerbating the pressure on water utilities' free cash flows
11 through increased capital expenditures for infrastructure,
12 repair and replacement. In the course of procuring water
13 supplies and treating water so that it complies with Safe
14 Drinking Water Act ("SDWA") standards, water utilities have
15 an ever-increasing responsibility to be stewards of the
16 environment from which supplies are drawn, in order to
17 preserve and protect essential natural resources of the
18 United States.

19 Water utilities are typically vertically engaged in the
20 entire process of acquisition, supply, production, treatment
21 and distribution of water. In contrast, electric and natural
22 gas companies, where transmission and distribution is often
23 separate from generation, do not always produce the

1 electricity or natural gas which they transmit and distribute.

2 Hence, water utilities require significant capital investment

3 not only in distribution and transmission systems but also in

4 sources of supply (wells), production (treatment facilities),

5 and storage. Significant capital investment is necessary

6 both to serve additional customers and to replace aging

7 systems, creating a major risk facing the water utility

8 industry.

9 *Value Line Investment Survey ("Value Line")*³

10 observes the following about the water utility industry:

11 The industry continues to face the same
12 problems that have existed for years. Chronic
13 under-investment in the infrastructure of water
14 utilities in the past has resulted in most
15 domestic investor owned and municipal
16 systems being antiquated and in great need of
17 repair.

18
19 To bring these water systems up to par,
20 companies are increasing their capital budgets.
21 Since these expenditures can't be financed
22 entirely with internal funds, the difference must
23 be made up by issuing new debt and equity.

24 * * * *

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27 No stock in the industry is ranked to outperform
28 the market in the year ahead. Moreover, the
29 recent strength in the price of most of these
30 stocks has significantly reduced their long-term
31 appeal.

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³ *Value Line Investment Survey*, January 16, 2015 p 1779.

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Almost no utilities generate a sufficient amount of funds internally to cover the rising capital budgets. Therefore, there should be a fair amount of new debt and equity issued in the years ahead. Since no regulated utility currently has subpar finances, as of now, we don't foresee a major deterioration in the group's balance sheet. However, most will likely be in worse shape by the end of the decade.

* * *

Most state commissions realize that huge sums are required to mostly replace aging pipelines networks. Therefore, they have been relatively reasonable when it comes to allowing the companies to increase their customers [sic] bills to recoup their investment.

* * *

Investors should understand that a harsh regulatory environment is one of the major risks that any kind of utility faces.

As we mentioned earlier, these stocks have been on a remarkable run the past few months. The sharp increases in the price of the equities has removed much of the previous appeal that this group offered. Indeed, almost every water stock seems to be fully valued for both the long and short term.

In addition, because the water utility industry is more capital-intensive than the electric, combination electric and gas or natural gas utilities, the investment required to produce a dollar of revenue is greater. For example, as shown on page 1 of Ahern Direct Exhibit 2, it took \$3.91 of net utility plant on average to produce \$1.00 in operating

1 revenues in 2013 for the water utility industry as a whole.
2 For CWSNC specifically, it took a much greater \$5.39 of net
3 utility plant to produce \$1.00 in operating revenues in 2013.
4 In contrast, for the electric, combination electric and gas and
5 natural gas utility industries, on average it took only \$2.67,
6 \$2.18 and \$1.30, respectively, to produce \$1.00 in operating
7 revenues in 2013. As financing needs have increased and
8 will continue to increase, the competition for capital from
9 traditional sources has increased and will also continue to
10 increase, making the need to maintain financial integrity and
11 the ability to attract needed new capital increasingly
12 important.

13 **Q. WHY IS THERE AN INCREASED NEED FOR**
14 **FINANCING?**

15 **A.** There are a number of challenges facing the water utility
16 industry. The National Association of Regulatory
17 Commissioners ("NARUC") has highlighted the challenges
18 facing the water utility industry stemming from its capital
19 intensity. NARUC's Board of Directors adopted the following
20 resolution in July 2013.⁴

21 **WHEREAS**, There is both a constitutional
22 basis and judicial precedent allowing investor
23 owned public water and wastewater utilities

⁴ "Resolution Supporting Consideration of Regulatory Policies Deemed as 'Best Practices'", Sponsored by the Committee on Water. Adopted by the NARUC Board of Directors, July 2013.

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the opportunity to earn a rate of return that is reasonably sufficient to assure confidence in the financial soundness of the utility and its ability to provide quality service; and

WHEREAS, Through the *Resolution Supporting Consideration of Regulatory Policies Deemed as "Best Practices"* (2005), the National Association of Regulatory Utility Commissioners (NARUC) has previously recognized the role of innovative regulatory policies and mechanisms in the ability for public water and wastewater utilities to address significant infrastructure investment challenges facing water and wastewater system operators; and

* * *

WHEREAS, Recent analysis shows that as compared to other regulated utility sectors, significant and widespread discrepancies continue to be observed between commission authorized returns on equity and observed actual returns on equity among regulated water and wastewater utilities; and

* * *

WHEREAS, The extent of such discrepancies suggests the existence of challenges unique to the regulation of water and wastewater utilities; and

WHEREAS, Deficient returns present a clear challenge to the ability of the water and wastewater industry to attract the capital necessary to address future infrastructure investment requirements necessary to provide safe and reliable service, which could exceed one trillion dollars over a 20-year period; and

WHEREAS, The NARUC Committee on Water recognizes the critical role of the implementation and the effective use of sound regulatory practice [sic] and the innovative

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regulatory policies identified in the *Resolution Supporting Consideration of Regulatory Policies Deemed as "Best Practices"*; and

* * *

RESOLVED, That the Board of Directors of the National Association of Regulatory Utility Commissioners, convened at its 2013 Summer Meeting in Denver, Colorado, identifies the implementation and effective use of sound regulatory practice [sic] and the innovative regulatory policies identified in the *Resolution Supporting Consideration of Regulatory Policies Deemed as "Best Practices"* (2005) as a critical component of a water and/or wastewater utility's reasonable ability to earn its authorized return; and *be it further*

RESOLVED, That NARUC recommends that economic regulators carefully consider and implement appropriate ratemaking measures as needed so that water and wastewater utilities have a reasonable opportunity to earn their authorized returns within their jurisdictions...

Q. PLEASE CONTINUE YOUR DISCUSSION OF BUSINESS RISKS.

A. Coupled with its capital-intensive nature, the water utility industry also experiences lower relative depreciation rates as well. Given that depreciation is one of the principal sources of internal cash flows for all utilities, lower depreciation rates mean that water utility depreciation as a source of internally-generated cash is far less than for electric, combination electric and gas or natural gas. Water

1 utility assets have longer lives and, hence, longer capital
2 recovery periods. As such, water utilities face greater risk
3 due to inflation which results in a higher replacement cost
4 per dollar of net plant than for other types of utilities. As
5 shown on page 2 of Ahern Direct Exhibit 2, water utilities
6 experienced an average depreciation rate of 3.0% for 2013,
7 with CWSNC experiencing a lower rate of 2.5%. In contrast,
8 in 2013, the electric, combination electric and gas and
9 natural gas utilities experienced average depreciation rates
10 of 3.4%, 3.4% and 4.0%, respectively. Low depreciation
11 rates signify that the pressure on cash flows remains
12 significantly greater for water utilities than for other types of
13 utilities.

14 Not only is the water utility industry historically capital
15 intensive, it is expected to incur significant capital
16 expenditure needs over the next 20 years.

17 In 2011, the EPA stated the following:⁵

18 The survey estimated a total national
19 infrastructure need of \$384.2 billion for the 20-
20 year period from January 2011 through
21 December 2030.

22 * * *

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25
26 The large magnitude of the national need

⁵ "Fact Sheet: "EPA's 2011 Drinking Water Infrastructure Needs Survey and Assessment," United States Environmental Protection Agency, Office of Water, April 2013.

1 reflects the challenges confronting water
2 systems as they deal with an infrastructure
3 network that has aged considerably since
4 these systems were constructed, in many
5 cases, 50 to 100 years ago.

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9 With \$247.5 billion in needs over the next 20
10 years, transmission and distribution projects
11 represent the largest category of need. This
12 result is consistent with the fact that
13 transmission and distribution mains account for
14 most of the nation's water infrastructure. The
15 other categories, in descending order of need
16 are: treatment, storage, source and a
17 miscellaneous category of needs called "other".
18

19 **Q. FROM WHERE WILL THE NECESSARY CAPITAL TO**
20 **FUND THIS LEVEL OF INFRASTRUCTURE**
21 **REPLACEMENT BE RAISED?**

22 **A.** The question of the source of this necessary capital
23 highlights the importance of capital attraction. Water utility
24 capital expenditures as large as those projected by the EPA
25 will require significant financing. The three sources typically
26 used for financing are debt, equity (common and preferred)
27 and cash flow. All three are intricately linked to the
28 opportunity to earn a sufficient rate of return as well as the
29 ability to achieve that return. Consistent with *Hope* and
30 *Bluefield*, the return must be sufficient enough to maintain
31 credit quality as well as enable the attraction of necessary
32 new capital, be it debt or equity capital. If unable to raise

1 debt or equity capital, the utility must turn to either retained
2 earnings or free cash flow [operating cash flow (funds from
3 operations) minus capital expenditures], both of which are
4 directly linked to earning a sufficient rate of return. The level
5 of free cash flows represents the financial flexibility of a
6 company or a company's ability to meet the needs of its debt
7 and equity holders. As noted above, even *Value Line*⁶
8 notes as much when it states: "Almost no utilities generate a
9 sufficient amount of funds internally to cover the rising
10 capital budgets. Therefore, there should be a fair amount of
11 new debt and equity issued in the years ahead." If either
12 retained earnings or free cash flows are inadequate, it will be
13 nearly impossible for the utility to attract the necessary new
14 capital, on reasonable terms, to invest in needed new
15 infrastructure. It is thus clear that an insufficient rate of
16 return can be financially devastating for utilities and for their
17 customers.

18 In view of the foregoing, the water utility industry's
19 high degree of capital intensity and low depreciation rates,
20 coupled with the need for substantial infrastructure capital
21 spending, makes the need to maintain financial integrity and
22 the ability to attract needed new capital increasingly
23 important in order for water utilities to be able to successfully

⁶ *Value Line* 1779

1 meet the challenges they face.

2 **Q. DOES A COMPANY'S SIZE HAVE A BEARING ON**
3 **BUSINESS RISK?**

4 A. Yes. Lack of sufficient company size is a significant element
5 of business risk for which investors expect to be
6 compensated through higher returns on their investment.
7 Smaller companies are simply less able to cope with
8 significant events that affect sales, revenues and earnings.
9 For example, smaller companies face more risk exposure to
10 business cycles and economic conditions, both nationally
11 and locally. Additionally, the loss of revenues from a few
12 larger customers would have a greater effect on a small
13 company than on a much bigger company with a larger,
14 more diverse, customer base.

15 Further evidence of the risk effects of size includes
16 the fact that investors demand higher returns to compensate
17 for the lack of marketability and liquidity of the securities of
18 smaller firms. Moreover, it is a basic financial principle that it
19 is the use of funds invested and not the source of those
20 funds that gives rise to the risk of any investment.⁷
21 Consistent with the financial principle of risk and return
22 discussed above, such increased risk due to small size must

⁷ Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance
(McGraw-Hill Book Company, 1996) 204-205, 229.

1 be taken into account in the allowed rate of return on
2 common equity.

3 **Q. PLEASE DISCUSS HOW CWSNC'S SIZE INCREASES ITS**
4 **BUSINESS RISK RELATIVE TO THE PROXY GROUP.**

5 A. CWSNC is smaller than the average company in the proxy
6 group of eight water companies based upon estimated
7 market capitalization, providing water and wastewater
8 service to 20,094 (water) and 12,343 (wastewater)
9 customers in 31 counties throughout North Carolina. I will
10 discuss this in greater detail below. For now, as shown on
11 Ahern Direct Exhibit 10, page 1, CWSNC's estimated market
12 capitalization of \$127.613 million is lower than the average
13 market capitalization of the proxy water group, \$2.356 billion
14 at February 27, 2015. Consequently, CWSNC has greater
15 relative business risk because, all else being equal, size has
16 a bearing on risk.

17 Since investors demand an increased return in
18 compensation for assuming greater risk, CWSNC's greater
19 relative business risk must be reflected in the cost of
20 common equity derived from the market data of the less
21 business risky proxy companies in the proxy group.

22

23

1 **Financial Risk**

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

5 **A.** Financial risk is the additional risk created by the introduction
6 of senior capital, i.e., debt and preferred stock, into the
7 capital structure. The higher the proportion of senior capital
8 in the capital structure, the higher the financial risk which
9 must be factored into the common equity cost rate,
10 consistent with the previously mentioned basic financial
11 principle of risk and return, i.e., investors demand a higher
12 common equity return as compensation for bearing higher
13 investment risk.

14 **Q. CAN THE COMBINED BUSINESS RISKS, I.E.,**
15 **INVESTMENT RISK OF AN ENTERPRISE, BE PROXIED**
16 **BY BOND AND CREDIT RATINGS?**

17 **A.** Yes. Similar bond/issuer credit (bond/credit) ratings reflect
18 and are representative of similar combined business and
19 financial risks, i.e., total risk faced by bond investors.
20 Although specific business or financial risks may differ
21 between companies, the same bond/credit rating indicates
22 that the combined risks are similar, albeit not necessarily
23 equal, as the purpose of the bond/credit rating process is to

1 assess credit quality or credit risk and not common equity
2 risk. Risk distinctions within Standard & Poor's ("S&P")
3 bond/issuer rating categories are recognized by a plus or
4 minus, i.e., within the A category, an S&P rating can be at +,
5 A, or A-. Similarly, risk distinctions for Moody's ratings are
6 distinguished by numerical rating gradations, i.e., within the
7 A category, a Moody's rating can be A1, A2 and A3. As
8 shown on Ahern Direct Exhibit 6, page 4, the average S&P
9 long-term issuer rating of the eight water companies is A and
10 the average Moody's long-term issuer rating is A2/A3.

11 **Proxy Group**

12 **Q. PLEASE EXPLAIN HOW YOU CHOSE THE PROXY**
13 **GROUP OF EIGHT WATER COMPANIES.**

14 **A.** I chose the proxy group by selecting those companies which
15 meet the following criteria: 1) they are included in the *Value*
16 *Line's* standard edition (January 16, 2015; 2) they have 70%
17 or greater of 2013 total operating income derived from and
18 70% or greater of 2013 total assets devoted to regulated
19 water operations; 3) at the time of the preparation of this
20 testimony, they had not publicly announced that they were
21 involved in any major merger or acquisition activity, i.e., one
22 publicly-traded utility merging with or acquiring another;
23 4) they have not cut or omitted their common dividends

1 during the five years ending 2014 or through the time of the
2 preparation of this testimony; 5) they have a *Value Line*
3 adjusted beta; and 6) they have *Value Line*, Reuters, Zacks
4 or Yahoo! Finance, consensus five-year earnings per share
5 ("EPS") growth rate projections. The following eight
6 companies met these criteria: American States Water Co.,
7 American Water Works Co., Inc., Aqua America, Inc.,
8 California Water Service Corp., Connecticut Water Service,
9 Inc., Middlesex Water Co., SJW Corp. and York Water Co.⁸

10 **Q. HAVE YOU REVIEWED FINANCIAL DATA FOR THE**
11 **PROXY GROUP?**

12 **A.** Yes. Page 1 of Ahern Direct Exhibit 3 contains comparative
13 capitalization and financial statistics for the eight proxy group
14 water companies for the years 2009-2013.

15 As shown on page 1, during the five-year period
16 ending 2013, the historically achieved average earnings rate
17 on book common equity for the group averaged 9.09%. The
18 average common equity ratio based upon permanent capital
19 (excluding short-term debt) was 50.28%, and the average
20 dividend payout ratio was 61.54%.

21 Total debt outstanding as a percent of EBITDA for the
22 years 2009-2013 ranged between 3.65 and 5.40 times,

⁸ I no longer include Artesian Resources, Inc. in my water proxy group because of a continued lack of forecasted data and Artesian Resources, Inc. is not included in *Value Line's* Standard Edition

1 averaging 4.43 times, while funds from operations relative to
2 total debt range between 16.76% to 22.91%, averaging
3 19.50%.

4 **Capital Structure Ratios and Long-Term Debt Cost Rate**

5 **Q. WHAT CAPITAL STRUCTURE RATIOS AND LONG-TERM**
6 **DEBT COST RATE DO YOU RECOMMEND FOR USE IN**
7 **DETERMINING THE OVERALL COST OF CAPITAL FOR**
8 **CWSNC AND WHY?**

9 A. I recommend that the actual consolidated capital structure
10 ratios and embedded long-term debt cost rate of UI at
11 December 31, 2014 be use to establish an allowed overall
12 rate of return for CWSNC. These ratios, as well as
13 corresponding cost rates, are shown on page 1 of Ahern
14 Direct Exhibit 1. They consist of 48.99% long-term debt, at
15 an embedded cost rate of 6.60%, and 51.01% common
16 equity at my recommended common equity cost rate of
17 10.40%.

18 **Q. ARE THE CONSOLIDATED PARENT CAPITAL**
19 **STRUCTURE RATIOS AT DECEMBER 31, 2014**
20 **APPROPRIATE FOR RATEMAKING PURPOSES?**

21 A. Yes. The Company's current capital structure contains
22 100% common equity, which is not appropriate for
23 ratemaking purposes. Because there is no income tax

1 shield resulting from interest expense deduction for tax
2 purposes, a common equity ratio of 100% would result in an
3 unreasonably high revenue cost of capital, and
4 consequently, higher than necessary rates for customers.

5 UI's capital structure ratios at December 31, 2014 are
6 reasonable to use for ratemaking purposes for CWSNC
7 because they are consistent if not conservative, compared
8 with the capital structure ratios maintained, on average, by
9 the proxy group of eight water companies upon whose
10 market data I relied in deriving my recommended common
11 equity cost rate of 10.40%.

12 **Q. HOW DOES UI'S LONG-TERM DEBT RATIO OF 48.99%**
13 **AT DECEMBER 31, 2014 COMPARE WITH THE LONG-**
14 **TERM DEBT RATIO MAINTAINED, ON AVERAGE, BY**
15 **THE PROXY GROUP?**

16 **A.** UI's long-term debt ratio of 48.99% at December 31, 2014 is
17 similar to the long-term debt ratio based upon permanent
18 (excluding short-term debt) capital of 49.52% for the five
19 years ending 2013 and 46.24% for 2013 as shown on page
20 1 of Ahern Direct Exhibit 3 and detailed by the individual
21 proxy group companies on page 2. However, as this case
22 progresses, I recommend that the Commission set rates for
23 CWSNC based upon the most recently available actual

1 capital structure of UI.

2 **Common Equity Cost Rate Models**

3 **Q. ARE THE COST OF COMMON EQUITY MODELS YOU**
4 **USE MARKET-BASED MODELS?**

5 **A.** Yes. It is important to use market-based models because
6 the cost of common equity is a function of investors'
7 perception of risk, which is embodied in the market prices
8 they pay. The DCF model is market-based in that market
9 prices are utilized in developing the dividend yield
10 component of the model. The RPM is market-based in that
11 the bond/issuer ratings and expected bond yields used in the
12 application of the RPM reflect the market's assessment of
13 bond/credit risk. Also, market prices are used in the
14 development of the returns and equity risk premiums used in
15 the Predictive Risk Premium Model ("PRPM"). In addition,
16 the use of betas to determine the equity risk premium also
17 reflects the market's assessment of market/systematic risk
18 as betas are derived from regression analyses of market
19 prices. The CAPM is market-based for many of the same
20 reasons that the RPM is market-based i.e., the use of
21 expected bond (U.S. Treasury bond) yields and betas.

1 **Discounted Cash Flow Model ("DCF")**

2 **Q. WHAT IS THE THEORETICAL BASIS OF THE DCF**
3 **MODEL?**

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

15 **Q. WHICH VERSION OF THE DCF MODEL DO YOU USE?**

16 A. I utilize the single-stage constant growth DCF model
17 because, in my experience, it is the most widely utilized
18 version of the DCF in public utility rate regulation. In my
19 opinion, it is widely utilized because utilities are generally in
20 the mature stage of their lifecycles and not transitioning from
21 one growth stage to another.

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

1 A. The unadjusted dividend yields are based upon a recent
2 (February 27, 2015) indicated dividend divided by the
3 average of closing market prices for the 60 days ending
4 February 27, 2015 as shown in Column [1] on page 1 of
5 Ahern Direct Exhibit 4.

6 **Q. PLEASE EXPLAIN THE ADJUSTED DIVIDEND YIELD**
7 **SHOWN ON PAGE 1 OF AHERN DIRECT EXHIBIT 4,**
8 **COLUMN [7].**

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

13 DCF theory calls for the use of the full growth rate, or
14 D_1 , in calculating the dividend yield component of the model.
15 However, since the various companies in the proxy group
16 increase their quarterly dividend at various times during the
17 year, a reasonable assumption is to reflect one-half the
18 annual dividend growth rate in the dividend yield component,
19 or $D_{1/2}$. This is a conservative approach, which does not
20 overstate the dividend yield that should be representative of
21 the next twelve-month period. Therefore, the actual average
22 dividend yields in Column [1] on page 1 of Ahern Direct
23 Exhibit 4 have been adjusted upward to reflect one-half the

1 average projected growth rate shown in Column [6].

2 **Q. PLEASE EXPLAIN THE BASIS OF THE GROWTH RATES**
3 **OF THE PROXY GROUP THAT YOU USE IN YOUR**
4 **APPLICATION OF THE DCF MODEL.**

5 A. Ahern Direct Exhibit 5 shows that on average approximately
6 48% of the common shares of the eight water companies are
7 held by individuals as opposed to institutional investors.
8 Institutional investors tend to have more extensive
9 informational resources than most individual investors.
10 Individual investors, with more limited resources, are
11 therefore likely to place great significance on the opinions
12 expressed by financial information services, such as *Value*
13 *Line*, Reuters, Zacks and Yahoo! Finance, which are easily
14 accessible and/or available on the Internet and through
15 public libraries. Investors realize that analysts have
16 significant insight into the dynamics of the industries and
17 individual companies they analyze, as well as an entity's
18 historical and future abilities to effectively manage the effects
19 of changing laws and regulations and ever changing
20 economic and market conditions.

21 Security analysts' earnings expectations have a more
22 significant, but not sole, influence on market prices than
23 dividend expectations and market price appreciation or the

1 "growth" experienced by investors.⁹ Moreover, over the long
2 run, there can be no growth in dividends per share without
3 growth in EPS. Thus, the use of earnings growth rates in a
4 DCF analysis provides a better matching between investors'
5 market price appreciation expectations and the growth rate
6 component of the DCF.

7 **Q. PLEASE SUMMARIZE YOUR DCF MODEL RESULTS.**

8 A. As shown on page 1 of Ahern Direct Exhibit 4, the average
9 result of the application of the single-stage DCF model is
10 8.84% while the median result is 8.52%. In arriving at a
11 conclusion of a DCF-indicated common equity cost rate for
12 the proxy group, I have relied upon the median result of the
13 DCF, due to the wide range of DCF results as well as
14 continuing volatile capital market conditions in light of the
15 continued slow recovery of the economy, and to not give
16 undue weight to outliers on either the high or the low side. In
17 my opinion, the median is a more accurate and reliable
18 measure of central tendency, and provides recognition of all
19 the DCF results.

20 **The Risk Premium Model ("RPM")**

⁹ Roger A. Morin, New Regulatory Finance (Public Utility Reports, Inc., 2006) 298-303.

1 Q. PLEASE DESCRIBE THE THEORETICAL BASIS OF THE
2 RPM.

3 A. The RPM is based upon the basic financial principle of risk
4 and return, namely, that investors require greater returns for
5 bearing greater risk. The RPM recognizes that common
6 equity capital has greater investment risk than debt capital,
7 as common equity shareholders are last in line in any claim
8 on an entity's assets and earnings, with debt holders being
9 first in line. Therefore, investors require higher returns from
10 investment in common stocks than from investment in bonds
11 to compensate them for bearing the additional risk.

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

1 Q. PLEASE EXPLAIN HOW YOU DERIVED YOUR
2 INDICATED COST OF COMMON EQUITY BASED UPON
3 THE RPM.

4 A. I relied upon the results of the application of two risk
5 premium methods. The first method is the Predictive Risk
6 Premium Model (PRPM), while the second method is a risk
7 premium model using an adjusted total market approach.

8 Q. PLEASE EXPLAIN THE PRPM.

9 A. The PRPM, published in the Journal of Regulatory
10 Economics (JRE)¹⁰ and The Electricity Journal (TEJ),¹¹ was
11 developed from the work of Robert F. Engle who shared the
12 Nobel Prize in Economics in 2003 "for methods of analyzing
13 economic time series with time-varying volatility ("ARCH")¹²
14 with "ARCH" standing for autoregressive conditional
15 heteroskedasticity. In other words, the volatility of stock
16 returns and equity risk premiums changes over time and is
17 related from one period to the next. Engle discovered that
18 the volatility in market prices, returns, and equity risk

¹⁰ "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.

¹¹ "Comparative Evaluation of the Predictive Risk Premium Model™, the Discounted Cash Flow Model and the Capital Asset Pricing Model", Pauline M. Ahern, Richard A. Michelfelder, Ph.D., Rutgers University, Dylan W. D'Ascendis, and Frank J. Hanley, The Electricity Journal (May, 2013).

¹² www.nobelprize.org

1 premiums also clusters over time, making them highly
2 predictable and available to predict future levels of risk and
3 risk premiums. In other words, the predicted equity risk
4 premium is generated by the prediction of volatility (risk).
5 The PRPM estimates the risk / return relationship directly by
6 analyzing the actual results of investor behavior rather than
7 using subjective judgment as to the inputs required for the
8 application of other cost of common equity models. Thus,
9 the PRPM is not based upon an estimate of investor
10 behavior, but rather upon the evaluation of the actual results
11 of that behavior, i.e., the variance of historical equity risk
12 premiums.

13 The inputs to the model are the historical returns on
14 the common shares of each utility in the proxy group minus
15 the historical monthly yield on long-term U.S. Treasury
16 securities through February 2015. Using a generalized form
17 of ARCH, known as GARCH, each water utility's projected
18 equity risk premium was determined using Eviews®
19 statistical software. The forecasted 30-year U.S. Treasury
20 Bond (Note) yield of 3.61% is based upon the consensus
21 forecast for the six quarters ending with the second quarter
22 2016, derived from the March 1, 2015 Blue Chip Financial
23 Forecasts (Blue Chip), was averaged with the long-range

1 forecasts for 2016-2020 and 2021-2025 from the December
2 1, 2014 *Blue Chip* (shown on pages 9 and 10 of Ahern Direct
3 Exhibit 6) as discussed below. The risk-free rate of 3.61%
4 was then added to each company's PRPM-derived equity
5 risk premium to arrive at a PRPM-derived cost of common
6 equity as shown on page 2 of Ahern Direct Exhibit 6 which
7 presents the average and median results for each proxy
8 company. As shown on page 2, the average PRPM
9 indicated common equity cost rate is 12.31% and the
10 median is 11.81% for the eight water companies. Consistent
11 with my use of the median DCF results, I rely upon the
12 median PRPM results of 11.81%.

13 **Q. PLEASE EXPLAIN THE ADJUSTED TOTAL MARKET**
14 **APPROACH RPM.**

15 **A.** The adjusted total market approach RPM adds a prospective
16 public utility bond yield to an equity risk premium which is
17 derived from a beta-adjusted total market equity risk
18 premium and an equity risk premium based upon the S&P
19 Utilities Index.

20 **Q. PLEASE EXPLAIN THE BASIS OF THE ADJUSTED**
21 **PROSPECTIVE BOND YIELD OF 4.88% APPLICABLE TO**
22 **THE EIGHT WATER COMPANIES SHOWN ON PAGE 3**
23 **OF AHERN DIRECT EXHIBIT 6.**

1 A. The first step in the adjusted total market approach RPM
2 analysis is to determine the expected bond yield. Because
3 both ratemaking and the cost of capital, including common
4 equity cost rate, are prospective in nature, a prospective
5 yield on long-term debt similarly rated to the proxy group is
6 essential. Hence, I rely on a consensus forecast of about 50
7 economists of the expected yield on Aaa rated corporate
8 bonds for the six calendar quarters ending with the second
9 calendar quarter of 2016 as derived from the March 1, 2015
10 *Blue Chip* averaged with the long-range forecasts for 2016-
11 2020 and 2021-2025 from the December 1, 2014 *Blue Chip*
12 (shown on pages 9 and 10 of Ahern Direct Exhibit 6). As
13 shown on Line No. 1 of page 3, the average expected yield
14 on Moody's Aaa rated corporate bonds is 4.65%. An
15 adjustment of 0.10% is necessary to adjust that average Aaa
16 corporate bond yield to be equivalent to a Moody's A rated
17 public utility bond, as shown on Line No. 2 and explained in
18 Note 2 resulting in an expected bond yield applicable to a
19 Moody's A rated public utility bond of 4.75% as shown on
20 Line No. 3.

21 Since the eight water companies' average Moody's
22 issuer rating is A2/A3, an adjustment of 0.13% is necessary
23 to make the prospective bond yield applicable to the proxy

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1 group's average A2/A3 long-term issuer rating, as detailed in
2 Note 3 on page 3 of Ahern Direct Exhibit 6. Therefore, the
3 adjusted prospective bond yield is 4.88% for the eight water
4 companies as shown on Line No. 5.

5 **Q. PLEASE EXPLAIN THE METHOD OF ESTIMATING THE**
6 **EQUITY RISK PREMIUM IN THE ADJUSTED TOTAL**
7 **MARKET APPROACH.**

8 A. I evaluated the results of market equity risk premium studies
9 based upon Ibbotson Associates' data and *Value Line's*
10 forecasted total annual market return in excess of the
11 prospective yield on Moody's Aaa corporate bonds, as well
12 as two different studies of the equity risk premium for public
13 utilities with Moody's A rated bonds as detailed on pages 8
14 and 11 of Ahern Direct Exhibit 6. As shown on Line No. 3,
15 page 7 of Ahern Direct Exhibit 6, the average equity risk
16 premium is 4.79% applicable to the eight water companies.
17 This estimate is the result of an average of a beta-derived
18 equity risk premium as well as the average public utility
19 equity risk premium relative to bonds rated A by Moody's
20 based upon holding period returns.

21 **Q. PLEASE EXPLAIN THE BASIS OF THE BETA-DERIVED**
22 **EQUITY RISK PREMIUM.**

23 A. The basis of the beta-derived equity risk premium applicable

1 to the proxy group is shown on page 8 of Ahern Direct
2 Exhibit 6. The beta-determined equity risk premium is
3 relevant because betas are derived from the market prices of
4 common stocks over a recent five-year period. Beta is a
5 measure of relative risk to the market as a whole and a
6 logical means by which to allocate an entity's/proxy group's
7 share of the total market's equity risk premium relative to
8 corporate bond yields.

9 The total market equity risk premium utilized is 6.55%,
10 based upon an average of the long-term arithmetic mean
11 historical market equity risk premium; a predicted market
12 equity risk premium based upon the PRPM; a forecasted
13 market equity risk premium based upon *Value Line's*
14 projected market appreciation and dividend yield; and, a
15 forecasted market equity risk based upon the S&P 500's
16 projected market appreciation and dividend yield as detailed
17 below and in Notes 1 through 4 on page 7 of Ahern Direct
18 Exhibit 6.

19 **Q. HOW DID YOU DERIVE THE LONG-TERM HISTORICAL**
20 **MARKET EQUITY RISK PREMIUM?**

21 **A.** To derive the historical (expectational) market equity risk
22 premium, I used the most recent Morningstar data on
23 holding period returns for the large company common stocks

1 from the Ibbotson® SBBI® 2014 Valuation Yearbook – Market
2 Results for Stocks, Bonds, Bill and Inflation (“SBBI –
3 2014”)¹³ and the average historical yield on Moody’s Aaa
4 and Aa rated corporate bonds for the period 1926-2013.
5 Moreover, the use of holding period returns over a very long
6 period of time is useful because it is consistent with the long-
7 term investment horizon presumed by the DCF model.

8 Consequently, as explained in Note 1 on page 8 of
9 Ahern Direct Exhibit 6, the long-term arithmetic mean
10 monthly total return rate on large company common stocks
11 of 12.05% and the long-term arithmetic mean monthly yield
12 on Moody’s Aaa and Aa rated corporate bonds of 6.20%
13 were used. As shown on Line No. 1, the resultant long-term
14 historical equity risk premium on the market as a whole is
15 5.85%.

16 I used arithmetic mean monthly total return rates for
17 the large company stocks and yields (income returns) for
18 Moody’s Aaa/Aa corporate bonds, because they are
19 appropriate for cost of capital purposes as noted in the
20 SBBI – 2014. Arithmetic mean return rates and yields are
21 appropriate because ex-post (historical) total returns and
22 equity risk premiums differ in size and direction over time,

¹³ Ibbotson® SBBI® Valuation Yearbook – Market Results for Stocks,
Bonds, Bills and Inflation, Morningstar, Inc., 2014.

1 providing insight into the variance and standard deviation of
2 returns. Because the arithmetic mean captures the
3 prospect for variance in returns and equity risk premiums, it
4 provides the valuable insight needed by investors in
5 estimating future risk when making a current investment.
6 Absent such valuable insight into the potential variance of
7 returns, investors cannot meaningfully evaluate prospective
8 risk. If investors alternatively relied upon the geometric
9 mean of ex-post equity risk premiums, they would have no
10 insight into the potential variance of future returns because
11 the geometric mean relates the change over many periods of
12 time to a constant rate of change, thereby obviating the
13 period-to-period fluctuations, or variance, *critical to risk*
14 *analysis*.

15 Only the arithmetic mean takes into account all of the
16 returns / premiums, hence, providing meaningful insight into
17 the variance and standard deviation of those returns /
18 premiums.

19 **Q. PLEASE EXPLAIN THE DERIVATION OF PRPM MARKET**
20 **EQUITY RISK PREMIUM.**

21 A. The inputs to the model are the historical monthly returns on
22 large company common stocks from SBBI – 2014 minus the
23 monthly yields on Aaa and Aa corporate bonds during the

1 period from January 1926 through January 2015 (the latest
2 available at the time of the preparation of this testimony),
3 consistent with the rationale for using of the long-term
4 historical arithmetic market equity risk premium discussed
5 above. Using the previously discussed generalized form of
6 ARCH, known as GARCH, the market's projected equity risk
7 premium was determined using Eviews® statistical software.
8 The resulting predicted market equity risk premium based
9 upon the PRPM of 6.18% is shown on Line No. 2 on page 8
10 of Ahern Direct Exhibit 6.

11 **Q. PLEASE EXPLAIN THE DERIVATION OF A MARKET**
12 **EQUITY RISK PREMIUM BASED UPON VALUE LINE'S**
13 **3-5 YEAR ESTIMATED MEDIAN TOTAL ANNUAL**
14 **MARKET RETURN MINUS THE PROSPECTIVE YIELD ON**
15 **AAA RATED CORPORATE BONDS IN YOUR**
16 **DEVELOPMENT OF A MARKET EQUITY RISK PREMIUM**
17 **FOR YOUR RPM ANALYSIS.**

18 **A.** Because both ratemaking and the cost of capital, including
19 the cost rate of common equity, are prospective, a
20 prospective market equity risk premium is essential.
21 The derivation of the *Value Line* based forecasted or
22 prospective market equity risk premium of 4.76% can be
23 found in Note 3 on page 8 of Ahern Direct Exhibit 6.

1 Consistent with the development of the dividend yield
2 component of my DCF analysis, it is derived from an
3 average of the most recent thirteen weeks ending February
4 27, 2015 3-5 year estimated median market price
5 appreciation potential by *Value Line* plus an average of the
6 median estimated dividend yield for the common stocks of
7 the approximately 1,700 firms covered in *Value Line's*
8 Standard Edition as explained in detail in Note 1 on page 2
9 of Ahern Direct Exhibit 7.

10 The average median expected price appreciation is
11 3%, which translates to a 7.39% annual appreciation and,
12 when added to the average (similarly calculated) median
13 dividend yield of 2.02% equates to a forecasted annual total
14 return rate on the market as a whole of 9.41%. The
15 forecasted total market equity risk premium of 4.76%, shown
16 on Line No. 3, page 8 of Ahern Direct Exhibit 6, is derived by
17 deducting the 4.65% prospective yield on Moody's Aaa rated
18 corporate bonds discussed previously from the *Value Line*-
19 derived projected market return of 9.41% ($4.76\% = 9.41\% -$
20 4.65%).

21 **Q. PLEASE EXPLAIN THE DERIVATION OF THE MARKET**
22 **EQUITY RISK PREMIUM BASED UPON THE S&P 500.**

23 **A.** Using data from Bloomberg Professional Service, an

1 expected total return for the S&P 500 can be derived by
2 adding the expected dividend yield for the S&P 500 to long-
3 term growth in earnings per share as a proxy for capital
4 appreciation. The expected total return for the S&P 500 is
5 14.05%. Subtracting the prospective yield on Moody's Aaa
6 rated corporate bonds of 4.65% results in a 9.40% projected
7 market equity risk premium.

8 In arriving at my conclusion of market equity risk
9 premium of 6.55% on Line No. 4 on page 8, I averaged the
10 historical market equity risk premium of 5.85%; the PRPM
11 based market equity risk premium of 6.18%; the *Value Line*-
12 based forecasted market equity risk premium of 4.76%; and
13 the S&P 500 projected market equity risk premium of 9.40%
14 shown on Line Nos. 1 through 4. $(6.55\% = ((5.85\% + 6.18\%$
15 $+ 4.76\% + 9.40\%) / 4)$.

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

19 **A.** As shown on page 1 of Ahern Direct Exhibit 7, the most
20 current average and median *Value Line* betas for the eight
21 water companies is 0.74. Applying a median beta of 0.74 to
22 the market equity risk premium of 6.55%, on Line No. 4 of
23 page 8 of Ahern Direct Exhibit 6, results in a beta adjusted

1 equity risk premium of 4.85% for the eight water companies.

2 **Q. HOW DID YOU DERIVE THE 4.73% EQUITY RISK**
3 **PREMIUM BASED UPON THE S&P UTILITY INDEX AND**
4 **MOODY'S A RATED PUBLIC UTILITY BONDS?**

5 A. First, I derived the long-term monthly arithmetic mean equity
6 risk premium between the S&P Utility Index total returns of
7 10.69% and monthly A rated public utility bond yields of
8 6.48% from 1928-2014 to arrive at an equity risk premium of
9 4.21% as shown on Line No. 3 on page 11 of Ahern Direct
10 Exhibit 6. I then performed the PRPM using historical
11 monthly equity risk premiums from January 1928 through
12 February 2015 to arrive at the PRPM derived equity risk
13 premium of 4.18% for the S&P Utility Index shown on Line
14 No. 4, on page 11. Finally, I derived the projected total
15 return on the S&P Utilities Index using data from Bloomberg
16 Professional Service of 10.55%, identically to the projected
17 total return on the S&P 500 discussed above, and
18 subtracting the prospective Moody's A rated public utility
19 bond yield of 4.75% from Line No. 3 on page 3 of Ahern
20 Direct Exhibit 6. The resulting equity risk premium is 5.80%

21 I rely upon the average of the historical (4.21%); the
22 PRPM (4.18%) and S&P Utilities Index (5.80%) derived
23 equity risk premiums, which is 4.73%. $(4.73\% = ((4.21\% +$

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1 4.18% + 5.80%) / 3).

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

5 A. The equity risk premium applicable to the proxy group of
6 eight water companies is the average of the beta-derived
7 premium, 4.85%, and that based upon the holding period
8 returns of public utilities with Moody's A rated bonds, 4.73%,
9 as summarized on Line No. 3 on Ahern Direct Exhibit 6,
10 page 7, i.e., $(4.79\% = (4.85\% + 4.73\%) / 2)$.

11 **Q. WHAT IS THE INDICATED RPM COMMON EQUITY COST**
12 **RATE BASED UPON THE ADJUSTED TOTAL MARKET**
13 **APPROACH?**

14 A. It is 9.67% for the eight water companies as shown on Line
15 No. 7 on Ahern Direct Exhibit 6 page 3.

16 **Q. WHAT ARE THE RESULTS OF YOUR APPLICATION OF**
17 **THE PRPM AND THE ADJUSTED TOTAL MARKET**
18 **APPROACH RPM?**

19 A. As shown on page 1 of Ahern Direct Exhibit 6, the indicated
20 RPM-derived common equity cost rate is 10.74%, derived by
21 averaging the PRPM results with those based upon the
22 adjusted total market approach. $(10.74\% = ((11.81\% +$
23 $9.67\%) / 2)$.

1 The Capital Asset Pricing Model ("CAPM")

2 Q. PLEASE EXPLAIN THE THEORETICAL BASIS OF THE
3 CAPM.

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

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

20 $R_s = R_f + \beta(R_m - R_f)$

21 Where: R_s = Return rate on common stock
22 R_f = Risk-free rate of return
23 R_m = Return rate on the entire market
24 B = Adjusted beta

25 Numerous tests of the CAPM have measured the
26

1 extent to which security returns and betas are related as
2 predicted by the CAPM confirming its validity. The empirical
3 CAPM ("ECAPM") reflects the reality that while the results of
4 these tests support the notion that beta is related to security
5 returns, the empirical Security Market Line ("SML")
6 described by the CAPM formula is not as steeply sloped as
7 the predicted SML.¹⁴

8 In view of theory and practical research, I have
9 applied both the traditional CAPM and the ECAPM to the
10 companies in the proxy group and averaged the results.

11 **Q. PLEASE DESCRIBE YOUR SELECTION OF THE BETA**
12 **COEFFICIENT FOR YOUR CAPM ANALYSIS?**

13 A. I relied upon an average of the adjusted betas published by
14 the *Value Line* and provided by Bloomberg Professional
15 Service.

16 **Q. PLEASE DESCRIBE YOUR SELECTION OF A RISK-FREE**
17 **RATE OF RETURN FOR YOUR CAPM ANALYSIS.**

18 A. As shown in column [3] on page 1 of Ahern Direct Exhibit 7,
19 the risk-free rate adopted for both applications of the CAPM
20 is 3.61%. The risk-free rate for my CAPM analysis is based
21 upon the average of the consensus forecast of the second
22 calendar quarter of 2016 from the March 1, 2015 *Blue Chip*

¹⁴ Morin 175.

1 averaged with the long-range forecasts for 2016-2020 and
2 2021-2025 from the December 1, 2014 *Blue Chip*, as shown
3 in Note 2, page 2 of Ahern Direct Exhibit 7.

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

7 A. The yield on long-term U.S. Treasury T-Bonds is almost risk-
8 free and its term is consistent with the long-term cost of
9 capital to public utilities measured by the yields on A rated
10 public utility bonds, the long-term investment horizon
11 inherent in utilities' common stocks, the long-term
12 investment horizon presumed in the standard DCF model
13 employed in regulatory ratemaking, and the long-term life of
14 the jurisdictional rate base to which the allowed fair rate of
15 return (i.e., cost of capital) will be applied. In contrast, short-
16 term U.S. Treasury yields are more volatile and largely a
17 function of Federal Reserve monetary policy.

18 **Q. PLEASE EXPLAIN THE ESTIMATION OF THE EXPECTED**
19 **EQUITY RISK PREMIUM FOR THE MARKET.**

20 A. The basis of the market equity risk premium is explained in
21 detail in Note 1 on page 2 of Ahern Direct Exhibit 7. It is
22 derived from *Value Line's* 3-5 year median total market price
23 appreciation projections averaged over the most recent

1 thirteen weeks ending February 27, 2015; the arithmetic
2 mean monthly equity risk premiums of large company
3 common stocks relative to long-term U.S. Treasury bond
4 income yields from SBBI-2014 from 1926-2013; the PRPM
5 predicted market equity risk premium using monthly equity
6 risk premiums for large company common stocks relative to
7 long-term U.S. Treasury securities from January 1926
8 through January 2015 (the latest available at the time of the
9 preparation of this testimony); and the projected total return
10 on the S&P 500 less the projected risk free rate as detailed
11 below and in Note 1 on of Ahern Direct Exhibit 7.

12 The *Value Line*-derived forecasted total market equity
13 risk premium is derived by deducting the 3.61% risk-free rate
14 discussed above from the *Value Line* projected total annual
15 market return of 9.41%, also discussed above, resulting in a
16 forecasted total market equity risk premium of 5.80%.

17 The long-term income return on U.S. Government
18 Securities of 5.26% was deducted from the SBBI-2014
19 monthly historical total market return of 12.05% resulting in
20 an historical market equity risk premium of 6.79%.

21 The PRPM market equity risk premium is 6.98%,
22 derived using the PRPM, discussed above, relative to the
23 yields on long-term U.S. Treasury securities from January

1 1926 through January 2015 (the latest available at the time
2 of the preparation of this testimony).

3 The S&P 500 projected market equity risk premium of
4 10.44% is derived by subtracting the 3.61% projected risk-
5 free rate, discussed above, from the projected total return of
6 14.05%, also discussed above.

7 These four market equity risk premiums result in an
8 average total market equity risk premium of 7.50%. $(7.50\%$
9 $= ((5.80\% + 6.79\% + 6.98\% + 10.44\%) / 4)$

10 **Q. WHAT ARE THE RESULTS OF YOUR APPLICATION OF**
11 **THE TRADITIONAL AND EMPIRICAL CAPM TO THE**
12 **PROXY GROUP?**

13 **A.** As shown on Ahern Direct Exhibit 7, page 1, the average
14 traditional CAPM cost rate is 9.10% while the median is
15 9.16% for the eight water companies. The average ECAPM
16 cost rate is 9.61%, while the median is 9.65%. Consistent
17 with my reliance upon the median results of the DCF
18 discussed above, I rely upon the median results of the
19 traditional CAPM and ECAPM for the proxy group, 9.16%
20 and 9.65%, respectively, or 9.41% as shown on column [6]
21 on page 1 of Ahern Direct Exhibit 7. $(9.41\% = ((9.16\% +$
22 $9.65\%) / 2)$

23 **Common Equity Cost Rates for the Proxy Group of Domestic,**

1 Non-Price Regulated Companies Based Upon the DCF, RPM
2 and CAPM

3 Q. PLEASE DESCRIBE THE BASIS OF APPLYING COST OF
4 COMMON EQUITY MODELS TO COMPARABLE RISK,
5 NON-PRICE REGULATED COMPANIES.

6 A. Applying cost of common equity models to non-price
7 regulated companies, comparable in total risk, is derived
8 from the "corresponding risk" standard of the landmark
9 cases of the U.S. Supreme Court, i.e., Hope and Bluefield,
10 previously discussed. Therefore, it is consistent with the
11 Hope doctrine that the return to the equity investor should be
12 commensurate with returns on investments in other firms
13 having corresponding risks based upon the fundamental
14 economic concept of opportunity cost which maintains that
15 the true cost of an investment is equal to the cost of the best
16 available alternative use of the funds to be invested. The
17 opportunity cost principle is also consistent with one of the
18 fundamental principles upon which regulation rests: that
19 regulation is intended to act as a surrogate for competition
20 and to provide a fair rate of return to investors.

21 The first step in determining such an opportunity cost
22 of common equity based upon a group of non-price
23 regulated companies comparable in total risk to the eight

1 water companies is to choose an appropriate broad-based
2 proxy group of non-price regulated firms comparable in total
3 risk to the proxy group of eight water companies which
4 excludes utilities to avoid circularity.

5 The selection criteria for the non-price regulated firms
6 of comparable risk are based upon statistics derived from
7 the market prices paid by investors. *Value Line* betas were
8 used as a measure of systematic risk. The standard error of
9 the regression was used as a measure of each firm's
10 unsystematic or specific risk with the standard error of the
11 regression reflecting the extent to which events specific to a
12 company's operations affect its stock price. In essence,
13 companies which have similar betas and standard errors of
14 the regression, have similar total investment risk. Using a
15 *Value Line* proprietary database dated December 15, 2015,
16 the application of these criteria based upon the eight water
17 companies results in a proxy group of non-price regulated
18 firms comparable in total risk to the average water company
19 in the proxy group of eight water companies as explained on
20 page 1 of Ahern Direct Exhibit 8. Pages 3 provides the
21 identities of the companies in the proxy group of non-price
22 regulated companies.

23 Q. DID YOU CALCULATE COMMON EQUITY COST RATES

1 USING THE DCF, RPM AND CAPM FOR THE PROXY
2 GROUP OF DOMESTIC, NON-PRICE REGULATED
3 COMPANIES THAT ARE COMPARABLE IN TOTAL RISK
4 TO THE UTILITY PROXY GROUP?

5 A. Yes. Because the DCF, RPM and CAPM have been applied
6 in an identical manner as described above relative to the
7 market data of the eight water companies, I will not repeat the
8 details of the rationale and application of each model shown
9 on page 1 of Ahern Direct Exhibit 9. An exception is that, in
10 the application of the RPM, I did not use public utility-specific
11 equity risk premiums nor apply the PRPM to the individual
12 companies.

13 Page 2 of Ahern Direct Exhibit 9 contains the
14 derivation of the DCF cost rates. As shown, the average and
15 median DCF cost rates for the proxy group of twenty-eight
16 non-price regulated companies comparable in total risk to the
17 eight water companies, is 10.63%.

18 Pages 3 through 5 of Ahern Direct Exhibit 9 contain
19 information relating to the 11.01% RPM cost rate for the proxy
20 group of twenty-eight non-price regulated companies
21 summarized on page 3. As shown on Line No. 1 of page 3,
22 the consensus prospective yield on Moody's Baa rated
23 corporate bonds of 5.51% is based upon the forecasted yields

1 for the six quarters ending with the second quarter of 2016
2 averaged with the long-range forecasted yields for 2016-2020
3 and 2021-2025 from the March 1, 2015 and December 1,
4 2014 *Blue Chip*, respectively. Since the twenty-eight non-
5 price regulated companies comparable in total risk to the
6 eight water companies have an average Moody's long-term
7 issuer rating of Baa2 as shown on page 4 of Ahern Direct
8 Exhibit 9, no adjustment is necessary to make the prospective
9 bond yield applicable to the Baa corporate bond yield. Thus,
10 the expected specific bond yield is 5.51% for the twenty-eight
11 non-price regulated companies as shown on Line No. 1 on
12 page 3 of Ahern Direct Exhibit 9. When the beta-adjusted risk
13 premium of 5.50% relative to the proxy group of non-price
14 regulated companies, as derived on page 5, is added to the
15 prospective Baa rated corporate bond yields of 5.51%, the
16 indicated RPM cost rate is 11.10%.

17 Page 6 of Ahern Direct Exhibit 9 contains the details of
18 the application of the traditional CAPM and ECAPM to the
19 proxy group of twenty-eight non-price regulated companies
20 comparable in total risk to the eight water companies. As
21 shown, the median traditional CAPM and ECAPM results are
22 10.17% and 10.21%, respectively, for the twenty-eight non-
23 price regulated companies which, when averaged, result in an

1 indicated CAPM cost rate of 10.19%.

2 Q. WHAT IS YOUR CONCLUSION OF THE COST RATE OF
3 COMMON EQUITY BASED UPON THE PROXY GROUP
4 OF NON-PRICE REGULATED COMPANIES
5 COMPARABLE IN TOTAL RISK TO THE EIGHT WATER
6 COMPANIES?

7 A. As shown on page 1 of Ahern Direct Exhibit 9, the results of
8 the DCF, RPM and CAPM applied to the non-price regulated
9 group comparable in total risk to the eight water companies
10 are 10.63%, 11.01% and 10.06%, respectively. Based upon
11 these results, I will rely upon the median of the DCF, RPM
12 and CAPM results of 10.63% for the proxy group of non-
13 price regulated companies as summarized on page 1 of
14 Ahern Direct Exhibit 9.

15 **Conclusion of Common Equity Cost Rate**

16 Q. WHAT IS YOUR RECOMMENDED COMMON EQUITY
17 COST RATE?

18 A. It is 10.40% based upon the indicated common equity cost
19 rate resulting from the application of multiple cost of common
20 equity models to the eight water companies adjusted for
21 CWSNC's business risks.

22 As discussed above, I employ multiple cost of
23 common equity models as primary tools in arriving at my

1 recommended common equity cost rate because: 1) no
2 single model is so inherently precise that it can be relied
3 upon solely to the exclusion of other theoretically sound
4 models; 2) all of the models are market-based; 3) the use of
5 multiple models adds reliability to the estimation of the
6 common equity cost rate; and 4) the prudence of using
7 multiple cost of common equity models is supported in both
8 the financial literature and regulatory precedent. Therefore,
9 no single model should be relied upon exclusively to
10 estimate the investor required rate of return on common
11 equity.

12 The results of the cost of common equity models
13 applied to the eight water companies are shown on page 2
14 of Ahern Direct Exhibit 1, and summarized below:

1		
2	Discounted Cash Flow Model	8.52%
3	Risk Premium Model	10.74
4	Capital Asset Pricing Model	9.41
5		
6	Cost of Equity Models Applied to	
7	Comparable Risk, Non-Price	
8	Regulated Companies	<u>10.63%</u>
9		
10	Indicated Common Equity	
11	Cost Rate	10.02%
12		
13	Business Risk Adjustment	<u>0.40%</u>
14		
15	Indicated Common Equity Cost Rate	10.42%
16		
17	Recommended Common Equity Cost Rate	<u>10.40%</u>

18 **Business Risk Adjustment**

19 **Q. IS THERE A WAY TO QUANTIFY A BUSINESS RISK**
 20 **ADJUSTMENT DUE TO CWSNC'S SMALL SIZE**
 21 **RELATIVE TO THE PROXY GROUP?**

22 **A.** Yes. As discussed above, increased risk due to small size
 23 must be taken into account in the cost of common equity
 24 consistent with the financial principle of risk and return.
 25 Since the Company is smaller in size relative to the proxy
 26 group, measured by the estimated market capitalization of
 27 common equity for CWSNC, whose common stock is not
 28 traded, it has greater business risk than the average
 29 company in the proxy group.

30

	Market Cap. (1) (\$ Millions)	Times Greater than CWSNC
CWSNC	\$127.613	
Proxy Group of Eight Water Cos.	2,355.800	18.5x

(1) From page 1 of Ahern Direct Exhibit 10.

As derived on page 2 of Ahern Direct Exhibit 10, CWSNC's estimated market capitalization based upon the proxy group's February 27, 2015 market-to-book ratio was \$127.613 million. In contrast, the market capitalization of the average water company was \$2.336 billion on February 27, 2015, or 18.5 times the size of CWSNC's market capitalization.

Therefore, it is necessary to upwardly adjust the indicated common equity cost rate of 10.02% based upon the eight water companies to reflect CWSNC's greater risk due to its smaller relative size. The determination is based upon the size premiums for decile portfolios of New York Stock Exchange (NYSE), American Stock Exchange (AMEX) and NASDAQ listed companies for the 1926-2013 period and related data from Duff & Phelps 2015 Valuation Handbook (Preview Edition). The size premium for the 6th decile (1.74%) in which the eight water companies fall has

1 been compared with the size premium for the 10th decile
2 (5.78%) in which the estimated market capitalization of
3 CWSNC falls. As shown on page 1, the size premium
4 spread between the 10th and 6th deciles is 4.04%. In view of
5 the foregoing, I am recommending a business risk
6 adjustment to reflect CWSNC's greater relative business risk
7 due to CWSNC's smaller size relative to the proxy group of
8 0.40%, which, in my opinion, is both reasonable and
9 conservative.

10 Adding a business risk adjustment of 0.40% to the
11 10.02% indicated common equity cost rate based upon the
12 eight water companies before adjustment, results in a
13 business risk-adjusted common equity cost rate of 10.42%¹⁵
14 which when rounded to 10.40% is my recommended
15 common equity cost rate.

16 In my opinion, a common equity cost rate of 10.40%,
17 which results in an overall rate of return of 8.54%, is both
18 reasonable and conservative.

19 A common equity cost rate of 10.40% is consistent
20 with the *Hope* and *Bluefield* standards of a fair and
21 reasonable return which ensures the integrity of presently
22 invested capital and enables the attraction of needed new

¹⁵ 10.42% = 10.02% + 0.40%.

1 capital on reasonable terms. It also ensures the continued
2 reliability and quality of service to the benefit of ratepayers.
3 Thus, it balances the interests of both ratepayers and the
4 Company.

5 **Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?**

6 **A. Yes.**

ATTACHMENT A

RESUME OF

PAULINE M. AHERN, CRRA
PARTNER

SUSSEX ECONOMIC ADVISORS, LLC

Pauline M. Ahern, CRRA
Partner
Sussex Economic Advisors, LLC

Ms. Ahern has served as a consultant for investor-owned and municipal utilities and authorities for 27 years. As a Certified Rate of Return Analyst (CRRA), she has extensive experience in rate of return analyses, including the development of ratemaking capital structure ratios, senior capital cost rates, and the cost rate of common equity for regulated public utilities. She has testified as an expert witness before 29 regulatory commissions and one Canadian province.

She also maintains the benchmark index against which the American Gas Association's (AGA) Mutual Fund performance is measured. Ms. Ahern has also served as President of the Society of Utility Regulatory and Financial Analysts (SURFA) from 2006-2010 and now sits on its Board of Directors. SURFA is a non-profit organization founded to promote the education and understanding of rate of return analysis which represents utility financial analysts in government, the financial community, industry and academia. She also serves on the Finance/Accounting/Taxation Committees of the National Association of Water Companies. Ms. Ahern is also a member of the Advisory Council, Financial Research Institute, University of Missouri - Robert J. Trulaske, Sr. School of Business. She is also a member of Edison Electric Institute's Cost of Capital Working Group.

PROFESSIONAL HISTORY

Sussex Economic Advisors, LLC (2015 – Present)

Partner

AUS Consultants (1988 – 2015)

Principal

- Offered testimony as an expert witness on the subjects of fair rate of return, cost of capital and related issues before state public utility commissions.
- Provided assistance and support to clients throughout the entire ratemaking litigation process; supervision of the financial analyst and administrative staff in the preparation of fair rate of return and cost of capital testimonies and exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies as well as the preparation of interrogatory responses, as well as rebuttal exhibits.
- Responsible for the production, publishing, and distribution of the AUS Utility Reports (formerly C. A. Turner Utility Reports), which has provided financial data and related ratios for about 80 public utilities (*i.e.*, electric, combination gas and electric, natural gas distribution, natural gas transmission, telephone, and water utilities, on a monthly, quarterly and annual basis) since 1930. Subscribers include utilities, many state regulatory commissions, federal agencies, individuals, brokerage firms, attorneys, as well as public and academic libraries.
- Responsible for maintaining and calculating the performance of the AGA

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Index, a market capitalization weighted index of the common stocks of the approximately 70 corporate members of the AGA, which serves as the benchmark for the AGA Gas Utility Index Fund.

Assistant Vice President

- Prepared fair rate of return and cost of capital exhibits which were filed along with expert testimony before various state and federal public utility regulatory bodies; supporting exhibits include the determination of an appropriate ratemaking capital structure and the development of embedded cost rates of senior capital and also support the determination of a recommended return on common equity through the use of various market models, such as, but not limited to, Discounted Cash Flow analysis, Capital Asset Pricing Model and Risk Premium Methodology, as well as an assessment of the risk characteristics of the client utility.
- Assisted in the preparation of responses to any interrogatories received regarding such testimonies filed on behalf of client utilities. Following the filing of fair rate of return testimonies, assisted in the evaluation of opposition testimony in order to prepare interrogatory questions, areas of cross-examination, and rebuttal testimony and evaluated and assisted in the preparation of briefs and exceptions following the hearing process.
- Submitted testimony before state public utility commissions regarding appropriate capital structure ratios and fixed capital cost rates.

Senior Financial Analyst

- Supervised two analysts and assisted in the preparation of fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies; the team also assisted in the preparation of interrogatory responses.
- Evaluated the final orders and decisions of various commissions to determine whether further actions were warranted and to gain insight which assisted in the preparation of future rate of return studies.
- Assisted in the preparation of an article authored by Frank J. Hanley and A. Gerald Harris entitled "Does Diversification Increase the Cost of Equity Capital?" published in the July 15, 1991 issue of Public Utilities Fortnightly.

Administrator of Financial Analysis for AUS Utility Reports

- Oversaw the preparation of this monthly publication, as well as the accompanying annual publication, Financial Statistics - Public Utilities.

Financial Analyst

- Assisted in the preparation of fair rate of return studies including capital structure determination, development of senior capital cost rates, determination of an appropriate rate of return on equity, preparation of interrogatory responses, interrogatory questions of the opposition, areas of cross-examination and rebuttal testimony, as well as preparation of the annual publication C. A. Turner Utility Reports - Financial Statistics - Public Utilities.

Research Dept. of the Regional Economics Division of the Federal Reserve Bank of Boston (1973 - 1975)

Research Assistant

- Involved in the development and maintenance of econometric models to

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RÉSUMÉ OF PAULINE AHERN

simulate regional economic conditions in New England in order to study the effects of, among other things, the energy crisis of the early 1970's and property tax revaluations on the economy of New England. I was also involved in the statistical analysis and preparation of articles for the New England Economic Review. Also, I was Assistant Editor of New England Business Indicators.

Office of the Assistant Secretary for International Affairs, U.S. Treasury Department, Washington, D.C. (1972)

Research Assistant

- Developed and maintained econometric models which simulated the economy of the United States in order to study the results of various alternate foreign trade policies so that national trade policy could be formulated and recommended.

Education

M.B.A., Rutgers University, High Honors, 1991

B.A., Clark University, Honors, 1973

Designations and Professional Affiliations

Advisory Council

Financial Research Institute

University of Missouri's Trulaske School of Business

Edison Electric Institute

Cost of Capital Working Group

National Association of Water Companies

Member of the Finance/Accounting/Taxation and Rates and Regulation Committees

Society of Utility and Regulatory Financial Analysts

Member, Board of Directors – 2010-2014 President – 2006-2008 and 2008-2010

Secretary/Treasurer – 2004-2006

American Finance Association

Financial Management Association

SPEAKING ENGAGEMENTS

"Leadership in the Financial Services Sector", Guest Professor – Cost of Capital, Business Leader Development Program, Rutgers University School of Business,

February 20, 2015, Camden, NJ.

"ROE: Trends & Analysis", American Gas Association, AGA Mini-Forum for the Financial Analysts Community & Finance Committee Meeting, September 11, 2014, The Princeton Club, New York, NY.

Guest Professor, "Measuring Risk", Asset Supervision and Administration Commission of the State Council of the Peoples' Republic of China, Rutgers School of Business, July 21, 2014, New Brunswick, NJ.

Instructor, "Cost of Capital 101", EPCOR Water America, Inc., Regulatory Management Team, June 9, 2014, Phoenix, AZ.

Moderator: Society of Utility Financial Analysts: 46th Financial Forum – "The Rating Agencies' Perspectives: Regulatory Mechanisms and the Regulatory Compact", April 22-25, 2014, Indianapolis, IN.

"The Return on Equity Debate: Its Impact on Budgeting and Investment and Wall Street's View of Risk", National Association of Water Companies – 2014 Indiana Chapter Water Summit, March 13, 2014, Indianapolis, IN.

"Regulatory Training in Financing, Planning, Strategies and Accounting Issues for Publicly- and Privately-Owned Water and Wastewater Utilities", New Mexico State University Center for Public Utilities, October 13-18, 2013, Instructor (Cost of Capital).

"Regulated Utilities – Access to Capital", (panelist) - Innovation: Changing the Future of Energy, 2013 Deloitte Energy Conference, Deloitte Center for Energy Solutions, May 22, 2013, Washington, DC.

"Comparative Evaluation of the Predictive Risk Premium Model, the Discounted Cash Flow Model and the Capital Asset Pricing Model for Estimating the Cost of Common Equity", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Advanced Workshop in Regulation and Competition, 32nd Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 17, 2013, Rutgers University, Shawnee on the Delaware, PA.

"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.

"Issues Surrounding the Determination of the Allowed Rate of Return", before the Staff Subcommittee on Electricity of the National Association of Regulatory Utility Commissioners, Winter 2013 Committee Meetings, February 3, 2013, Washington, DC.

"Leadership in the Financial Services Sector", Guest Professor – Cost of Capital, Business Leader Development Program, Rutgers University School of Business, February 1, 2013, Camden, NJ.

"Analyst Training in the Power and Gas Sectors", SNL Center for Financial Education, Downtown Conference Center at Pace University, New York City, December 12, 2012, Instructor (Financial Statement Analysis).

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"Regulatory Training in Financing Planning, Strategies and Accounting Issues for Publicly and Privately Owned Water and Wastewater Utilities", New Mexico State University Center for Public Utilities, October 14-19, 2012, Instructor (Cost of Financial Capital).

"Application of a New Risk Premium Model for Estimating the Cost of Common Equity", Co-Presenter with Dylan W. D'Ascendis, CRRA, AUS Consultants, Edison Electric Institute Cost of Capital Working Group, October 3, 2012, Webinar.

"Application of a New Risk Premium Model for Estimating the Cost of Common Equity", Co-Presenter with Dylan W. D'Ascendis, CRRA, AUS Consultants, Staff Subcommittee on Accounting and Finance of the National Association of Regulatory Commissioners, September 10, 2012, St. Paul, MN.

"Analyst Training in the Power and Gas Sectors", SNL Center for Financial Education, Downtown Conference Center at Pace University, New York City, August 7, 2012, Instructor (Financial Statement Analysis).

"Advanced Regulatory Training in Financing Planning, Strategies and Accounting Issues for Publicly and Privately Owned Water and Wastewater Utilities", New Mexico State University Center for Public Utilities, May 13-17, 2012, Instructor (Cost of Financial Capital).

"A New Approach for Estimating the Equity Risk Premium Applied to Public Utilities", before the Finance and Regulatory Committees of the National Association of Water Companies, March 29, 2012, Telephonic Conference.

"A New Approach for Estimating the Equity Risk Premium Applied to Public Utilities", (co-presenter with Frank J. Hanley, Principal and Director, AUS Consultants) before the Water Committee of the National Association of Regulatory Utility Commissioners' Winter Committee Meetings, February 7, 2012, Washington, DC.

"A New Approach for Estimating the Equity Risk Premium Applied to Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University and Frank J. Hanley, Principal and Director, AUS Consultants) before the Wall Street Utility Group, December 19, 2011, New York City, NY.

"Advanced Cost and Finance Issues for Water", (co-presenter with Gary D. Shambaugh, Principal & Director, AUS Consultants), 2011 Advanced Regulatory Studies Program – Ratemaking, Accounting and Economics, September 29, 2011, Kellogg Center at Michigan State University – Institute for Public Utilities, East Lansing, MI.

"Public Utility Betas and the Cost of Capital", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Advanced Workshop in Regulation and Competition, 30th Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 20, 2011, Rutgers University, Skytop, PA.

Moderator: Society of Utility and Regulatory Financial Analysts: 43rd Financial Forum –
“Impact of Cost Recovery Mechanisms on the Perception of Public Utility Risk”, April
14-15, 2011, Washington, DC.

“A New Approach for Estimating the Equity Risk Premium for Public Utilities”, (co-
presenter with Richard

A. Michelfelder, Ph.D., Rutgers University) – Hot Topic Hotline Webinar, December 3,
2010, Financial Research Institute of the University of Missouri.

“A New Approach for Estimating the Equity Risk Premium for Public Utilities”, (co-
presenter with Richard

A. Michelfelder, Ph.D., Rutgers University) before the Indiana Utility Regulatory
Commission Cost of Capital Task Force, September 28, 2010, Indianapolis, IN.

Tomorrow’s Cost of Capital: Cost of Capital Issues 2010, Deloitte Center for Energy
Solutions, 2010 Deloitte Energy Conference, “Changing the Great Game: Climate,
Customers and Capital”, June 7-8, 2010, Washington, DC.

“A New Approach for Estimating the Equity Risk Premium for Public Utilities”, (co-
presenter with Richard

A. Michelfelder, Ph.D., Rutgers University) – Advanced Workshop in Regulation and
Competition, 29th

Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI),
May 20, 2010, Rutgers University, Skytop, PA.

Moderator: Society of Utility and Regulatory Financial Analysts: 42nd Financial Forum –
“The Changing Economic and Capital Market Environment and the Utility Industry”,
April 29-30, 2010, Washington, DC.

“A New Model for Estimating the Equity Risk Premium for Public Utilities” (co-presenter
with Richard A. Michelfelder, Ph.D., Rutgers University) – Spring 2010 Meeting of the
Staff Subcommittee on Accounting and Finance of the National Association of Regulatory
Utility Commissioners, March 17, 2010,

Charleston, SC.

“New Approach to Estimating the Cost of Common Equity Capital for Public Utilities”
(co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) - Advanced
Workshop in Regulation and Competition, 28th Annual Eastern Conference of the Center
for Research in Regulated Industries (CRRI), May 14, 2009, Rutgers University, Skytop,
PA.

Moderator: Society of Utility and Regulatory Financial Analysts: 41st Financial Forum –
“Estimating the Cost of Capital in Today’s Economic and Capital Market Environment”,

April 16-17, 2009, Washington, DC.

“Water Utility Financing: Where Does All That Cash Come From?”, AWWA Pre-Conference Workshop: Water Utility Ratemaking, March 25, 2008, Atlantic City, NJ.

PAPERS

“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, Dylan W. D’Ascendis, and Frank J. Hanley, The Electricity Journal, May, 2013 (forthcoming).

“A New Approach for Estimating the Equity Risk Premium for Public Utilities”, co-authored with Frank J. Hanley and Richard A. Michelfelder, Ph.D., Rutgers University, The Journal of Regulatory Economics (December 2011), 40:261-278.

“Comparable Earnings: New Life for Old Precept” co-authored with Frank J. Hanley, Financial Quarterly Review, (American Gas Association), Summer 1994.

Clients Served

I have offered expert testimony before the following commissions:

Alaska
Arkansas
Arizona
British Columbia
California
Connecticut
Delaware
Florida
Hawaii
Idaho
Illinois
Indiana
Iowa
Kentucky
Louisiana

Maine
Maryland
Michigan
Missouri
Nevada
New Hampshire
New Jersey
New York
North Carolina
Ohio
Pennsylvania
Rhode Island
South Carolina
Virginia
Washington

I have sponsored testimony on fair rate of return and related issues for:

Alpena Power Company
Apple Canyon Utility
Company
Applied Wastewater
Management, Inc.
Aquarion Water Company
Aquarion Water Co. of New
Hampshire, Inc.
Arizona Water Company
Artesian Water Company
The Atlantic City Sewerage
Company
Audubon Water Company
Bermuda Water Company
Carolina Pines Utilities, Inc.
Carolina Water Service, Inc.
of NC
Carolina Water Service, Inc.
of SC
Chaparral City Water
Company

Aqua Illinois, Inc.
Aqua New Jersey, Inc.
Aqua North Carolina, Inc.
Aqua Ohio, Inc.
Aqua Virginia, Inc.
The Columbia Water
Company
The Connecticut Water
Company
Consumers Illinois Water
Company
Consumers Maine Water
Company
Consumers New Jersey
Water Company
Corix Utilities
City of DuBois, Pennsylvania
Elizabethtown Water
Company
Emporium Water Company
EPCOR Water Arizona, Inc.

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Fairbanks Natural Gas LLC
Greenridge Utilities, Inc.
The Borough of Hanover, PA
GTE Hawaiian Telephone Inc.
Illinois American Water
Company
Indiana American Water
Company
Iowa American Water
Company
Jersey Central Power & Light
Co.
Lake Wildwood Utilities Corp.
Land'Or Utility Company
Long Island American Water
Company
Long Neck Water Company
Louisiana Water Service, Inc.
Maine Water Company
Massanutten Public Service
Company
Middlesex Water Company
Missouri Gas Energy
Missouri-American Water
Company
Mt. Holly Water Company
Nero Utility Services, Inc.
New Jersey Utilities
Association
The Newtown Artesian Water
Company
NRG Energy Center
Harrisburg LLC
NRG Energy Center
Pittsburgh LLC
Ohio-American Water
Company
Penn Estates Utilities
Pinelands Waste Water
Company
Pinelands Water Company
Pioneer Water LLC
Pittsburgh Thermal
San Gabriel Valley Water
Company
San Jose Water Company
Southland Utilities, Inc.
Spring Creek Utilities, Inc.

Sussex Shores Water
Company
Tega Cay Water Services,
Inc.
Thames Water Americas
Tidewater Utilities, Inc.
Total Environmental Services,
Inc. –
Treasure Lake Water &
Sewer Divisions
Transylvania Utilities, Inc.
Trigen – Philadelphia Energy
Corporation
Twin Lakes Utilities, Inc.
United Utility Companies
United Water Arkansas, Inc.
United Water Arlington Hills
Sewerage, Inc.
United Water Connecticut,
Inc.
United Water Delaware, Inc.
United Water Great Gorge
Inc./United Water
Vernon Transmission, Inc.
United Water Idaho, Inc.
United Water Indiana, Inc.
United Water New Jersey,
Inc.
United Water New Rochelle,
Inc.
United Water New York, Inc.
United Water Owego/Nichols,
Inc.
United Water Pennsylvania,
Inc.
United Water Rhode Island,
Inc.
United Water South County,
Inc.
United Water Toms River, Inc.
United Water Vernon Sewage
Inc.
United Water Virginia, Inc.
United Water West Lafayette,
Inc.
United Water West Milford,
Inc.
United Water Westchester,

ATTACHMENT A
RÉSUMÉ OF PAULINE AHERN

OFFICIAL COPY

AUG 21 2015

Inc.
Utilities, Inc.
Utilities Inc. of Central Nevada
Utilities, Inc. of Florida
Utilities, Inc. of Louisiana
Utilities, Inc. of Nevada
Utilities, Inc. of Pennsylvania
Utilities, Inc. - Westgate

Utilities Services of South
Carolina
Utility Center, Inc.
Valley Energy, Inc.
Water Services Corp. of
Kentucky
Wellsboro Electric Company
Western Utilities, Inc.

I have sponsored testimony on generic/uniform
methodologies for determining the return on common equity for:

Aquarion Water Company
The Connecticut Water Company
Corix Multi-Utility Services, Inc.

United Water Conn., Inc.
Utilities, Inc.

I have sponsored testimony on the rate of return and capital
structure effects of merger and acquisition issues for:

California-American Water Co.

NJ American Water Co.

I have sponsored testimony on capital structure and senior
capital cost rates for the following clients:

Alpena Power Company
Arkansas-Western Gas
Company
Associated Natural Gas
Company

PG Energy Inc.
United Water Delaware, Inc.
Washington Natural Gas
Company

I have sponsored testimony on Distribution System
Improvement Charges (DSIC):

Arizona Water Company

I have assisted in the preparation of rate of return studies on
behalf of the following clients:

GTE Arkansas, Inc.
GTE California, Inc.
GTE Florida, Inc.
GTE Hawaiian Telephone
GTE North, Inc.
GTE Northwest, Inc.
GTE Southwest, Inc.
Hawaiian Electric Company
Hawaiian Electric Light
Company
IES Utilities Inc.
Illinois Power Company
Interstate Power Company
Interstate Power & Light Co.
Iowa Electric Light and Power
Company
Iowa Southern Utilities
Company
Kentucky-West Virginia Gas
Company
Lockhart Power Company
Middlesex Water Company
Milwaukee Metropolitan
Sewer District
Mountaineer Gas Company
National Fuel Gas Distribution
Corp.
National Fuel Gas Supply
Corp.
Newco Waste Systems of NJ,
Inc.
New Jersey Natural Gas
Company
New Jersey-American Water
Company
New York-American Water
Company
North Carolina Natural Gas
Corp.
Northumbrian Water
Company
Ohio-American Water
Company
Oklahoma Natural Gas
Company
Orange and Rockland Utilities
Paute Pipeline Company
PECO Energy Company

Algonquin Gas Transmission
Company
Anadarko Petroleum
Corporation
Arizona Water Company
Arkansas-Louisiana Gas
Company
Arkansas Western Gas
Company
Artesian Water Company
Associated Natural Gas
Company
Atlantic City Electric Company
Bridgeport-Hydraulic
Company
Cambridge Electric Light
Company
Carolina Power & Light
Company
Citizens Gas and Coke Utility
City of Vernon, CA
Columbia Gas/Gulf
Transmission Cos.
Commonwealth Electric
Company
Commonwealth Telephone
Company
Conestoga Telephone &
Telegraph Co.
Connecticut Natural Gas
Corporation
Consolidated Gas
Transmission Company
Consumers Power Company
CWS Systems, Inc.
Delmarva Power & Light
Company
East Honolulu Community
Services, Inc.
Equitable Gas Company
Equitrans, Inc.
Fairbanks Natural Gas, LLC
Florida Power & Light
Company
Gary Hobart Water Company
Gasco, Inc.
Great Lakes Gas
Transmission L.P.

ATTACHMENT A
RÉSUMÉ OF PAULINE AHERN

Penn Estates Utilities, Inc.
Penn-York Energy
Corporation
Pennsylvania-American Water
Co.
PG Energy Inc.
Philadelphia Electric
Company
Providence Gas Company
South Carolina Pipeline
Company
Southwest Gas Corporation
Stamford Water Company
Tesoro Alaska Petroleum
Company
Tesoro Refining & Marketing
Co.
United Telephone of New
Jersey
United Utility Companies
United Water Arkansas, Inc.
United Water Delaware, Inc.
United Water Idaho, Inc.
United Water Indiana, Inc.
United Water New Jersey,
Inc.

United Water New York, Inc.
United Water Pennsylvania,
Inc.
United Water Virginia, Inc.
United Water West Lafayette,
Inc.
Utilities, Inc. of Pennsylvania
Utilities, Inc. - Westgate
Vista-United
Telecommunications Corp.
Washington Gas Light
Company
Washington Natural Gas
Company
Washington Water Power
Corporation
Waste Management of New
Jersey –
Transfer Station A
Wellsboro Electric Company
Western Reserve Telephone
Company
Western Utilities, Inc.
Wisconsin Power and Light
Company

OFFICIAL COPY

Aug 21 2015

1 MR. BENNINK: We have Mr. Lashua here this
2 morning to respond to questions. If it's agreeable, I
3 think we would prefer to put him on last. He may
4 respond to some questions the Commission will ask of
5 the Public Staff. Is that agreeable to the Public
6 Staff?

7 MS. HOLT: That's agreeable.

8 MR. BENNINK: And, at the appropriate time,
9 I do have a list of exhibits, or not exhibits but
10 filings that have been made in the docket that we'd
11 like to move into evidence. We can do that either now
12 or at the end of the hearing.

13 CHAIRMAN FINLEY: Why don't you do that now.

14 MR. BENNINK: We would ask first that the
15 Application for the general rate case, which was filed
16 on March 31, 2015, including all attachments, and the
17 NCUC Form W-1, Rate Case Information Report, be
18 admitted into evidence. And, as far as the W-1, that
19 would include both the public and confidential items.

20 CHAIRMAN FINLEY: The Company's Application
21 of March 31, 2015, is received into evidence and the
22 Company's Form W-1, both confidential pieces and the
23 non-confidential pieces, are received into evidence.

24

1 Carolina Water Service, Inc., of North Carolina

2 Application

3 (Admitted)

4 Carolina Water Service, Inc., of North Carolina Form

5 W-1, including Confidential and Non-Confidential

6 (Admitted)

7 MR. BENNINK: There were also supplemental
8 filings made in the docket concerning the W-1 on
9 April 10th and April 21st, they appear in the
10 Commission's official file and we would ask that those
11 supplemental W-1 filings be admitted into evidence.

12 CHAIRMAN FINLEY: Filings from the W-1 filed
13 April 10, you say?

14 MR. BENNINK: April 10th and April 21st.

15 CHAIRMAN FINLEY: And the 21st are copied
16 into -- are received into evidence.

17 Supplemental W-1 Filings

18 (Admitted)

19 MR. BENNINK: The Company filed a revised
20 Appendix A-1 to the general rate case application on
21 May 6, 2015. We would ask that that be admitted.

22 CHAIRMAN FINLEY: Without objection, that's
23 so admitted.

Revised Appendix A-1

(Admitted)

MR. BENNINK: CWSNC filed its ongoing Three-Year WSIC/SSIC Plan on July 1, 2015. We request that that filing be admitted into evidence.

CHAIRMAN FINLEY: The Three-Year WSIC/SSIC filing is admitted into evidence.

CWSNC Three-Year WSIC/SSIC Plan

(Admitted)

MR. BENNINK: The Company also filed six Reports on Customer Service Quality Issues from the public hearings in Jacksonville, Raleigh, Currituck, Charlotte, Boone and Asheville. We request that those reports be admitted into evidence.

CHAIRMAN FINLEY: The six reports on quality of service, without objection, are received into evidence.

Reports on Customer Service Quality Issues from Public

Hearings in Jacksonville, Raleigh, Currituck,

Charlotte, Boone and Asheville

(Admitted)

MR. BENNINK: And the Company, on September 22nd and October 1st, filed notices in this docket that it had completed metering the seven

1 service areas that were required in the Sub 336 Order,
2 the seven mountain systems. We ask that that be
3 admitted.

4 CHAIRMAN FINLEY: The report on the metering
5 of the seven mountain systems are received into
6 evidence.

7 Notice to Customers Regarding Installation of Meters
8 filed on September 22, 2015

9 (Admitted)

10 Notice to Customers Regarding Installation of Meters
11 filed on October 1, 2015

12 (Admitted)

13 MR. BENNINK: Thank you. That's it.

14 CHAIRMAN FINLEY: Intervening parties.

15 MR. BRADY ALLEN: Nothing.

16 MR. DWIGHT ALLEN: Nothing.

17 CHAIRMAN FINLEY: Ms. Holt.

18 MS. HOLT: Thank you, Mr. Chairman. At this
19 time, I'd like to move the admission of the prefilled
20 testimony of witnesses who have been excused. The
21 Public Staff moves the admission of the prefilled
22 testimony of Katherine Fernald consisting of 17 pages
23 of testimony and we also move the admission of her one
24 exhibit as premarked. The Public Staff moves the

1 admission of the prefiled testimony of Fenge Zhang
2 consisting of 14 pages of testimony and one appendix
3 and one exhibit, and we move that the exhibit and
4 appendix be admitted as premarked. We also move the
5 admission of the testimony of Calvin C. Craig
6 consisting of 24 pages and eight exhibits and that
7 those exhibits be admitted as premarked.

8 CHAIRMAN FINLEY: The prefiled testimony of
9 Witnesses Fernald, Zhang, and Craig are received into
10 evidence. And the exhibits, as premarked in the
11 filing, are so identified and received into evidence.

12 **Fernald Exhibit 1**

13 (Identified and Admitted)

14 (WHEREUPON, the prefiled direct
15 testimony of **KATHERINE A. FERNALD**
16 is copied into the record as if
17 given orally from the stand.)
18
19
20
21
22
23
24

CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA
DOCKET NO. W-354, SUB 344

TESTIMONY OF KATHERINE A. FERNALD
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION

October 15, 2015

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

3 A. My name is Katherine A. Fernald. My business address is 430 North
4 Salisbury Street, Raleigh, North Carolina. I am an Assistant Director
5 of the Public Staff – Accounting Division.

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

8 A. I have been employed by the Public Staff since 1988.

9 Q. PLEASE BRIEFLY DISCUSS YOUR EDUCATION AND
10 EXPERIENCE.

11 A. I am a graduate of North Carolina State University with a Bachelor of
12 Arts degree in Accounting. I am a Certified Public Accountant. Since
13 joining the Public Staff, I have presented testimony and exhibits in
14 general rate cases for Virginia Electric and Power Company (Docket
15 No. E-22, Sub 314), North Carolina Natural Gas Corporation (Docket
16 No. G-21, Sub 293), Ellerbe Telephone Company (Docket No. P-21,
17 Sub 54), Duke Energy Carolinas, LLC (Docket No. E-7, Sub 1026),
18 and Dominion North Carolina Power (Docket No. E-22, Sub 479). I

1 have also filed testimony and exhibits in numerous water and sewer
2 utility general rate cases, including LaGrange Waterworks
3 Corporation (Docket No. W-200, Sub 20), Bald Head Utilities, Inc.
4 (Docket No. W-798, Sub 8), Carolina Water Service, Inc. of NC
5 (Docket No. W-354, Sub 266), Heater Utilities, Inc. (Docket No. W-
6 274, Sub 478), Aqua North Carolina, Inc. (Docket No. W-218, Sub
7 274), and Aqua North Carolina, Inc. (Docket No. W-218, Sub 319). I
8 have also filed testimony or affidavits in various other water and
9 sewer utility proceedings.

10 Q. WHAT ARE YOUR DUTIES?

11 A. I am responsible for the performance and/or supervision of the
12 following activities: (1) the examination and analysis of testimony,
13 exhibits, books and records, and other data presented by utilities and
14 other parties involved in Commission proceedings; and (2) the
15 preparation and presentation to the Commission of testimony,
16 exhibits, and other documents in those proceedings.

17 Q. WHAT IS THE NATURE OF THE APPLICATION IN THIS CASE?

18 A. On March 31, 2015, Carolina Water Service, Inc. of North Carolina
19 (CWSNC or Company) filed an application with the Commission
20 seeking authority to increase rates for its water and sewer
21 operations.

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

3 A. The purpose of my testimony is to support the Stipulation between
4 the Public Staff, Corolla Light Community Association, Inc., and
5 CWSNC (Stipulating Parties) filed on October 15, 2015. My
6 testimony also discusses the adjustments agreed to by the
7 Stipulating Parties related to (1) the treatment of excess deferred
8 income taxes and (2) accumulated deferred income taxes. I also
9 assisted Public Staff Engineer Casselberry in the review of service
10 revenues.

11 Q. PLEASE DESCRIBE THE SCOPE OF YOUR INVESTIGATION
12 INTO THE COMPANY'S FILING.

13 A. My investigation included a review of the Company's application and
14 other data filed by the Company, an examination of the books and
15 records for the test year ended December 31, 2014, and a review of
16 the Company's accounting, end-of-period, and after period
17 adjustments to test year rate base and expenses.

18 Q. PLEASE COMMENT ON THE STIPULATION.

19 A. The Stipulation is the product of extensive give-and-take
20 negotiations between the parties. The Public Staff believes that the
21 Stipulation represents a just and reasonable resolution of the issues
22 that it covers. As stated in the Stipulation, the issues as they are
23 agreed upon do not necessarily reflect any position asserted by the

1 parties, but are a compromise of a complex set of issues. From the
2 perspective of the Public Staff on behalf of customers, based on the
3 overall reasonableness of the items included in the cost of service,
4 as well as the other provisions of the Stipulation, the Stipulation is in
5 the public interest and should be approved.

6 Q. HAVE YOU PREPARED EXHIBITS FOR USE IN THIS
7 PROCEEDING?

8 A. Yes. Fernald Exhibit I sets forth the stipulated adjustments which I
9 support.

10 **EXCESS DEFERRED INCOME TAXES**

11 Q. MS. FERNALD, WHAT ARE EXCESS DEFERRED INCOME
12 TAXES AND HOW DO THEY ARISE?

13 A. Deferred income taxes (DIT) arise when income tax amounts
14 collected in utility rates differ from the amount of taxes currently due
15 and payable by a utility. The primary cause of the tax differences is
16 the straight-line depreciation rates used for ratemaking purposes as
17 opposed to the accelerated depreciation rates used for income tax
18 purposes. The accumulated balance of DIT (ADIT) is available to the
19 utility to invest until it is needed to fund the taxes due and payable in
20 later years. Excess deferred income taxes (EDIT) arise as a result
21 of an income tax rate reduction. In this case, the state income tax
22 rate was initially reduced from 6.9% to 5% as a result of North
23 Carolina Session Law 2013-316 (House Bill (HB) 998), An Act to

1 Simplify the North Carolina Tax Structure and to Reduce Individual
2 and Business Tax Rates, which was signed into law on July 23, 2013.
3 HB 998 also added a new section, G.S. 105-130.3C, to the general
4 statutes concerning possible future rate reduction triggers. On
5 August 6, 2015, the North Carolina Department of Revenue
6 announced that pursuant to this new section, the target for the fiscal
7 year 2014-2015 had been met, and the state corporate tax rate will
8 decrease to 4% effective January 1, 2016. Prior to the enactment of
9 HB 998, rates of North Carolina regulated utilities, including CWSNC,
10 were set based on the assumption that the utility would pay a 6.9%
11 state income tax rate. The reduction of the tax rate from 6.9% to 4%
12 resulted in EDIT for these utilities.

13 Under generally accepted accounting principles (GAAP), when a
14 reduction in tax rates is enacted, ADIT is adjusted to reflect the new
15 enacted tax rate, and the resulting EDIT is credited to income tax
16 expense, which in effect flows the EDIT to the company's
17 shareholders. However, for regulated utilities, the EDIT is generally
18 flowed back to ratepayers.

19 Q. HAS THE COMMISSION ADDRESSED THE TREATMENT OF THE
20 EDIT RESULTING FROM HB 998 FOR NORTH CAROLINA
21 PUBLIC UTILITIES?

22 A. Yes. In its Order Addressing the Impacts of HB 998 on North
23 Carolina Public Utilities issued on May 13, 2014 in Docket No. M-

1 100, Sub 138 (May 13, 2014 Tax Docket Order), the Commission
2 ordered that EDIT for all utilities be held in a deferred tax regulatory
3 liability account until they can be amortized as credits (i.e.,
4 reductions) to income tax expense for ratemaking purposes in each
5 utility's next general rate case proceeding. The Commission further
6 ordered that all utilities are required to establish a deferred tax
7 regulatory liability account and shall not begin amortization of
8 amounts recorded in such accounts pending further order of the
9 Commission.

10 Q. DID CWSNC ESTABLISH A DEFERRED TAX REGULATORY
11 LIABILITY ACCOUNT ON ITS BOOKS?

12 A. No. CWSNC did not establish a deferred tax regulatory liability
13 account on its books. Instead, when the state corporate tax rate was
14 reduced from 6.9% to 5% in 2013, CWSNC recorded an entry on its
15 books to reduce income tax expense by the EDIT.

16 Q. WHAT IS THE PUBLIC STAFF'S RECOMMENDATION
17 CONCERNING THE TREATMENT OF EDIT IN THIS CASE?

18 A. The Public Staff recommends that the EDIT be flowed back to
19 ratepayers by amortizing the EDIT as a credit to expenses, as
20 required by the Commission in its May 13, 2014, Tax Docket Order.
21 The ratepayers have paid rates based on the higher state income tax
22 rate of 6.9%, and should be refunded the excess deferred taxes that

1 have been collected at this higher rate, which the utility will no longer
2 have to pay due to the reduction in the state income tax rate.

3 Q. ARE THERE ANY RESTRICTIONS ON HOW THE EDIT SHOULD
4 BE REFUNDED TO RATEPAYERS?

5 A. No. There are no restrictions on how the EDIT should be refunded
6 to ratepayers.¹ The Public Staff believes that the manner in which
7 EDIT should be refunded to ratepayers, including the period over
8 which the EDIT is amortized, should be determined on a case by
9 case basis in each utility's next general rate case.

10 Q. WHAT AMORTIZATION PERIOD DOES THE PUBLIC STAFF
11 RECOMMEND FOR CWSNC'S EDIT?

12 A. The Public Staff recommends that CWSNC's EDIT be refunded to
13 ratepayers over a three year period. This is the period of time that
14 the Commission has generally used to amortize rate case expense
15 for water and sewer companies, on the basis that, on average, water
16 and sewer companies file for rate increases every three years.

17 Q. WHAT IS THE AMOUNT OF EDIT TO BE AMORTIZED IN THIS
18 PROCEEDING?

¹ Under the Tax Reform Act of 1986, where the excess deferred taxes were related to federal income taxes on depreciation, the excess deferred taxes related to depreciation were protected and the period over which the excess deferred taxes could be flowed back to ratepayers was restricted, due to the normalization rules. In this case, the excess deferred taxes are related to a state income tax change and there are no restrictions on the period over which these excess deferred taxes can be flowed back to ratepayers.

1 A. During 2013, CWSNC removed \$29,262 of EDIT from ADIT by
 2 debiting ADIT and crediting income tax expense by this amount.
 3 CWSNC calculated this amount based on the accumulated deferred
 4 state income tax amounts as of December 31, 2012, and the change
 5 in the state income tax rate from 6.9% to 5%. In response to a Public
 6 Staff data request, the Company provided an updated calculation
 7 based on the accumulated deferred state income tax amounts as of
 8 December 31, 2013, as follows:

9	Accumulated state deferred taxes at 12-31-13	\$ 169,859
10	Divided by 6.9%	<u>6.9%</u>
11	Grossed up amount based on 6.9% rate	2,461,721
12	Decrease in state income tax	<u>1.9%</u>
13	Effect of state tax rate change	46,773
14	Less: federal effect of rate change at 34%	15,903
15	Excess deferred income taxes	<u>\$ 30,870</u>

16 In determining the amount of EDIT to be amortized in this
 17 proceeding, I have begun with the \$30,870 of EDIT calculated by
 18 CWSNC.

19 To this amount, I have made several adjustments. First, I have
 20 decreased this amount by \$2,627 to reflect additional 2013 activity
 21 at 6.9% that was not included in the Company's calculation. Second,
 22 I have increased this amount by \$28,029 to include excess deferred
 23 taxes for the 2014 ADIT activity, based on the difference between
 24 the 2014 state corporate tax rate of 6% for 2014, and the 5% state
 25 corporate tax rate effective January 1, 2015. Third, I have included

1 an additional \$26,791 of excess deferred taxes related to the
2 decrease in the state corporate income tax rate from 5% to 4%
3 effective January 1, 2016. These three adjustments resulted in an
4 increase in EDIT of \$52,193.

5 Finally, I have grossed up my adjusted level of EDIT of \$83,063
6 (\$30,870 plus \$52,193) to a pre-tax amount based on the combined
7 income tax rate of 36.64% to determine the revenue requirement of
8 \$131,097, which should be established as a regulatory liability.

9 Finally, I have amortized the deferred tax regulatory liability over
10 three years, resulting in an annual credit to expenses of \$43,699. I
11 have also deducted the unamortized regulatory liability of \$87,398
12 (\$131,097 minus \$43,699) from rate base. I have allocated these
13 amounts between uniform water, uniform sewer, Corolla Light &
14 Monterey Shores (Corolla/Monteray), and Nags Head based on
15 plant, net of depreciation.

16 ACCUMULATED DEFERRED INCOME TAXES

17 Q. DO YOU AGREE WITH THE COMPANY'S PRO FORMA
18 ADJUSTMENTS TO ADIT?

19 A. No, I do not. In general, the Company either made errors in its pro
20 forma adjustments, or was unable to explain the basis for the
21 adjustment. Specifically, my issues with the Company's pro forma
22 adjustments are as follows:

- 1 (1) In its application, the Company included adjustments to ADIT
2 based on adjustments made in prior Commission orders.
3 ADIT is based on the timing differences between the book and
4 tax treatment of items, and over time, these timing differences
5 will reverse. In making its adjustments based on prior
6 proceedings, the Company generally made them at the same
7 amounts as made in previous proceedings, without any
8 adjustment to update the amounts to reflect the reversal of the
9 ADIT timing differences since those proceedings. Also, the
10 Company included an adjustment related to ADIT for
11 Corolla/Monteray twice, once under CWSNC uniform sewer
12 operations, and again under Corolla/Monteray sewer
13 operations.
- 14 (2) The Company made pro forma adjustments to ADIT related
15 to depreciation for which it was unable to provide an
16 explanation of why the adjustments were made.
- 17 (3) The Company made an adjustment to ADIT related to rate
18 case expense, which contained several errors. First, the
19 Company did not deduct state income taxes in calculating the
20 federal ADIT amount. Second, the Company made an error
21 in applying the adjustment to the per books amount of ADIT.
22

1 Q. WHAT ADJUSTMENTS HAVE YOU MADE TO ACCUMULATED
2 DEFERRED INCOME TAXES?

3 A. I have made the following adjustments to ADIT.

- 4 (1) Remove Company's pro forma adjustments
- 5 (2) Reflect Company corrections
- 6 (3) Reclassify ADIT related to Cabarrus Woods gain
- 7 (4) Reclassify state portion of ADIT
- 8 (5) Remove additional excess deferred taxes
- 9 (6) Reflect adjustment based on prior Commission orders
- 10 (7) Adjust ADIT related to unamortized balances

11 Q. WHY HAVE YOU MADE AN ADJUSTMENT TO REVERSE THE
12 COMPANY'S PRO FORMA ADJUSTMENTS TO ADIT?

13 A. I have made an adjustment to reverse most of the Company's pro
14 forma adjustments to ADIT due to the errors in the Company's pro
15 forma adjustments and the Company's inability to explain the
16 purpose of some of the adjustments. The only adjustment that I did
17 not remove was the Company's adjustment to allocate the ADIT from
18 WSC, since this amount is appropriate and should be included. This
19 resulted in a debit to ADIT of \$3,435,623.

20 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO REFLECT COMPANY
21 CORRECTIONS.

22 A. The Public Staff made three corrections to ADIT based on
23 information provided by the Company. First, during my investigation

1 Company personnel indicated that the \$475,093 debit recorded to
2 ADIT in 2013 should have been reversed in 2014, and an entry
3 crediting ADIT by \$475,093 would be made on the books in 2015 to
4 do so. Second, in 2014, the Company recorded all of the ADIT
5 activity, including both state and federal amounts, in federal ADIT
6 related to depreciation. In response to data request, the Company
7 provided the journal entry that will be recorded in 2015 to reclassify
8 and correct the amounts for the 2014 ADIT activity, resulting in a net
9 debit to ADIT of \$36,582. Third, in response to a data request, the
10 Company provided an updated calculation of the entry for the state
11 tax rate change from 6.9% to 5%, resulting in a debit to ADIT of
12 \$1,609. These three corrections to the Company's per books
13 amounts resulted in a credit to ADIT of \$436,902 (\$475,093 less
14 \$36,582 less \$1,609).

15 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO RECLASSIFY THE
16 ADIT RELATED TO THE CABARRUS WOODS GAIN ON SALE TO
17 A SEPARATE LINE ITEM.

18 A. The Company included the ADIT related to the Cabarrus Woods gain
19 on sale in ADIT – depreciation. I have reclassified this ADIT to a
20 separate line item since it is related to a regulatory liability and not
21 depreciation.

1 Q. WHY HAVE YOU MADE AN ADJUSTMENT TO RECLASSIFY A
2 PORTION OF A 2013 ENTRY FROM FEDERAL ADIT TO STATE
3 ADIT?

4 A. In 2013, the Company recorded an entry to reflect adjustments on its
5 books based on prior Commission orders, along with a
6 corresponding adjustment to ADIT. Based on supporting
7 workpapers provided by the Company, the Company recorded both
8 the state and federal components of ADIT to federal ADIT in error.
9 The Company should have recorded the state portion to state ADIT,
10 instead of recording a combined state and federal amount to federal
11 ADIT. I have made an adjustment to reclassify the state portion of
12 this entry to state ADIT. While this adjustment does not impact ADIT
13 in total, it is necessary in order to have a correct calculation of excess
14 deferred taxes.

15 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO REMOVE
16 ADDITIONAL EDIT FROM ADIT.

17 A. As discussed previously in my testimony under EDIT, I have made
18 several adjustments to the EDIT calculated by CWSNC, resulting in
19 an increase in EDIT of \$52,193. I have made a corresponding
20 adjustment to ADIT to remove this additional amount of EDIT.

21 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO ADIT BASED ON
22 PRIOR COMMISSON ORDERS.

1 A. As previously discussed, the Company included in its application
2 adjustments to ADIT based on prior Commission orders. However,
3 the amounts included by the Company were incorrect, because the
4 Company failed to update the amounts to reflect the reversal of the
5 ADIT timing differences since those proceedings. Due to this error,
6 I have reversed the Company's adjustments related to prior
7 Commission orders as part of my adjustment to reverse the
8 Company's pro forma adjustments to ADIT.

9 In order to determine if any of the adjustments made to ADIT in prior
10 Commission orders should still be made, and if so, at what amounts,
11 I reviewed the reasons for the adjustments in the prior orders, the
12 changes in accounting made by the Company on its tax returns,
13 other activity on the tax returns in recent years, and the entries made
14 to clean up the amount of ADIT on the Company's books. Based on
15 this review, I have determined that most of these entries should no
16 longer be made. However, there is one adjustment that was made
17 in the Sub 327 rate case that should still be made in part. In that
18 proceeding, the Company indicated that it had reported \$4,778,460
19 of reservation of capacity fees collected from the Corolla Bay
20 developer as taxable income in error. Therefore, an adjustment was
21 made to remove the ADIT related to this CIAC, which should never
22 have been paid. Since then, the Company has changed its
23 accounting for this CIAC on its tax return, so that the amounts

1 collected in 2008 and 2009 of \$3,778,460 were no longer reported
2 and taxes were no longer paid on these amounts. This change in
3 accounting was reflected in the Company's ADIT for that year,
4 resulting in the removal of this portion of the taxes paid on CIAC from
5 ADIT on the books. However, the Company has not changed the
6 treatment of the \$1,000,000 that was reported as taxable income in
7 2006 and 2007 in error, and the taxes paid on this CIAC are still
8 included in ADIT. I have made an adjustment to remove the taxes
9 paid on this CIAC from ADIT. Since the Company reported this CIAC
10 as taxable income on its tax returns, it is able to depreciate the plant
11 paid for by this CIAC for tax purposes, and the Public Staff has
12 recognized this offset in its calculation of the ADIT related to the
13 CIAC reported in error. This adjustment resulted in a credit to ADIT
14 of \$252,816.

15 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO ADIT RELATED TO
16 UNAMORTIZED BALANCES.

17 A. I have adjusted ADIT related to rate case expense, deferred
18 maintenance, and the Cabarrus Woods gain on sale to reflect the
19 Public Staff's adjusted level of unamortized balances for these items.

20 Q. HOW HAVE YOU ALLOCATED YOUR ADJUSTED LEVEL OF ADIT
21 FOR CWSNC BETWEEN UNIFORM WATER, UNIFORM SEWER,
22 COROLLA/MONTERAY, AND NAGS HEAD?

1 A. I have allocated my adjusted level of ADIT for CWSNC to uniform
2 water, uniform sewer, Corolla/Monteray, and Nags Head based on
3 several allocation factors. First, I have allocated ADIT related to
4 CIAC based on CIAC, net of accumulated amortization. Second, I
5 have allocated ADIT related to rate case expense, deferred
6 maintenance, and the Cabarrus Woods gain on sale based on the
7 unamortized balances for those items. Third, I have allocated ADIT
8 related to organization costs and bad debts based on the number of
9 customers. Finally, I have allocated ADIT related to depreciation and
10 the NOL deferred asset based on plant, net of accumulated
11 depreciation.

12 **WATER AND SEWER SYSTEM IMPROVEMENT CHARGES**

13 Q. DO YOU HAVE ANY COMMENTS CONCERNING THE WATER
14 SYSTEM IMPROVEMENT CHARGE (WSIC) AND SEWER
15 SYSTEM IMPROVEMENT CHARGE (SSIC) MECHANISM THAT
16 WAS APPROVED BY THE COMMISSION FOR THE COMPANY IN
17 ITS LAST GENERAL RATE CASE, DOCKET NO. W-354, SUB 336?

18 A. Yes. First, consistent with Rules R7-39(k) and R10-26(k), CWSNC's
19 WSIC and SSIC surcharges will be reset to zero as of the effective
20 date of the rates in this proceeding.

21 Second, the WSIC and SSIC does not currently apply to the Nags
22 Head and Linville Ridge service areas since they were not part of the
23 Sub 336 rate case. Since these two service areas are included in

1 this proceeding, the WSIC and SSIC will apply to those customers
2 once the order is issued in this case.

3 Third, by law, the cumulative maximum charges that the Company
4 can recover between rate cases cannot exceed five percent of the
5 total service revenues approved by the Commission in this rate case.
6 Based on the agreed upon service revenues set forth in the
7 stipulation, the WSIC and SSIC caps after this rate case will be:

8		Service		WSIC &
9		<u>Revenues</u>		<u>SSIC Cap</u>
10				
11	Uniform water	\$10,727,674	x 5% =	\$536,384
12	Uniform sewer	1,117,239	x 5% =	55,862
13	Corolla/Monteray	693,575	x 5% =	34,679
14	Nags Head	7,097,654	x 5% =	354,883

15 Q. DOES THIS COMPLETE YOUR TESTIMONY?

16 A. Yes, it does.

Zhang Exhibit 1

(Identified and Admitted)

(WHEREUPON, the prefiled direct
testimony of FENG ZHANG is copied
into the record as if given orally
from the stand.)

CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA
DOCKET NO. W-354, SUB 344

TESTIMONY OF FENG ZHANG
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION

October 15, 2015

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

3 A. My name is Fenge Zhang, and my business address is 430 North
4 Salisbury Street, Raleigh, North Carolina. I am an Accountant in the
5 Accounting Division of the Public Staff. My qualifications and
6 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 the results of my
10 investigation of (1) the expenses and investment allocated between
11 Carolina Water Service, Inc. of North Carolina (CWSNC or the
12 Company) and its affiliated companies; (2) salaries, benefits and
13 payroll taxes; (3) transportation costs; and (4) operating expenses
14 charged to plant.

15 Q. PLEASE DESCRIBE THE SCOPE OF YOUR INVESTIGATION
16 INTO THE COMPANY'S FILING.

1 A. My investigation included a review of the Company's application for
2 rate increase for its CWSNC uniform water operations (CWSNC
3 water), CWSNC uniform sewer operations (CWSNC sewer), Corolla
4 Light & Monteray Shores sewer operations (CLMS sewer), and Nags
5 Head sewer operations (Nags Head), an examination of the books
6 and records for the test year and through July 31, 2015, and a review
7 of additional documentation provided by the Company in response
8 to written and verbal data requests.

9 Q. MS. ZHANG, BASED ON YOUR INVESTIGATION, WHAT
10 ADJUSTMENTS TO THE COMPANY'S RATE BASE AND
11 EXPENSES DO YOU RECOMMEND?

12 A. Based on my investigation, I recommend adjustments for the
13 following items:

- 14 1) Common rate base
- 15 2) Transportation equipment
- 16 3) Outside services
- 17 4) Office supplies & other office expense
- 18 5) Maintenance and repair
- 19 6) Depreciation expense
- 20 7) Miscellaneous expense
- 21 8) Salaries and wages
- 22 9) Transportation expense
- 23 10) Operating expenses charged to plant
- 24 11) Pensions and other benefits
- 25 12) Rent expense
- 26 13) Insurance
- 27 14) Payroll taxes

28 **COMMON RATE BASE**

29 Q. PLEASE BRIEFLY DESCRIBE THE CORPORATE STRUCTURE
30 OF CWSNC AND ITS AFFILIATED COMPANIES.

1 A. Utilities, Inc. (UI), CWSNC's parent company, owns regulated utilities
2 in approximately fifteen states, including six regulated utilities in
3 North Carolina. The regulated utilities in North Carolina are: (1)
4 CWSNC, (2) Bradfield Farms Water Company (Bradfield Farms), (3)
5 Carolina Trace Utilities, Inc., (4) CWS Systems, Inc., (5) Elk River
6 Utilities, Inc., and (6) Transylvania Utilities, Inc.

7 UI also has a service company, Water Service Corporation (WSC),
8 which provides management, administration, engineering,
9 accounting, billing, data processing, and regulatory services to UI's
10 subsidiaries, including CWSNC.

11 Q. MS. ZHANG, WHAT COSTS ARE BEING ALLOCATED TO CWSNC
12 FROM ITS AFFILIATED COMPANIES?

13 A. The following costs are allocated to CWSNC from its affiliated
14 companies:

- 15 1) WSC's costs are allocated to the UI affiliates, including
16 CWSNC, based on the number of equivalent residential
17 customers (ERCs).
- 18 2) Statewide costs related to the operation of the regulated
19 companies in North Carolina (state expenses) are allocated
20 based on the number of ERCs for those companies.
- 21 3) Regional Costs, including the costs associated with the
22 President of CWSNC, are allocated based on the number of

1 ERCs for the regulated companies in the State of North
2 Carolina and the State of Tennessee regions.

3 4) Salaries, benefits, payroll taxes, transportation costs, and
4 operating expenses charged to plant associated with
5 operations personnel are allocated based on the number of
6 ERCs served by the systems that those personnel operate.

7 5) UI has three call centers for customer service, which are
8 located in North Carolina (the Charlotte Office), Nevada, and
9 Florida. The customer service representatives (CSRs) at
10 these three offices handle all customer service calls, including
11 calls from North Carolina customers. Since the Florida and
12 Nevada offices include CSRs who handle customer calls for
13 all of the UI companies, including CWSNC, a portion of the
14 costs related to these offices are allocated to CWSNC based
15 on the number of ERCs.

16 Q. WHAT COSTS HAS THE COMPANY ALLOCATED FROM CWSNC
17 TO ITS AFFILIATED COMPANIES IN ITS APPLICATION?

18 A. The following costs are allocated from CWSNC to its affiliated
19 companies:

20 1) Charlotte Office - CWSNC has an office in Charlotte, North
21 Carolina, where personnel, who oversee the operations in the
22 State of North Carolina, as well as the President and his
23 support staff, are located. This office is also one of three

1 offices nationwide that have CSRs who handle customer
2 calls. The costs for the Charlotte Office are allocated between
3 CWSNC and its affiliates based on the allocation of the
4 salaries for all of the personnel located in this office, including
5 CWSNC operations personnel, regional personnel, the
6 President and his support staff, and the CSRs.

7 2) Charlotte Parent – CWSNC has corporate costs that are
8 recorded to the Charlotte Parent cost center. These costs are
9 allocated between CWSNC and its affiliates using the same
10 factor as the Charlotte Office costs.

11 3) Charlotte Warehouse - CWSNC has a warehouse in Charlotte
12 that is used by CWSNC's systems in the Charlotte area, as
13 well as by Bradfield Farms. The costs for the Charlotte
14 Warehouse are allocated between CWSNC and Bradfield
15 Farms based on the number of ERCs served by the systems
16 that use the warehouse.

17 Q. PLEASE EXPLAIN HOW YOU HANDLE THE RATE BASE FOR
18 CHARLOTTE PARENT, CHARLOTTE OFFICE, AND CHARLOTTE
19 WAREHOUSE COST CENTERS.

20 A. In order to properly present the allocated amounts for these cost
21 centers, Public Staff witness Henry removed 100% of the rate base
22 amount for these cost centers from the direct book amounts for
23 CWSNC uniform. Next, I calculated the appropriate amount of rate

1 base that should be allocated to CWSNC uniform water and sewer
2 operations from these cost centers. In addition, I made adjustments
3 to the Charlotte Warehouse rate base, which are discussed below in
4 the Charlotte Warehouse rate base section.

5 Q. PLEASE EXPLAIN YOUR ADJUSTMENTS TO WSC RATE BASE
6 AND ASSOCIATED DEPRECIATION EXPENSE.

7 A. I have made a few adjustments to the WSC computers. First, I
8 updated the accumulated depreciation through July 31, 2015.
9 Second, I removed \$25,354 of depreciation expense related to the
10 fully depreciated computers. Third, I made an adjustment to re-
11 amortize the unamortized balance for 2008 computer system cost (or
12 Project Phoenix) over 3 years. This re-amortization decreased the
13 depreciation expense on WSC computers by \$1,826,340 before
14 allocating to CWSNC utility operations.

15 Q. PLEASE EXPLAIN YOUR ADJUSTMENTS TO THE CHARLOTTE
16 WAREHOUSE RATE BASE AND THE ASSOCIATED
17 DEPRECIATION EXPENSE IN THIS CASE.

18 A. In this case, the Company did not make a pro forma adjustment to
19 remove the Charlotte Warehouse plant and accumulated
20 depreciation associated with systems sold to CMUD. I have made
21 an adjustment to remove the amount of Charlotte Warehouse plant,
22 accumulated depreciation, and depreciation expense associated
23 with the systems sold using the same methodology as was used in

1 the calculation of the gain on sale in the Docket No. W-354, Sub 331
2 transfer proceeding. In addition, I have updated the amount of
3 Charlotte Warehouse computer software accumulated depreciation
4 and removed the related depreciation expense, because the
5 computer software was fully amortized as of July 31, 2015. I then
6 allocated the remaining Charlotte Warehouse rate base and
7 depreciation expense to CWSNC uniform operations based on the
8 ERCs for the systems currently using the warehouse. Finally, I
9 assigned the Charlotte Warehouse rate base and depreciation
10 expense to CWSNC water and CWSNC sewer based on the plant
11 accounts to which the costs were recorded, which is a more direct
12 allocation method than the number of ERCs that was utilized by the
13 Company.

14 **TRANSPORTATION EQUIPMENT**

15 Q. WHAT ADJUSTMENTS HAVE YOU MADE TO TRANSPORTATION
16 EQUIPMENT IN THIS CASE?

17 A. I have adjusted transportation equipment, accumulated depreciation,
18 and depreciation expense to reflect the cost of the current vehicles
19 assigned to the operators and a four-year depreciation life for
20 CWSNC based on the ERC percentage for each operator. I updated
21 accumulated depreciation for transportation equipment through July
22 31, 2015. I also included the transportation equipment, accumulated
23 depreciation, and depreciation expense for the operators who the

1 Company inadvertently left out of rate base in the Company's
2 calculation for CWSNC uniform. In addition, I removed the related
3 amounts for the operators who left the Company and have not been
4 replaced for CWSNC uniform.

5 **OUTSIDE SERVICES**

6 Q. WHAT ADJUSTMENTS HAVE YOU MADE TO OUTSIDE
7 SERVICES?

8 A. The Company included two years of audit and taxes review fees in
9 the per book expenses for WSC. I have made an adjustment to
10 remove the audit and taxes review fees related to 2013 so that only
11 one year is reflected in expenses. Second, I have amortized the
12 audit and taxes review fees that were either out of scope or
13 infrequent in nature over three years. The result of my adjustments
14 is a decrease in outside services of \$45,985 for CWSNC water,
15 \$26,092 for CWSNC sewer, \$2,330 for CLMS sewer, and \$1,831 for
16 Nags Head.

17 **OFFICE SUPPLIES AND OTHER OFFICE EXPENSE**

18 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO OFFICE SUPPLIES
19 AND OTHER OFFICE EXPENSE.

20 A. I removed the holiday event expenses associated with Utilities Inc.
21 of FL that should not be allocated to CWSNC utility operations from
22 the Florida cost center.

MAINTENANCE AND REPAIR

1

2 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO MAINTENANCE AND
3 REPAIR.

4 A. The Company booked the CWSNC uniform system permit fees to
5 the Charlotte Parent cost center, which resulted in these costs being
6 allocated from CWSNC to other companies, such as CWS Systems,
7 Inc., when they should have been directly charged to CWSNC. It
8 also resulted in these permit fees being allocated to CLMS sewer
9 and Nags Head in this proceeding. I have made an adjustment to
10 put these permit fees back to CWSNC uniform operations and
11 removed these fees from CLMS sewer and Nags Head. This results
12 in an increase of \$27,760 for CWSNC uniform operations, a
13 decrease of \$345 for CLMS sewer, and a decrease of \$268 for Nags
14 Head.

DEPRECIATION EXPENSE

15

16 Q. WHAT ADJUSTMENTS WERE MADE TO THE ALLOCATION OF
17 DEPRECIATION EXPENSE?

18 A. In addition to the depreciation expense adjustments mentioned
19 above for WSC and the Charlotte Warehouse cost centers, I have
20 also made an adjustment to remove the depreciation expense that
21 should not be allocated from the Florida cost center. Further, I
22 removed the depreciation expenses allocated from the Regional and

1 Charlotte Parent cost centers since there are no plant in service and
2 accumulated depreciation allocated from these two cost centers.

3 **MISCELLANEOUS EXPENSE**

4 Q. WHAT ADJUSTMENTS HAVE YOU MADE TO MISCELLANEOUS
5 EXPENSE?

6 A. I have recommended several adjustments to the allocation of
7 miscellaneous expense. First, although the Company calculated the
8 amount of other income allocated from common cost centers on its
9 supporting workpaper, the amount was not carried forward to the pro
10 forma adjustment for CWSNC uniform. So I made an adjustment to
11 correct this error. Second, I removed the items that should not have
12 been allocated from the Florida cost center to CWSNC.

13 **SALARIES AND WAGES**

14 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO SALARIES AND
15 WAGES.

16 A. I have adjusted salaries and wages to reflect the updated payroll
17 information provided by the Company. These adjustments resulted
18 in a decrease in salaries and wages of \$37,039 for CWSNC water,
19 \$21,014 for CWSNC sewer, \$1,539 for CLMS sewer, and \$1,212 for
20 Nags Head, as shown on Schedule 2-2(a), Schedule 2-2(b), and
21 Schedule 2-2(c) of Zhang Exhibit I.

TRANSPORTATION EXPENSE

1
2 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO TRANSPORTATION
3 EXPENSE.

4 A. I have calculated transportation expense based on the average
5 transportation expense per vehicle for the twelve months ended
6 December 31, 2014, allocated to CWSNC water, CWSNC sewer,
7 CLMS sewer, and Nags Head and based on the number of vehicles
8 allocated to each of those operations. My adjustment also includes
9 the operators who the Company left out in the calculation for CWSNC
10 uniform.

OPERATING EXPENSES CHARGED TO PLANT

11
12 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO OPERATING
13 EXPENSES CHARGED TO PLANT.

14 A. Operating expenses charged to plant is the credit to expenses for
15 time spent by employees on capital projects, and is calculated by
16 multiplying the hours worked by the employee on the capital project
17 times a loaded hourly rate for the employee. Since I have updated
18 salaries, benefits, and payroll taxes to current amounts, I have also
19 adjusted the credit to expenses for operating expenses charged to
20 plant to reflect the current loaded hourly rates and the number of
21 hours capitalized for the twelve months ended June 30, 2015. In
22 addition, I have annualized the hours for the employees who were
23 hired less than a year and removed the employees who are no longer

1 with the Company or promoted to positions that are not applicable in
2 the allocation to CWSNC. This results in an increase in the credit to
3 expenses of \$85,599 for CWSNC water, \$48,564 for CWSNC sewer,
4 \$2,648 for CLMS sewer, and \$2,074 for Nags Head.

5 **PENSIONS AND OTHER BENEFITS**

6 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO PENSIONS AND
7 OTHER BENEFITS.

8 A. I have adjusted pensions and other benefits to reflect my updated
9 level of salaries. Also, during the investigation, I found out that the
10 Company included a duplicate expense and an expense outside the
11 test year in the health benefit per employee calculation. Therefore, I
12 removed these expenses and adjusted the amount for health benefit
13 per employee to include in the calculation of pensions and other
14 benefits. I then allocated these pensions and other benefits amounts
15 to CWSNC water, CWSNC sewer, CLMS sewer, and Nags Head
16 using the same percentage as was used to allocate the employee's
17 salary.

18 **RENT EXPENSE**

19 Q. PLEASE EXPLAIN YOUR ADJUSTMENTS TO RENT EXPENSE.

20 A. I have made several adjustments to rent expense. First, I adjusted
21 the State, Charlotte Office, and Charlotte Warehouse rent to reflect
22 the current annual lease amount. Second, I reclassified the
23 statewide rent from the Charlotte Parent cost center to the State cost

1 center so that the correct allocation factor is used to allocate this rent
2 expense. Third, I included the Fairfield Mountain office rent in the
3 State cost center so that the correct allocation of rent is applied
4 consistently across the state. I then allocated the rent expense to
5 CWSNC water, CWSNC sewer, CLMS sewer, and Nags Head based
6 on the allocation percentage of each cost center.

7 **INSURANCE EXPENSE**

8 Q. PLEASE EXPLAIN YOUR ADJUSTMENTS TO INSURANCE
9 EXPENSE.

10 A. I have updated the annual insurance premiums to reflect the current
11 insurance policies in effect. Also, since the pollution liability
12 insurance is a three-year policy, I made an adjustment to include only
13 one-third of the pollution liability insurance premium to reflect an
14 annual level of premium for this policy.

15 I also made adjustments to update the allocation factors for
16 insurance expense as follows:

17 (1) I have updated the allocation factors for automobile insurance
18 to reflect my adjusted allocation of transportation equipment
19 for CWSNC uniform.

20 (2) I have updated the allocation factors for property insurance to
21 reflect the value of the property covered by the current
22 insurance policies, and

1 (3) I have adjusted the allocation of workers compensation
2 insurance to reflect my adjusted level of payroll.

3 **PAYROLL TAXES**

4 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO PAYROLL TAXES.

5 A. In its application, the Company included a pro forma level of payroll
6 taxes for operations and maintenance, customer service, and WSC
7 employees.

8 I have made an adjustment to reflect payroll taxes for operations and
9 maintenance, customer service, and WSC employees based on my
10 adjusted level of salaries and wages at the current payroll tax rates.

11 Q. DOES THIS COMPLETE YOUR TESTIMONY?

12 A. Yes, it does.

Appendix A

Fenge Zhang**Qualifications and Experience**

I graduated from North Carolina State University in 2011 with a Bachelor of Science degree and a Masters degree in Accounting. I am a Certified Public Accountant licensed in North Carolina. I joined the Public Staff on March 28, 2012. Since then, I have been involved in various topics related to the regulated telephone, water, sewer, electric and natural gas industries. I have filed and/or assisted in the following Demand Side Management and Energy Efficiency (DSM/EE) riders, electric fuel rider cases, gas annual reviews, lead lag study, and general rate case audits:

CWS Systems, Inc.

Bradfield Farms Water Company

Carolina Water Service, Inc. of North Carolina
Duke Energy Carolinas, LLC

Dominion North Carolina Power

Progress Energy Carolinas, Inc.

Frontier Natural Gas, LLC

Piedmont Natural Gas Company, Inc.

Docket No. W-778, Sub 89

Docket No. W-1044, Sub 19

Docket No. W-354, Sub 336

Docket No. E-7, Sub 1001,
Sub 1026, and Sub 1072,

Docket No. E-22, Sub 513
and Sub 524

Docket No. E-2, Sub 1019,
Sub 1023, and Sub 1069

Docket No. G-40, Sub 110,
Sub 119, and Sub 125

Docket No. G-9, Sub 631

1 Exhibits CCC-1 through CCC-8

2 (Identified and Admitted)

3 (WHEREUPON, the prefled direct
4 testimony of CALVIN C. CRAIG, III
5 is copied into the record as if
6 given orally from the stand.)
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DOCKET NO. W-354, SUB 344

TESTIMONY OF CALVIN C. CRAIG, III
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION

October 14, 2015

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

3 A. My name is Calvin C Craig, III. I am a Financial Analyst in the
4 Economic Research Division of the Public Staff of the North
5 Carolina Utilities Commission (Public Staff), representing the using
6 and consuming public. My business address is 430 North Salisbury
7 Street, Raleigh, North Carolina 27603.

8 Q. PLEASE OUTLINE YOUR EDUCATIONAL BACKGROUND AND
9 RELEVANT EMPLOYMENT EXPERIENCE.

10 A. I received a Bachelor of Science degree in Industrial Relations from
11 the University of North Carolina at Chapel Hill in 1985, an MBA
12 degree from East Carolina University in 1993, and a Juris Doctor
13 degree from North Carolina Central University in 2006. Since
14 joining the Public Staff in November 1995, I have been involved
15 with natural gas expansion projects, have conducted rate of return
16 studies, and have filed affidavits assessing financial viability and a
17 fair rate of return in numerous water and wastewater utility rate
18 cases.

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

3 A. The purpose of my testimony in this proceeding is to address the
4 fair rate of return 8.20%, specifically the return on equity
5 component of 9.75%, agreed to in the Stipulation between Carolina
6 Water Service, Inc. of North Carolina (CWSNC or Company), a
7 wholly owned subsidiary of Utilities, Inc., and the Public Staff and to
8 provide support for the Public Staff's position that the return on
9 equity component is just and reasonable for use as a basis for
10 adjusting the water and sewer rates of the Company's system
11 involved in this docket.

12 Q. HOW IS YOUR TESTIMONY STRUCTURED?

13 A. My testimony is presented in the following five sections:

- 14 I. Legal and Economic Guidelines for Fair Rate of Return
- 15 II. Present Financial Market Conditions
- 16 III. Appropriate Capital Structure and Cost of Long Term Debt
- 17 IV. The Cost of Common Equity
- 18 V. Overall Recommended Cost of Capital

1 I. LEGAL AND ECONOMIC GUIDELINES FOR FAIR RATE OF RETURN

2 Q. ARE THERE ANY LEGAL AND ECONOMIC GUIDELINES TO
3 FOLLOW WHEN DETERMINING THE COST OF CAPITAL TO A
4 PUBLIC UTILITY?

5 A. Yes. In Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S.
6 591 (1944), the U.S. 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. Id. at 603.

13 In Bluefield Water Works & Improvement Co. v. Public Serv.
14 Comm'n of West Virginia, 262 U.S. 679 (1923), the U S. Supreme
15 Court stated:

16 A public utility is entitled to such rates as will permit it
17 to earn a return on the value of the property which it
18 employs for the convenience of the public equal to
19 that generally being made at the same time and in the
20 same general part of the country on investments in

1 other business undertakings which are attended by
2 corresponding risks and uncertainties; but it has no
3 constitutional right to profits such as are realized or
4 anticipated in highly profitable enterprises or
5 speculative ventures. The return should be
6 reasonably sufficient to assure confidence in the
7 financial soundness of the utility and should be
8 adequate, under efficient and economical
9 management, to maintain and support its credit and
10 enable it to raise the money necessary for the proper
11 discharge of its public duties. A rate of return may be
12 reasonable at one time and become too high or too
13 low by changes affecting opportunities for investment,
14 the money market and business conditions generally.

15 Id. at 692-93.

16 These two decisions recognize that utilities are competing for the
17 capital of investors and provide legal guidelines as to how the
18 allowed rate of return should be set. The decisions specifically
19 speak to the standards or criteria of capital attraction, financial
20 integrity, and comparable earnings. The Hope decision, in
21 particular, recognizes that the cost of common equity is
22 commensurate with risk relative to investments in other enterprises.

1 In competitive capital markets, the required return on common
2 equity will be the expected return foregone by not investing in
3 alternative investments of comparable risk. For the utility to attract
4 capital, possess financial integrity, and exhibit comparable
5 earnings, the return allowed on a utility's common equity should be
6 that return required by investors for stocks with comparable risk.

7 It is widely recognized that a public utility should be allowed a rate
8 of return on capital which, under prudent management, will allow
9 the utility to meet the criteria or standards referenced by the Hope
10 and Bluefield decisions. If the allowed rate of return is set too high,
11 consumers are burdened with excessive costs, current investors
12 receive a windfall, and the utility has an incentive to overinvest. If
13 the return is set too low, and the utility is not able to attract capital
14 on reasonable terms to invest in capital improvements for its
15 service area, and its future service obligations may be impaired.
16 Because a public utility is capital intensive, the cost of capital is a
17 very large part of its overall revenue requirement and is a crucial
18 issue for a company and its ratepayers.

19 Q. WHAT IS A FAIR RATE OF RETURN?

20 A. The fair rate of return is simply a percentage, which, when
21 multiplied by a utility's rate base investment, will yield the dollars of

1 net operating income a utility should have the opportunity to earn.
2 This dollar amount of net operating income is available to pay the
3 interest cost on a utility's debt and a return to the common equity
4 investor. The fair rate of return multiplied by the utility's rate base
5 yields the dollars a utility needs to recover in order to earn for
6 investors the cost of capital.

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

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

20 Second, I determined the cost rate of each form of financial capital.
21 The individual debt issues have contractual agreements explicitly

1 stating the cost of each issue. The embedded annual cost of debt
2 may be calculated by simply considering these agreements and the
3 utility's books and records. The cost of common equity is more
4 difficult to determine, however, because it reflects common equity
5 investors' expectations. Various economic and financial models or
6 methods are available to measure the cost of common equity.

7 Third, by combining the appropriate capital structure ratios for
8 ratemaking purposes with the associated cost rates, I calculated an
9 overall weighted cost of capital or fair rate of return to the utility.

10 II. PRESENT FINANCIAL MARKET CONDITIONS

11 **Q. CAN YOU BRIEFLY DESCRIBE CURRENT FINANCIAL MARKET**
12 **CONDITIONS?**

13 **A.** Yes. After dropping several hundred basis points since 2009, the
14 cost of financing has remained relatively stable over the past three
15 years. According to the issue of Credit Trends by Moody's Investors
16 Service, Inc., yields on long-term "A" rated public utility bonds are
17 4.55% for the month-ending July, 2015; as compared to 4.28%
18 average yield for 2014, 4.48% for 2013, and 4.13% for 2012 as
19 shown in Exhibit CCC-1.

20 The economic outlook for national economy and for North Carolina
21 continues to show improvement as indicated by the second quarter

1 2015 US annualized gross domestic product (GDP) growth of 3.7
2 percent and a 1.0 percent growth in personal income for the nation
3 and for NC as of the first quarter of 2015. Dr. Michael Walden¹ of
4 North Carolina State University predicts that the positive economic
5 trends will continue throughout 2015.

6 **Q. HOW DO THESE LOWER INTEREST RATES AFFECT THE**
7 **FINANCING COSTS OF A COMPANY?**

8 A. In simple terms, the current lower interest rates and stable
9 inflationary environment of today, relative to the early 1990's,
10 indicate that borrowers are paying less for the time value of money.
11 This finding is significant since utility stocks and utility costs of capital
12 are highly interest rate-sensitive relative to most industries within the
13 securities markets.

14 **III. APPROPRIATE CAPITAL STRUCTURE AND COST OF LONG TERM**
15 **DEBT**

16 **Q. WHY IS THE ISSUE OF THE APPROPRIATE CAPITAL**
17 **STRUCTURE IMPORTANT FOR RATEMAKING PURPOSES?**

18 A. For companies that do not have monopoly power, the price that an
19 individual company charges for its products or services is set in a
20 competitive market and that price is generally not influenced by the

¹ Bracken, David "Forecast: NC economic growth poised to accelerate over the remainder of 2015", The News & Observer, June 29, 2015.

1 company's capital structure. However, the capital structure that is
2 determined appropriate for a regulated public utility has a direct
3 bearing on the fair rate of return, revenue requirements, and,
4 therefore, the prices charged to captive ratepayers.

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

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

1 cost rate. Conversely, the cost of debt is set at an embedded rate,
2 because the utility is incurring only the costs previously established
3 in contracts with senior security holders.

4 Because the Commission has the duty to promote economical
5 utility service, it must decide whether or not a utility's requested
6 capital structure is appropriate for ratemaking purposes. Each
7 dollar of its common equity, and long term debt which supports the
8 retail rate base has the following approximate annual costs
9 (including income tax and regulatory fee expense) to CWSNC's
10 ratepayers:

11 (1) Each \$1 of common equity costs ratepayers 15 cents per
12 year.

13 (2) Each \$1 of long term debt costs ratepayers 7 cents per year.

14 **Q. WHAT IS YOUR RECOMMENDED CAPITAL STRUCTURE AND**
15 **RECOMMENDED EMBEDDED COST OF LONG TERM DEBT?**

16 A. The Company's application listed its capital structure as consisting
17 of 48.97% long-term debt and 51.03% common equity. In this
18 proceeding, through discovery, it was determined that the Company
19 was in position to update its capital structure to 48.61% long-term
20 debt and 51.39% common equity. As part of the overall Stipulation,
21 the Company agreed to a lower cost capital structure consisting of

1 49% long-term debt and 51% common equity. I recommend a
2 hypothetical capital structure for Utilities, Inc., which is the parent
3 company of Carolina Water Service, Inc. of North Carolina. The
4 recommended capital structure and embedded cost of long term
5 debt are as follows:

6	<u>Component</u>	<u>Ratio</u>	<u>Cost Rate</u>
7	Long Term Debt	49.00%	6.60%
8	<u>Common Equity</u>	<u>51.00%</u>	<u>-</u>
9	Total	100.00%	

10 III. THE COST OF COMMON EQUITY

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

13 A. I have employed the discounted cash flow (DCF) model for water
14 and local natural gas distribution companies (LDCs), the risk
15 premium method using a regression analysis of allowed returns for
16 LDCs and the comparable earnings analysis on a comparable
17 group of water utilities.

18 **Q. WOULD YOU PLEASE DESCRIBE THE DCF MODEL?**

19 A. The discounted cash flow model is a method of evaluating the
20 expected cash flows from an investment by giving appropriate
21 consideration to the time value of money. The theory dictates that

1 the price of the investment will equal the discounted cash flows of
2 returns. The return to an equity investor comes in the form of
3 expected future dividends and price appreciation. However, as the
4 new price will again be the sum of the discounted cash flows, price
5 appreciation can be ignored and attention focused on the expected
6 stream of dividends. Mathematically, this relationship may be
7 expressed as follows:

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

9 g = expected growth rate of dividends;

10 k = cost of equity capital; and

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

12 Then,

$$\begin{array}{l} 13 \\ 14 \\ 15 \end{array} \quad P = \frac{D_1}{1+k} + \frac{D_1(1+g)}{(1+k)^2} + \frac{D_1(1+g)^2}{(1+k)^3} + \dots + \frac{D_1(1+g)^{t-1}}{(1+k)^t}$$

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

$$\begin{array}{l} 20 \\ 21 \\ 22 \end{array} \quad P = \frac{D_1}{k-g}$$

1 Solving for k yields the DCF equation:

$$\begin{array}{l} 2 \\ 3 \\ 4 \end{array} \quad k = \frac{D_1 + g}{P}$$

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

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

9 A. No, because the common equity of CWSNC is not publically traded.
10 As such, I applied the DCF method to a comparable group of water
11 utilities and a group of natural gas distribution companies that are
12 comparable followed by Value Line Investment Survey (Value Line)
13 that exhibit comparable measure of investor-related risk measures
14 as shown in Exhibit CCC-2.

15 **Q. WHY DID YOU CONSIDER THE COST OF EQUITY FOR A**
16 **GROUP OF COMPANIES COMPARABLE IN RISK TO**
17 **CWSNC?**

18 A. The cost of equity capital is a cost borne by firms whose equity
19 shares are considered to be risk-comparable investments. In
20 order to estimate the investor required rate of return for
21 CWSNC, I performed a DCF analysis on comparable risk

1 companies. Use of a comparable risk group reduces the
2 possibility of error in judgment, can be used as a check, and
3 also insures that the standards and criteria of the Hope and
4 Bluefield cases are met.

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

7 A. I calculated the dividend yield by using the Value Line estimate of
8 dividends to be declared over the next 12 months divided by the
9 price of the stock as reported in the Value Line Summary and Index
10 sections for each week of the 13-week period from April 10, 2015
11 through July 3, 2015. A 13-week averaging period tends to smooth
12 out short-term variations in the stock prices. This process resulted
13 in a 2.7% average dividend yield for the comparable group of water
14 utilities.

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

17 A. I employed the growth rates of the comparable group in earnings
18 per share (EPS), dividend per share (DPS), and book value per
19 share (BPS) as reported in Value Line over the past five and ten
20 years. They apply a smoothing process in an attempt to avoid the

1 distortion that may be associated with choosing an
2 unrepresentative high or low beginning or ending point.

3 Secondly, I employed the forecasts of the growth rates of the
4 comparable groups in EPS, DPS, and BPS as also reported in
5 Value Line. These forecasts are prepared by analysts of an
6 independent advisory service. This service is widely available to
7 investors and should also provide an estimate of investor
8 expectations.

9 Thirdly, I incorporated the consensus of various analysts' forecasts
10 of five-year EPS growth rates projections as reported in Yahoo
11 Finance. On Exhibit CCC-3, I have presented the dividend yields
12 and growth rates as described above for each of the companies
13 individually as well as average for the group.

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

17 A. Based upon the DCF results for the comparable group of water
18 utilities, I determined that the cost of common equity is within the
19 range of 8.2% to 9.2%. This range is consistent with a dividend
20 yield of 2.7% and an expected growth rate of 5.5% to 6.5%.

1 Q. PLEASE DESCRIBE THE RISK PREMIUM METHOD BASED ON
2 COMMISSION APPROVED ALLOWED RETURNS OF EQUITY.

3 A. I used a regression analysis to analyze the historical relationship
4 between approved returns on common equity for LDC public
5 utilities and yields on utility bonds. The regression analysis
6 incorporates annual average allowed returns as reported by
7 Regulatory Research and Associates (RRA) and the annual
8 average single 'A' rated public utility bond yields as reported by
9 Moody's Investor Service (Moody's). Using the last three months of
10 'A' rated bond yields, the regression analysis generates a prediction
11 of the current allowed return of equity and the associated risk
12 premium.

13 The method was relied upon by this Commission in Docket No.
14 E-22, Sub 333, a 1993 general rate case of North Carolina Power,
15 and Docket No. G-5, Sub 327, a 1994 general rate case of Public
16 Service Company of North Carolina. This method has been used in
17 filings by the Public Staff in previous general rate cases that were
18 ultimately settled. The method has been used in annual formula
19 rate plans for LDCs² regulated by the Mississippi Public Service
20 Commission for over ten years and the method has used in filings

² Mississippi Valley Gas, Docket No. 92-UN-230; Willmut Gas & Oil Co., Docket 01-UN-0524.

1 by the Staff of the Federal Energy Regulatory Commission in
2 litigated rate cases.

3 Q. WHAT DID YOU CONCLUDE FROM THE ANALYSIS OF
4 ALLOWED RETURNS AND UTILITY BOND YIELDS?

5 A. Based on current Moody's single "A" rated utility bonds yields and
6 the regression equation, the predicted return on common equity is
7 9.66%, as shown in Exhibit CCC-4b. This result is derived by
8 adding the value for the intercept coefficient (0.07646) to the value
9 of the x variable coefficient (0.45964), and multiplying the result by
10 the average bond yield for "A" rated bonds during the past 90 days
11 (4.37%).

12 Q. DID YOU USE THE COMPARABLE EARNINGS METHOD?

13 A. Yes. I used the comparable earnings method to review actual earned
14 returns that are available to investors in the capital markets as a
15 method to check the results of my DCF analysis.

16 Q. PLEASE EXPLAIN THE BASIS FOR THIS METHOD.

17 A. The approach is based upon the Hope case cited earlier in my
18 testimony, which maintains that an investor should be able to earn a
19 return comparable to the returns available on alternative investments
20 with similar risks.

1 Q. WHAT ARE SOME OF THE STRENGTHS AND WEAKNESSES
2 INHERENT IN THE COMPARABLE EARNINGS APPROACH?

3 A. A strength of this method is that information on earned returns on
4 common equity is widely available to investors and it is believed that
5 investors use earned returns as a guide in determining an expected
6 return on an investment. A weakness is that actual earned rates of
7 return can be impacted by items outside the company's control, such
8 as with weather and inflation.

9 Q. PLEASE DESCRIBE YOUR COMPARABLE EARNING METHOD.

10 A. I examined the earned returns on common equity as reported in Value
11 Line for the water utility industry.

12 Q. WHAT DID YOU CONCLUDE FROM YOUR COMPARABLE
13 EARNINGS ANALYSIS OF THE GROUP OF COMPARABLE
14 WATER UTILITIES?

15 A. Based on the average earned rates of return from 2007-2015 as
16 shown in Exhibit CCC-5, I conclude that the cost of equity using the
17 comparable earnings analysis is in the range of 8.70% to 9.80%.The
18 low end of this range of estimates is based on the average return and
19 the median return for the years 2007-2012 of 8.60% and 8.70% and
20 high end of this range is based on the average return and the median

160

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1 return for the three most recent years (2013-2015) of 10.20% and
2 9.50%, respectively.

3 **Q. BASED UPON YOUR DCF, RISK PREMIUM, AND COMPABLE**
4 **EARNINGS METHODS, WHAT IS YOUR RECOMMENDED COST**
5 **OF EQUITY FOR CWSNC?**

6 A. Based on the results of the three methods, I conclude that a
7 reasonable range of estimates for the cost of equity is between
8 8.80% and 9.80%.

9 **Q. HAS CWSNC FILED A THREE-YEAR PLAN FOR WATER**
10 **SYSTEM OR SEWER SYSTEM IMPROVEMENT CHARGES**
11 **(WSIC/SSIC)?**

12 A. Yes. CWSNC's current three year plan projects \$1.79 Million of
13 capital improvements.

14 **Q. TO WHAT EXTENT DOES YOUR RECOMMENDED RATE OF**
15 **RETURN ON COMMON EQUITY TAKE INTO CONSIDERATION**
16 **THE IMPACT OF A WSIC/SSIC MECHANISM PURSUANT TO**
17 **G.S. 62-133.12 ON THE COMPANY'S FINANCIAL RISK?**

18 A. I believe the ability for enhanced recovery of the eligible
19 WSIC/SSIC capital improvements reduces regulatory lag and is
20 seen by investors as supportive regulation that mitigates risk.

1 However, a clear method does not exist to quantify the reduction in
2 risk and the return on equity from the investor perspective. As such,
3 I believe that this mechanism supports the reasonableness of my
4 recommendation.

5 **Q DID YOU SUPPORT SETTLING WITH THE COMPANY AT 9.75%**
6 **RATE OF RETURN ON COMMON EQUITY?**

7 A. CWSNC'S cost of capital expert witness Pauline Ahern's testimony
8 presents a specific return on common equity recommendation of
9 10.40%. Ms. Ahern's 10.40% includes a .40% upward business
10 risk adjustment to which the Public Staff completely disagrees. The
11 range of Ms. Ahern's return on company equity analyses included a
12 low of 8.52% discounted cash flow model and a high of 10.74% risk
13 premium model.

14 While the results of my study support a cost of equity between
15 8.80% and 9.80% and a mid point estimate of 9.30%, I believe that
16 the 9.75% return on common equity in the Stipulation represents a
17 reasonable compromise. The 9.75% should enable CWSNC by
18 sound management to produce a fair return for its shareholders,
19 considering economic conditions and other factors, as they now
20 exist, to maintain its facilities and services in accordance with the
21 reasonable requirements of its customers in the territories covered

1 by its franchises, and to compete in the market for capital funds
2 which are reasonable and which are fair to the customers and to its
3 existing investors.

4 IV. OVERALL RECOMMENDED COST OF CAPITAL

5 Q. WHAT IS YOUR RECOMMENDED OVERALL RATE OF RETURN?

6 A. The recommended cost of capital is 8.20%, as shown in Exhibit
7 CCC-7.

8 Q. DID YOU PERFORM ANY TESTS OF REASONABLNESS WITH
9 YOUR RECOMMENDED RETURN OF EQUITY AND OVERALL
10 COST OF CAPITAL?

11 A. In regard to reasonableness assessment with financial risk, I
12 considered the pre-tax interest coverage ratio as a result of my cost
13 of capital recommendation. Based on the recommended capital
14 structure, cost of debt, and equity return of 9.75%, the pre-tax
15 interest coverage ratio is approximately 2.9 times. This level of pre-
16 tax interest coverage should allow the Company to qualify for a
17 "BBB" bond rating.

18 Q. TO WHAT EXTENT DOES THE RETURN ON EQUITY AGREED
19 TO IN THE STIPULATION TAKE INTO CONSIDERATION THE

1 **IMPACT OF CHANGING ECONOMIC CONDITIONS ON THE**
2 **CWSNC CUSTOMERS?**

3 A. I am aware of no clear numerical basis for quantifying the impact of
4 changing economic conditions on customers in determining an
5 appropriate return on equity in setting rates for a public utility.
6 Rather, the impact of changing economic conditions nationwide is
7 inherent in the methods and data used in my study to determine the
8 cost of equity for utilities that are comparable in risk to CWSNC. In
9 addition, customer testimony at the public hearings in this
10 proceeding focused on the amount of proposed rate increases in
11 the various service areas. There was no customer testimony on the
12 impact of changing economic conditions on the Company's cost of
13 equity capital.

14 In order to obtain information on the economic conditions in the
15 area served by CWSNC, I conducted a review of the data on total
16 personal income for the years 2008 through 2014 as compiled by
17 the Bureau of Economic Analysis (BEA) and the Development Tier
18 Designations published by the North Carolina Department of
19 Commerce for the counties within the Company's service area
20 which have the greatest number of CWSNC customers. The
21 CWSNC service areas with larger numbers of CWSNC customers
22 include subdivisions in Currituck, Dare, Forsyth, Gaston, Iredell,

1 Johnston, Mecklenburg, Montgomery, Moore, Onslow, Pender,
2 Watauga and Wake counties.

3 The two largest counties within the Company's service area,
4 Mecklenburg and Wake, experienced growth in personal income of
5 more than 3.5% annually during the years 2008 through 2014, all of
6 the 13 CWSNC counties experienced growth in personal income
7 from 2008-2014, and the annual average for all 13 of the CWSNC
8 counties was 2.7%.

9 The 2015 County Tier Designations by the North Carolina
10 Department of Commerce for these 13 counties has only
11 Montgomery County as TIER 1, Currituck, Dare, Gaston and
12 Onslow are TIER 2, and Forsyth, Iredell, Johnston, Mecklenburg,
13 Moore, Pender, Watauga and Wake are TIER 3.

14 These 13 CWSNC counties have an average 5.9% July 2015
15 unemployment rate compared to North Carolina's statewide 6.3%
16 July 2015 unemployment rate. The unemployment rate in these 13
17 counties has dropped an average of 0.4% in the one year period
18 July 2014 to July 2015 as shown on CCC Exhibit 8, which
19 demonstrates the continued improvement in North Carolina's
20 economy.

1 The determination of the rate of return for regulatory proposes must
2 be based on the requirements of capital markets. However, as
3 noted by the North Carolina Supreme Court in recent decisions, it is
4 necessary to consider the impact of changing economic conditions
5 on consumers in general rate cases. As noted in the discussion on
6 present economic conditions, there are reasons to believe that the
7 economic conditions in the nation and in North Carolina will
8 continue to improve which should provide a benefit for many
9 CWSNC customers.

10 In any event, the Commission's duty to set rates as low as
11 reasonably possible consistent with constitutional constraints is the
12 same regardless of the customer's ability to pay, and this was the
13 principle underlying the Stipulation.

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

15 **A. Yes.**

1 MS. HOLT: And, at this time, we'd like to
2 inform the Commission that Mr. Henry is not available
3 today to testify, but the Assistant Director of the
4 Accounting Division, Katherine Fernald, is going to
5 adopt his testimony, and we'd like to call her at this
6 time if the Commission has questions.

7 CHAIRMAN FINLEY: Ms. Fernald, if you will
8 come around and be sworn, please.

9 KATHERINE A. FERNALD; Was duly sworn and
10 testified as follows:

11 DIRECT EXAMINATION

12 BY MS. HOLT:

13 Q Could you please state your name, business
14 address and position for the record?

15 A My name is Katherine A. Fernald. My business
16 address is 430 North Salisbury Street, Raleigh,
17 North Carolina, and I am Assistant Director in
18 the Public Staff, Accounting Division.

19 Q Thank you. Ms. Fernald, are you familiar with
20 the testimony of Mr. Windley Henry which was
21 prefiled in this docket on October 15, 2015 --

22 A (Interposing) Yes, I am.

23 Q -- consisting of 25 pages and one exhibit?

24 A Yes, I am.

1 Q Do you agree with that testimony?

2 A Yes, I do.

3 Q Do you now adopt that testimony as representing
4 your position and that of the Public Staff in
5 this case?

6 A Yes, I do.

7 MS. HOLT: I now request that the testimony
8 of Mr. Windley Henry, as adopted by Witness Katherine
9 Fernald be copied into the record as if given orally
10 from the stand and that his exhibits be identified as
11 premarked?

12 CHAIRMAN FINLEY: Mr. Henry's prefiled
13 direct testimony, as accepted and testified to on
14 behalf of Ms. Fernald, is copied into the record as
15 though given orally from the stand, and his exhibits
16 are marked for identification as premarked in the
17 filing.

18 Henry Exhibit 1

19 (Identified)

20 (WHEREUPON, the prefiled direct
21 testimony of WINDLEY HENRY, as
22 adopted by KATHERINE A. FERNALD,
23 is copied into the record as if
24 given orally from the stand.)

CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA
DOCKET NO. W-354, SUB 344

TESTIMONY OF WINDLEY E. HENRY
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION

October 15, 2015

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

3 A. My name is Windley E. Henry and my business address is 430 N.
4 Salisbury Street, Raleigh, North Carolina. I am the Supervisor of the
5 Water Section of the Public Staff – Accounting Division, and
6 represent the using and consuming public.

7

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

10 A. I have been employed by the Public Staff since July 16, 1990.

11

12 Q. WILL YOU STATE BRIEFLY YOUR EDUCATION AND
13 EXPERIENCE?

14 A. I am a graduate of the University of North Carolina at Wilmington with
15 a Bachelor of Science degree in Accountancy. I am a Certified Public
16 Accountant licensed in the State of North Carolina. Prior to joining
17 the Public Staff, I was employed by the Seymour Johnson Federal
18 Credit Union. My duties there involved supervision of the accounting
19 department and preparing financial reports. I joined the Public Staff

1 as a Staff Accountant on July 16, 1990. Since joining the Public
2 Staff, I have presented testimony and exhibits in numerous cases
3 before this Commission involving water, sewer, and natural gas
4 utilities.

5
6 Q. WHAT ARE YOUR DUTIES?

7 A. I am responsible for the performance and supervision of the following
8 activities: (1) the examination and analysis of testimony, exhibits,
9 books and records, and other data presented by utilities and other
10 parties involved in Commission proceedings; and (2) the preparation
11 and presentation to the Commission of testimony, exhibits, and other
12 documents in those proceedings.

13
14 Q. MR HENRY, WHAT IS THE NATURE OF THE APPLICATION IN
15 THIS PROCEEDING?

16 A. On March 31, 2015, Carolina Water Service, Inc. of North Carolina
17 (CWSNC or Company) filed an application with the Commission
18 seeking authority to adjust and increase rates for all of its water and
19 sewer service areas in North Carolina. My investigation included a
20 review of the application filed by CWSNC, an examination of the
21 Company's books and records for the test year, and a review of
22 additional documentation provided by the Company in response to
23 written and verbal data requests.

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

3 A. The purpose of my testimony in this proceeding is to present the
4 results of my investigation of the levels of revenue, expenses, and
5 investment filed by CWSNC in support of its requested increase in
6 operating revenues for its uniform water operations (CWSNC water),
7 uniform sewer operations (CWSNC sewer), Corolla Light & Monteray
8 Shores sewer operations (CLMS sewer), and Nags Head sewer
9 operations (Nags Head).

10

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

13 A. Yes. My testimony contains a discussion of each issue resulting from
14 my investigation, and my exhibit consists of schedules showing the
15 calculation of my adjustments to revenues, expenses, and rate base.
16 My schedules also reflect adjustments recommended by other Public
17 Staff witnesses. Schedules 1(a) and 1(b) of my Exhibit I present the
18 return on original cost rate base for water and sewer operations
19 under present rates, Company proposed rates, and Public Staff
20 recommended rates. Schedules 2(a) through 2(e) of Exhibit I, along
21 with their supporting schedules, present the original cost rate base
22 for each of the water and sewer operations. Schedule 3(a) through
23 3(e) of Exhibit I, along with their supporting schedules, present the

1 calculation of net operating income for a return under present rates,
2 Company proposed rates, and Public Staff recommended rates.

3

4 Q. WHAT MODIFICATIONS OF THE TEST PERIOD HAVE YOU
5 MADE IN THIS PROCEEDING?

6 A. In its application, CWSNC made pro forma adjustments to rate base
7 to include estimated general ledger plant additions and construction
8 work in progress (CWIP) projects, net of retirements, which will be
9 placed in service between January 1, 2015, and the hearing date in
10 this proceeding. The Public Staff agrees with the Company that the
11 test year should be updated for certain events that occurred after the
12 test year. Those events should be known and measurable as of a
13 certain date before they should be considered in evaluating the need
14 for rate relief. Therefore, the Public Staff witnesses have made
15 adjustments in this proceeding to update the Company's test year to
16 recognize certain events affecting rate base, revenues, and
17 expenses as a result of certain known and measurable events that
18 occurred through July 31, 2015.

19 As part of this overall update adjustment, I have made the
20 adjustments to recognize changes to plant in service, accumulated
21 depreciation, contributions in aid of construction (CIAC), purchase
22 acquisition adjustment (PAA), deferred charges, and other rate base
23 changes that occurred through July 31, 2015.

1 In addition, several major CWIP projects expected to be completed
2 and placed in service prior to the hearing in this proceeding, have
3 been included in rate base.

4

5 Q. WHAT ARE THE COMPANY'S PROPOSED INCREASES IN
6 SERVICE REVENUES IN THIS CASE?

7 A. The service revenues under present rates, the Company's proposed
8 increases, and the Company's proposed rates are as follows:

	Present Rates	Proposed Increase	Proposed Rates
9 CWSNC Water	\$ 9,369,220	\$1,582,264	\$10,951,484
10 CWSNC Sewer	5,711,794	1,118,572	6,830,366
11 CLMS Sewer	1,117,239	309,148	1,426,387
12 Nags Head	693,575	166,240	859,815
13 Total CWSNC	<u>\$16,891,828</u>	<u>\$3,176,224</u>	<u>\$20,068,052</u>

16

17 Q. WHAT CONCLUSIONS HAVE YOU REACHED AS TO THE
18 COMPANY'S RATE INCREASE REQUEST?

19 A. Based on my investigation, the original cost rate base as of
20 December 31, 2014, updated to July 31, 2015, is as follows:

21 CWSNC Water	\$30,984,960
22 CWSNC Sewer	18,868,610
23 CLMS Sewer	6,668,286
24 Nags Head	<u>2,092,182</u>
25 Total CWSNC	<u>\$58,614,038</u>

26 Based on the overall rate of return of 8.20% stipulated to by CWSNC
27 and the Public Staff, I recommend that rates be set to produce the
28 following revenues:

		Service Revenues	Other Revenues & Uncollectibles	Total Operating Revenues
1				
2				
3				
4	CWSNC Water	\$10,727,674	\$ 82,986	\$10,810,660
5	Combined Sewer	<u>7,097,654</u>	<u>11,568</u>	<u>7,109,222</u>
6	Total CWSNC	<u>\$17,825,328</u>	<u>\$ 94,554</u>	<u>\$17,919,882</u>

7 Based on these levels of revenues, I recommend the following
8 increases in service revenues:

9	CWSNC Water	\$ 1,358,454
10	Combined Sewer	<u>1,385,860</u>
11	Total CWSNC	<u>\$ 2,744,314</u>

12 Q. DOES HENRY EXHIBIT I REFLECT ADJUSTMENTS SUPPORTED
13 BY OTHER PUBLIC STAFF WITNESSES?

14 A. My exhibit reflects the following adjustments supported by other
15 Public Staff witnesses:

16 (1) The recommendations of Public Staff witness Casselberry
17 regarding the following items:

- 18 (a) Service revenues at present rates
- 19 (b) Service revenues at Company proposed rates
- 20 (c) Purchased water
- 21 (d) Purchased sewer
- 22 (e) Maintenance and repair
- 23 (f) Maintenance testing
- 24 (g) Chemicals

25 (2) The recommendations of Public Staff witness Fernald
26 regarding the following items:

- 27 (a) Accumulated deferred income taxes (ADIT)
- 28 (b) Regulatory liability for excess deferred taxes
- 29 (c) Miscellaneous expense

30 (3) The recommendations of Public Staff witness Zhang
31 regarding the following items:

- 1 (a) Plant in service
- 2 (b) Accumulated depreciation
- 3 (c) Salaries and wages
- 4 (d) Maintenance and repair
- 5 (e) Transportation
- 6 (f) Operating expense charged to plant
- 7 (g) Outside services - other
- 8 (h) Office supplies and other office expense
- 9 (i) Pension and other benefits
- 10 (j) Insurance
- 11 (k) Miscellaneous expense
- 12 (l) Depreciation expense
- 13 (m) Payroll taxes

14

15 Q. WHAT ADJUSTMENTS WILL YOU DISCUSS?

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

- 18 (1) Plant in service
- 19 (2) Accumulated depreciation
- 20 (3) Contributions in aid of construction (CIAC)
- 21 (4) Cash working capital
- 22 (5) Customer deposits
- 23 (6) Gain on sale and flow back taxes
- 24 (7) Plant acquisition adjustment (PAA)
- 25 (8) Excess book value
- 26 (9) Cost-free capital
- 27 (10) Average tax accruals
- 28 (11) Deferred charges
- 29 (12) Miscellaneous revenues
- 30 (13) Uncollectibles
- 31 (14) Purchased power
- 32 (15) Maintenance and repair
- 33 (16) Outside services – other
- 34 (17) Miscellaneous expense
- 35 (18) Regulatory commission expense
- 36 (19) Depreciation expense
- 37 (20) Amortization of CIAC
- 38 (21) Amortization of PAA
- 39 (22) Franchise tax
- 40 (23) Property taxes

- 1 (24) Regulatory fee
2 (25) Gross receipts tax
3 (26) State income tax
4 (27) Federal income tax
5

6

PLANT IN SERVICE

7 Q. IN WHAT AREAS HAVE YOU MADE ADJUSTMENTS TO PLANT
8 IN SERVICE?

9 A. I adjusted direct water and sewer plant in service to remove
10 estimated post test year general ledger plant additions, which were
11 to be completed and in service by the hearing date in this proceeding.
12 I replaced the estimated general ledger additions with the actual and
13 known additions made on the Company's books from January 1,
14 2015 through July 31, 2015, the update period for rate base items.
15

16 I have also adjusted CWSNC's proposed level of plant in service to
17 remove the estimated cost of construction work in progress (CWIP)
18 projects. Plant in service was adjusted to include actual costs for
19 projects that have been completed and are in service. I have also
20 included actual amounts for CWIP projects completed by the hearing
21 date in this proceeding.
22

23 Plant in service has been adjusted to remove general ledger entries
24 booked twice to rate base by the Company. My adjustment corrects

1 this error to plant in service as well as similar errors made to CIAC
2 and PAA.

3
4 I adjusted plant in service to capitalize legal fees related to the
5 acquisition of the Linville Ridge water system. The legal fees were
6 improperly recorded as outside services – other instead of franchise
7 costs that the Company incurred to acquire this water system.

8
9 In this proceeding, as well as in the last rate case proceeding, Docket
10 No. W-354, Sub 336, CWSNC added the gain on sale of systems
11 sold to CMUD to plant in service. I removed the gain on sale from
12 plant in service and recommend that the Public Staff's adjusted
13 amount, net of amortization, be included as a separate line on the
14 rate base schedule.

15
16 Finally, I adjusted plant in service for recommended adjustments
17 made by Public Staff witness Zhang to the Charlotte Office, Charlotte
18 Warehouse, and North Carolina State cost centers plant balances
19 allocated to CWSNC water, CWSNC sewer, CLMS sewer, and Nags
20 Head.

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22
23

ACCUMULATED DEPRECIATION

1
2 Q. HOW HAVE YOU ADJUSTED ACCUMULATED DEPRECIATION?

3 A. I adjusted accumulated depreciation to remove depreciation on
4 estimated post-test year general ledger plant additions and
5 depreciation calculated by the Company on its estimated pro forma
6 CWIP projects for CWSNC water, CWSNC sewer, CLMS sewer, and
7 Nags Head. I replaced the estimated general ledger additions with
8 actual and known additions made on the Company's books as of July
9 31, 2015. Accumulated depreciation also reflects a matching
10 adjustment based on the Public Staff's recommended level of
11 depreciation expense.

12
13 I corrected an error made by the Company in its pro forma
14 adjustment to remove AFUDC calculated without using offsetting
15 plant modification fees on the Monterey Shores wastewater
16 treatment plant (WWTP) expansion. After correcting this error, I
17 updated the accumulated depreciation for this item through July 31,
18 2015.

19
20 Accumulated depreciation was adjusted to remove computer system
21 accumulated amortization for the Charlotte Warehouse cost center,
22 which was inappropriately included in accumulated depreciation for
23 CWSNC direct water and sewer plant. Public Staff witness Zhang

1 has calculated an updated amount of accumulated amortization to
2 include in rate base for this cost center plant item.

3
4 As part of the calculation of direct accumulated depreciation, I
5 removed general ledger entries included twice in rate base by the
6 Company. I also removed accumulated amortization on the gain on
7 sale of system sold to CMUD from accumulated depreciation and
8 recommend that the amount, net of amortization, be included as a
9 separate line item on the rate base schedule.

10
11 Accumulated depreciation also includes recommended adjustments
12 made by Public Staff witness Zhang to the Charlotte Office, Charlotte
13 Warehouse, and North Carolina State cost centers accumulated
14 depreciation balances that were allocated to CWSNC water,
15 CWSNC sewer, CLMS sewer, and Nags Head.

16
17 CONTRIBUTIONS IN AID OF CONSTRUCTION (CIAC)

18 Q. PLEASE EXPLAIN YOUR ADJUSTMENTS TO CIAC.

19 A. My adjustments to CIAC begin with a correction to the Company's
20 pro forma adjustment to accumulated amortization – CIAC to reflect
21 the costs for the Monteray Shores WWTP that were never recovered
22 from the developer. Additionally, I updated accumulated
23 amortization for this item through July 31, 2015.

1 Next, I adjusted accumulated amortization – CIAC to remove the
2 Company's pro forma adjustment to reflect its annualized level of
3 CIAC amortization expense. I replaced this adjustment with a
4 matching adjustment based on the Public Staff's recommended level
5 of CIAC amortization expense. As part of the update, I included the
6 actual and known additions made on the Company's books as of July
7 31, 2015, for both CIAC and accumulated amortization.

8
9 In addition to the adjustments discussed above, I removed general
10 ledger entries included twice in rate base by the Company to CIAC
11 and accumulated amortization - CIAC.

12

13

CASH WORKING CAPITAL

14 Q. PLEASE DESCRIBE YOUR CALCULATION OF CASH WORKING
15 CAPITAL.

16 A. Cash working capital provides the Company with the funds
17 necessary to carry on the day to day operations of the Company. In
18 my calculation, I have included 1/8 of total O&M and G&A expenses,
19 less purchased water and sewer expense, as a measure of cash
20 working capital.

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CUSTOMER DEPOSITS

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO CUSTOMER DEPOSITS.

A. Customer deposits were adjusted to correct the Company's pro forma adjustment, based on a corrected pro forma adjustment provided by the Company. I also updated customer deposits based on the balances as of July 31, 2015.

GAIN ON SALE AND FLOW BACK TAXES

Q. WHAT ADJUSTMENTS DID YOU MAKE TO GAIN ON SALE AND FLOW BACK TAXES?

A. I have adjusted gain on sale and flow back taxes to include the gain on sale of systems sold to CMUD and accumulated amortization that was inappropriately included in plant in service and accumulated depreciation as discussed above. Next, I amortized the gain on sale of systems sold to CMUD through December 31, 2015, so that the unamortized balance can be re-amortized over a three-year period.

PURCHASE ACQUISITION ADJUSTMENT (PAA)

Q. PLEASE DESCRIBE YOUR ADJUSTMENTS TO PAA.

A. I adjusted accumulated amortization - PAA to remove the Company's pro forma adjustment to reflect its annualized level of PAA amortization expense. I replaced this adjustment with a

1 matching adjustment based on the Public Staff's recommended level
2 of PAA amortization expense. Next, as part of the update, I included
3 actual general ledger additions made on the Company's books as of
4 July 31, 2015, in my adjusted PAA calculation. Finally, I removed
5 general ledger entries included twice in rate base by the Company in
6 PAA and accumulated amortization - PAA.

7

8

EXCESS BOOK VALUE

9 Q. WHY DID YOU ADJUST EXCESS BOOK VALUE?

10 A. Excess book value represents the difference between the price paid
11 by CWSNC to purchase stock of water and sewer systems and the
12 net book value of the stock. I have adjusted the excess book value
13 to reflect the accumulated amortization and unamortized balances
14 as of July 31, 2015. I also corrected the Company's pro forma
15 adjustment to remove the Britley system from excess book value due
16 to the sale of the system. The Company's pro forma adjustment
17 removes the Britley system from excess book value when it had
18 already been removed and my correction reverses this adjustment.

19

20

COST-FREE CAPITAL

21 Q. WHAT ADJUSTMENT DID YOU MAKE TO COST-FREE CAPITAL?

22 A. My adjustment reallocates cost-free capital between water and
23 sewer operations based on the Docket No. W-354, Sub 266 rate

1 case proceeding. The net effect of this adjustment on total cost-free
2 capital is zero.

3

4

AVERAGE TAX ACCRUALS

5 Q. HOW DID YOU CALCULATE AVERAGE TAX ACCRUALS?

6 A. Average tax accruals, calculated as 1/2 of property taxes plus 1/5 of
7 regulatory fee, are taxes which the Company collects in rates but
8 does not pay to the governmental agency every month. Since the
9 Company has the use of the money until it is paid to the
10 governmental agency, these tax accruals should be deducted from
11 rate base. Payroll taxes are not included in my calculation of average
12 tax accruals since they are paid to the taxing agencies on a more
13 frequent basis.

14

15

DEFERRED CHARGES

16 Q. PLEASE DESCRIBE YOUR ADJUSTMENTS TO DEFERRED
17 CHARGES.

18 A. I have adjusted deferred charges to reflect the unamortized balance
19 of deferred maintenance costs for tank painting, tank inspection, and
20 wastewater treatment plant painting as of July 31, 2015, consistent
21 with other updates made to rate base by the Public Staff in this
22 proceeding. I did not include the unamortized balance of the
23 Belvedere pump and haul cost in deferred charges. It is the Public

1 Staff's recommendation that the Company should not be able to earn
2 a return on these unusual and nonrecurring expenses that are
3 abnormally high due to a disagreement with the golf course. My
4 exclusion of the unamortized balance of the pump and haul
5 expenses is consistent with the treatment stipulated to by CWSNC
6 and the Public Staff in the Sub 324 rate case proceeding.
7

8 Next, I have adjusted unamortized rate case expense to reflect the
9 Public Staff's recommended level of rate case costs, less one year
10 of amortization, as discussed later in my testimony under regulatory
11 commission expense.
12

13 **MISCELLANEOUS REVENUES**

14 Q. WHY DID YOU ADJUST MISCELLANEOUS REVENUES?

15 A. I adjusted miscellaneous revenues to correct the Company's error in
16 allocating other water/sewer revenues between CWSNC water and
17 CWSNC sewer operations. The Company mistakenly allocated the
18 per book balance of these miscellaneous revenues based on test
19 year service revenues instead of directly assigning them to water or
20 sewer operations. My adjustment corrects this error.
21

22 I calculated a forfeited discount rate for CWSNC water and sewer
23 operations by dividing the respective test year forfeited discounts by

1 test year service revenues. The resulting rates were then applied to
2 the Public Staff's present, proposed and recommended levels of
3 service revenues to determine an appropriate level of forfeited
4 discounts to include in miscellaneous revenues.

5

6

UNCOLLECTIBLES

7 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO UNCOLLECTIBLES.

8 A. I have calculated uncollectibles percentages for CWSNC water and
9 sewer operations based on the per books levels of uncollectibles and
10 service revenues for the test year. I then applied these percentages
11 to my adjusted levels of service revenues under present, Company
12 proposed, and recommended rates to derive my adjusted levels of
13 uncollectibles.

14

15

PURCHASED POWER

16 Q. WHAT ADJUSTMENTS HAVE YOU MADE TO PURCHASED
17 POWER?

18 A. My first adjustment to purchased power is to update the test year
19 amount to reflect the actual amount for electric power as of the twelve
20 months ending June 30, 2015. This adjustment corresponds with the
21 adjustment to update revenues to June 30, 2015.

22

1 Next, I removed manual accruals to purchased power made on the
2 Company books to estimate the monthly electric costs needed for
3 financial reporting purposes. My updated purchased power expense
4 includes twelve months of actual purchased power expenses as of
5 June 30, 2015.

6
7 Next, I removed purchased power for the College Park sewer
8 system. Now that CWSNC is purchasing sewer treatment for this
9 system, the Company will no longer incur electric costs for this
10 system.

11
12 Finally, I removed purchased power for the Huntwick water system
13 from operating expenses, because the system was sold and the
14 Company will no longer incur electric costs for this system.

15

16 **MAINTENANCE AND REPAIR**

17 Q. HOW HAVE YOU ADJUSTED MAINTENANCE AND REPAIR
18 EXPENSE?

19 A. Maintenance and repair expense was adjusted to reflect one year of
20 annual amortization expense on the Public Staff's recommended
21 level of deferred charges discussed above under deferred charges.
22 I adjusted maintenance and repair to remove expenses for the
23 College Park sewer system based on the recommendation of Public

1 Staff witness Casselberry. My ongoing level of maintenance and
2 repair also includes cost center adjustments recommended by Public
3 Staff witness Zhang.

4

5

OUTSIDE SERVICES - OTHER

6 Q. PLEASE EXPLAIN HOW YOU CALCULATED OUTSIDE
7 SERVICES – OTHER.

8 A. My adjustments to outside services – other begins with the removal
9 of legal fees from test year expenses. I removed legal fees incurred
10 by the Company relating to the sale of the Huntwick water system.
11 The costs related to the sale of water and sewer systems should be
12 deducted from the sale proceeds received by the Company in the
13 transfer proceeding.

14

15 Next, I removed legal fees incurred by CWSNC to acquire the Linville
16 Ridge water system and capitalized them to plant in service as
17 franchise costs. Capitalizing these legal fees is the proper rate
18 making treatment for costs associated with acquiring water and
19 sewer systems.

20

21 Finally, I have incorporated Public Staff witness Zhang's cost center
22 adjustment to outside services – other into my exhibit.

23

MISCELLANEOUS EXPENSE

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Q. WHAT ADJUSTMENTS WERE MADE TO MISCELLANEOUS
EXPENSE?

A. The Company included in miscellaneous expense, unrecoverable
rate case expense from the last rate case, Docket No. W-354, Sub
336 that were written off to expenses during the test year. In the Sub
336 rate case proceeding, CWSNC and the Public Staff stipulated to
the amount of rate case expense that the Company was entitled to
recover from customers. The Stipulating Parties also agreed that the
rate case costs should be amortized to expenses over a three-year
period.

The Public Staff has included the unamortized balance of the Sub
336 rate case expense along with rate case expense for this
proceeding in regulatory commission expense. Any rate case costs
above and beyond the amount agreed to by the Stipulating Parties
in the Sub 336 proceeding should be booked below the line and
recovered from stockholders. Therefore, I removed the
unrecoverable rate case expense from miscellaneous expense.

Next, I included an adjustment for the amortization of the regulatory
liability related to excess deferred taxes based on the
recommendation of Public Staff witness Fernald. Miscellaneous

1 expense also reflects adjustments recommended by Public Staff
2 witness Zhang to the various cost centers.
3

4 **REGULATORY COMMISSION EXPENSE**

5 Q. PLEASE EXPLAIN HOW YOU CALCULATED REGULATORY
6 COMMISSION EXPENSE.

7 A. Based on information provided by the Company regarding costs
8 incurred to date and expected costs that will occur to complete this
9 rate case proceeding, I have included a total of \$304,330 of rate case
10 expenses for this proceeding, which is comprised of legal fees;
11 postage and stock for customer notices; FedEx, copying, printing,
12 and administrative; travel, hotel, meals, and rental car; WSC salaries
13 and wages; and consulting fees. I have allocated this total rate case
14 expense to CWSNC water, CWSNC sewer, CLMS sewer and Nags
15 Head based on the customer allocation percentages calculated from
16 the Company's ERCs. I also included in my calculation of rate case
17 expense the unamortized rate case expense from the last rate case
18 proceeding. I am recommending that the allocated level of rate case
19 costs be amortized to operating expenses over three years.
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DEPRECIATION EXPENSE

Q. HOW DID YOU ADJUST DEPRECIATION EXPENSE?

A. I have adjusted depreciation expense to reflect an ongoing annual level of depreciation expense for direct plant in service, based on the Public Staff's adjusted level of plant in service and the depreciation lives for each plant account.

Direct depreciation also includes one-third of the unamortized balance of gain on sale of systems sold to CMUD. The unamortized balance of the gain on sale is being re-amortized over a three-year period, resulting in a reduction in the amount of gain on sale deducted from depreciation expense.

My calculation of depreciation also includes the annual amortization of excess book value for both CWSNC uniform water and sewer operations.

Finally, I have included the annual level of depreciation expense recommended by Public Staff witness Zhang for the allocated plant.

1 AMORTIZATION OF CIAC

2 Q. WHAT ADJUSTMENT DID YOU MAKE TO AMORTIZATION OF
3 CIAC?

4 A. CIAC amortization expense was adjusted to reflect the Public Staff's
5 recommended level of CIAC times an amortization percentage
6 based on the overall depreciation rate for the Public Staff's adjusted
7 level of direct plant in service.

8

9 AMORTIZATION OF PAA

10 Q. WHY DID YOU ADJUST AMORTIZATION OF PAA?

11 A. PAA amortization expense was adjusted to reflect the Public Staff's
12 recommended level of PAA times an amortization percentage based
13 on the composite overall depreciation rate for the Public Staff's
14 adjusted level of direct plant in service.

15

16 FRANCHISE TAX

17 Q. PLEASE EXPLAIN HOW YOU CALCULATED FRANCHISE TAX.

18 A. In this proceeding, the Company provided work papers showing the
19 calculation of franchise tax for CWSNC in the amount of \$69,553,
20 which was based on measurements established by the NC
21 Department of Revenue (NCDOR). I allocated this amount to
22 CWSNC water, CWSNC sewer, CLMS sewer, and Nags Head based

1 on the percentage of each rate divisions' rate base to the total
2 combined rate base of the Company.
3

4 **PROPERTY TAXES**

5 Q. WHAT ADJUSTMENT DID YOU MAKE TO PROPERTY TAXES?

6 A. The Company inadvertently included interest during construction in
7 its pro forma balance for property taxes. My adjustment corrects this
8 error by removing interest during construction from property taxes.
9

10 **REGULATORY FEE**

11 Q. WHAT ADJUSTMENT HAVE YOU MADE TO REGULATORY FEE?

12 A. I have calculated regulatory fee using the statutory rate of 0.148%
13 applied to total operating revenues under present, Company
14 proposed, and Public Staff recommended rates.
15

16 **GROSS RECEIPTS TAX**

17 Q. HOW DID YOU ADJUST GROSS RECEIPTS TAX?

18 A. With the repeal of G.S. 105-116, water and sewer companies are no
19 longer subject to gross receipts tax, effective July 1, 2014, and,
20 instead, corporations will be only subject to the standard franchise
21 tax under G.S. 105-122. I have removed the gross receipts tax that
22 the Company included in its application from operating expenses
23 because CWSNC will no longer pay this tax to the NCDOR.

STATE INCOME TAX

1

2 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO STATE INCOME
3 TAX.

4 A. State income tax was calculated based on the adjusted levels of
5 revenues and expenses, and the State income tax rate of 4%,
6 effective January 1, 2016.

7

FEDERAL INCOME TAX

8

9 Q. WHAT ADJUSTMENT HAVE YOU MADE TO FEDERAL INCOME
10 TAX?

11 A. Federal income tax is based on the statutory corporate rates for the
12 level of income presented after all Public Staff adjustments.

13

14

15 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

16 A. Yes, it does.

1 MS. HOLT: Ms. Fernald is available for
2 cross.

3 EXAMINATION

4 BY CHAIRMAN FINLEY:

5 Q I think you're here, Ms. Fernald, for
6 Commission's questions; is that your
7 understanding?

8 A Yes, that is correct.

9 Q And I think that the Commission Staff have put
10 some questions together and those have been
11 furnished to the Public Staff late afternoon so I
12 hope you've had a chance to take a look at those.

13 A Yes, I've had a chance to look at those.

14 Q Let's run through those quickly if we might. On
15 Henry Exhibit 1, Schedule 3-6, line 1, column
16 (c), the amount of rate case expense for the
17 current proceeding is \$304,330. Would the Public
18 Staff be willing to file a late-filed exhibit
19 that details the major components, for example,
20 legal fees, postage and stock for customer
21 notices, consulting fees, allocated salaries and
22 wages, et cetera, of the \$304,330 amount?

23 A Yes, we will file a late-filed exhibit.

24 Q On page 23 of the Henry testimony filed October

1 15, 2015, beginning on line 17, the Public Staff
2 discusses its calculation for franchise tax for
3 this proceeding. In the testimony, the Public
4 Staff states that the Company provided work
5 papers showing the calculation of franchise tax
6 for CWSNC in the amount of \$69,533 (sic), which
7 was based on measurements established by the NC
8 Department of Revenue. Would the Public Staff
9 file a late-filed exhibit, including summary work
10 papers, that shows the calculation of the \$69,553
11 amount?

12 A Yes, that was received in response to a data
13 request, and the Public Staff will file the data
14 request response as a late-filed exhibit.

15 Q Thank you. In several schedules that we have
16 identified in the questions that were provided to
17 you yesterday, the reference is made to *UR*
18 *Adjustments* or *UR Ledger Entries*. What, please,
19 does "UR" stand for and, in general terms, could
20 you please explain these adjustments?

21 A The UR ledger was a separate regulatory ledger
22 maintained by the Company for Commission
23 adjustments. This was where the Company recorded
24 adjustments to plant, CIAC, et cetera, based on

1 adjustments in Commission Orders. When the
2 Company filed a rate case it added the amounts on
3 the UR ledger to the amounts on its regular
4 per-books ledger to obtain the amount per-books
5 for ratemaking.

6 In 2013, the Company decided that
7 since the amounts on the UR Ledgers were based on
8 Commission Orders, there was no reason to
9 maintain these entries in a separate ledger.

10 And, at the end of 2013, the Company made entries
11 to record the amounts that were on the UR ledger
12 onto the general ledger. However, the Company
13 did not make entries on the UR ledger to zero out
14 the balances, instead, its employees were told to
15 stop using the UR ledger. In preparing this
16 case, Company personnel followed the same
17 methodology as in the last case and added the UR
18 ledger amounts to the general ledger amounts.
19 This resulted in these amounts being included in
20 this case twice since they had already been
21 recorded on the general ledger at the end of
22 2013.

23 CHAIRMAN FINLEY: Freda, is that
24 satisfactory to your --

1 MS. HILBURN: Yes.

2 CHAIRMAN FINLEY: Okay.

3 BY CHAIRMAN FINLEY:

4 Q On Henry Exhibit 1, Schedule 2-1, lines 8 and 19,
5 amounts related to the JDE Conversion are listed.
6 Would you please explain this reduction in rate
7 base labeled, "JDE Conversion"?

8 A In the gain on sale proceeding in Docket Number
9 W-354, Sub 331, it was found that the Company had
10 not adequately maintained system-specific data
11 and the Company was ordered to review its
12 system-specific data and file a corrected list of
13 plant, CIAC and PAA, Purchase Acquisition
14 Adjustment, for both the systems being sold in
15 that proceeding and its remaining systems. This
16 entry is the adjustment to reflect the
17 corrections for the remaining systems based on
18 the Company's review. The "JDE" is the acronym
19 the Company uses when it refers to its ledger
20 systems.

21 CHAIRMAN FINLEY: Thank you. Let's see if
22 anybody else on the Commission has questions of
23 Ms. Fernald.

24 (No response.)

1 Are there questions on the Commission's
2 questions by any party?

3 MR. BENNINK: No questions from us.

4 MR. BRADY ALLEN: No questions.

5 CHAIRMAN FINLEY: Thank you, Ms. Fernald.
6 We appreciate your standing in for Mr. Henry. I'm
7 sure he appreciates it, too.

8 (The witness is excused.)

9 CHAIRMAN FINLEY: I believe we have some
10 questions for Ms. Casselberry.

11 MS. HOLT: We call Ms. Gina Casselberry.

12 GINA Y. CASSELBERRY; was duly sworn and
13 testified as follows:

14 **DIRECT EXAMINATION**

15 BY MS. HOLT:

16 Q Would you please state your name, business
17 address and position for the record?

18 A My name is Gina Casselberry. My business address
19 is 430 North Salisbury Street, Raleigh. I'm a
20 Utilities Engineer with the Public Staff, Water
21 Division.

22 Q Ms. Casselberry, on October 15, 2015, did you
23 prefile in this docket testimony in question and
24 answer form consisting of 33 pages and 22

1 exhibits?

2 A I did.

3 Q Do you have any additions or corrections to the
4 testimony?

5 A I do not.

6 Q If you were asked those same questions today,
7 would your answers be the same?

8 A Yes.

9 MS. HOLT: At this time, I request that
10 Ms. Casselberry's testimony be copied into the record
11 as if given orally from the stand and that her
12 exhibits be identified as premarked?

13 CHAIRMAN FINLEY: Ms. Casselberry's prefiled
14 testimony consisting of 33 pages are copied into the
15 record as though given orally from the stand and her
16 22 exhibits are identified as premarked in the filing.

17 CASSELBERRY EXHIBITS 1 - 22

18 (Identified)

19 (WHEREUPON, the prefiled direct
20 testimony of GINA Y. CASSELBERRY
21 is copied into the record as if
22 given orally from the stand.)

23

24

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA
DOCKET NO. W-354, SUB 344

TESTIMONY OF GINA Y. CASSELBERRY
ON BEHALF OF THE PUBLIC STAFF

OCTOBER 15, 2015

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 a
5 Utilities Engineer with the Public Staff's Water and Sewer Division.
6

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. Prior to joining the Public Staff,
12 I worked for McKim and Creed Engineers, PA, as a Project Engineer
13 designing water and sewer systems. I have been with the Public Staff's
14 Water Division since February, 1992. I have presented
15 recommendations in rate increase proceedings, new franchise and

1 transfer proceedings, and other matters before the Commission for the
2 past twenty-three years.

3 **Q. WHAT ARE YOUR DUTIES IN YOUR PRESENT POSITION?**

4 A. My duties with the Public Staff are to monitor the operations of
5 regulated water and sewer utilities with regard to service and rates.
6 Included in these duties are field investigations to review, evaluate, and
7 recommend changes, when needed, in the design, construction, and
8 operations of regulated water and sewer utilities; presentation of expert
9 testimony in formal hearings; and presentation of information, data,
10 and recommendations to the Commission.

11

12 **Q. PLEASE DESCRIBE THE SCOPE OF YOUR INVESTIGATION IN**
13 **THIS CASE.**

14 A. On March 31, 2015, Carolina Water Service, Inc. of North Carolina
15 (CWSNC or Company) filed an application with the Commission to
16 increase its rates for providing water and sewer utility service in all of
17 its service areas in North Carolina. My investigation included review of
18 customer complaints, contact with the Department of Environment and
19 Natural Resources (DENR), Surface Water Protection Sections
20 (SWPS) and Public Water Supply Sections (PWSS), review of
21 company records and analysis of revenues at existing and proposed
22 rates. I have also assisted Public Staff Accountant Windley Henry in
23 reviewing expenses and plant in service.

1 Q. PLEASE DESCRIBE CWSNC's SERVICE AREAS.

2 A. CWSNC operates 69 water utility systems and 30 sewer utility
3 systems, some of which serve multiple subdivisions. These water
4 and sewer utility systems are spread throughout North Carolina.
5 CWSNC serves primarily residential customers, but it does serve a
6 limited number of retail and commercial customers. Casselberry
7 Exhibit Nos. 1 and 2 list the water and sewer systems operated by
8 CWSNC. As of the twelve month period ending June 30, 2015,
9 CWSNC serves 18,275 water customers and 12,402 wastewater
10 customers, including 928 customers in the Corolla Light/Monteray
11 Shores (CLMS) service area, 684 sewer-only customers in The
12 Village of Nags Head (Nags Head or NH), and 344 water-only
13 customers in Linville Ridge Subdivision. There are also 1,509 water
14 availability customers in the Carolina Forest and Woodrun service
15 areas.

16
17 Q. DOES CWSNC PROVIDE METERED WATER SERVICE IN ALL
18 OF ITS SERVICE AREAS?

19 A. In its last general rate case, Docket No. W-354, Sub 336, CWSNC
20 was ordered to install meters in all of the legacy mountain systems,
21 to include Misty Mountain, Crystal Mountain, Mount Mitchell Lands,
22 Watauga Vista, High Meadows, Powder Horn, and Ski Country part

1 of Sugar Mountain, before the evidentiary hearing in its next general
2 rate case, and to immediately switch customers to the metered rates
3 as soon as each system is fully metered. As of September 30, 2015,
4 all of these mountain systems are metered. The only system where
5 meters have not been installed is Linville Ridge in Avery County,
6 which CWSNC acquired in the fall of 2013 and which was not
7 included in the last rate case. The Public Staff believes it would be
8 appropriate for CWSNC to install meters in Linville Ridge as soon as
9 reasonably practicable.

10 **Q. BRIEFLY DESCRIBE THE COMPANY'S APPLICATION IN THIS**
11 **CASE.**

12 **A.** CWSNC has requested an increase in its base rates, usage rates,
13 flat rates and availability rate for water and sewer service. CWSNC
14 is proposing a separate usage charge, based on the suppliers' rates,
15 for its purchased water and purchased sewer systems, and a
16 collection fee for its purchased sewer systems. CWSNC is
17 proposing its uniform rates for water utility service in Linville Ridge
18 Subdivision. CWSNC is proposing to increase the meter testing fee
19 from \$19.20 to \$20.00, new water customer charge from \$25.92 to
20 \$27.00, reconnection charge for commercial customers from \$25.92
21 to \$27.00, and return check charge from \$24.00 to \$25.00 for Linville
22 Ridge Subdivision. CWSNC is also proposing to increase the new

1 sewer customer charge from \$20.70 to \$22.00 and returned check
2 fee from \$14.11 to \$25.00 for Nags Head.

3

4 Q. WHAT ARE CWSNC'S PRESENT AND PROPOSED RATES?

5 A. CWSNC's present and proposed rates for water and sewer utility
6 service are shown in Casselberry Exhibit No. 3.

7

8 Q. WHAT EFFECTS WOULD THE PROPOSED RATES HAVE ON
9 RESIDENTIAL CUSTOMERS?

10 A. Based on the average monthly usage in gallons shown, the average
11 residential bills for a 5/8" meter would increase (decrease) as follows
12 if the rates requested by CWSNC are approved:

WATER OPERATIONS

<u>Service Area</u>	<u>Average Usage</u>	<u>Existing</u>	<u>Proposed</u>	<u>Percentage</u>
18 Carolina Forest	4,200	\$41.10	\$35.87	(12.7%)
19 High Vista Estates	4,200	\$41.10	\$35.70	(13.1%)
20 Riverpointe	4,200	\$41.10	\$48.93	19.1%
21 Whispering Pines	4,200	\$41.10	\$31.84	(22.5%)
22 White Oak/Lee Forest	4,200	\$41.10	\$36.12	(12.1%)
23 Winston Plantation	4,200	\$41.10	\$36.12	(12.1%)
24 Winston Pointe	4,200	\$41.10	\$36.12	(12.1%)
25 Woodrun	4,200	\$41.10	\$35.87	(12.7%)
26 Yorktown	4,200	\$41.10	\$43.51	5.9%
27 Zemosa Acres	4,200	\$41.10	\$44.60	8.5%
28 Linville Ridge (flat rate)	n/a	\$31.68	\$42.51	34.2%
29 All other water systems	4,200	\$41.10	\$50.61	23.1%

30

31

SEWER OPERATIONS

<u>Service Area</u>	<u>Average Usage</u>	<u>Existing</u>	<u>Proposed</u>	<u>Percentage</u>
37 White Oak Plantation/ 38 Lee Forest/				

1	Winston Point	4,200	\$43.35	\$ 49.97	15.3%
2	Kings Grant	4,200	\$43.35	\$ 46.82	8.0%
3	College Park	4,200	\$43.35	\$ 54.80	26.4%
4	Mt. Carmel	4,200	\$44.98	\$ 54.38	20.9%
5	CLMS	4,200	\$80.19	\$102.38	27.7%
6	Nags Head (flat rate)	n/a	\$62.81	\$ 76.11	21.2%
7	All other sewer systems	4,200	\$43.35	\$ 51.96	19.9%

8
9 **Q. HAVE YOU REVIEWED THE OPERATIONAL STATUS OF THE**
10 **WATER AND SEWER SYSTEMS WITH THE SURFACE WATER**
11 **PROTECTION SECTIONS (SWPS) AND PUBLIC WATER**
12 **SUPPLY SECTIONS (PWSS)?**

13 **A.** Yes. I contacted all of the regional offices for the SWPS and PWSS.
14 None of the regional office personnel expressed any major concerns
15 with the systems serving CWSNC customers or identified any major
16 issues concerning water quality.

17
18 **Q. HAS THE PUBLIC STAFF RECEIVED ANY CUSTOMER**
19 **COMPLAINTS AS A RESULT OF CUSTOMER NOTICE IN THIS**
20 **PROCEEDING?**

21 **A.** Yes. The Public Staff received approximately 36 email messages or
22 letters from CWSNC customers, a petition from Woodhaven
23 Subdivision with 53 signatures, and a petition from Pleasant Hill
24 Subdivision with 13 signatures. Six complaints were from CLMS,
25 seven from Nags Head, 13 from Riverpointe Subdivision, two from
26 Carolina Pines and the remaining eight from various CWSNC service
27 areas across North Carolina. All of the customers objected to the
28 magnitude of the increase. Customers at Nags Head also

1 complained about the odors they believed were emanating from the
2 wastewater treatment plant (WWTP); and customers in Riverpointe
3 complained that the usage rate for their subdivision was higher than
4 the rate for other subdivisions. Hearings were held across the state
5 for customer testimony, which voiced similar complaints.

6

7

Jacksonville Hearing

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22

One witness testified at the hearing in Jacksonville, Larry Campbell, who lives in White Oak Estates and is a sewer only customer. Witness Campbell opposed the magnitude of the increase and had several questions concerning charges that appeared on his water and sewer bill.

Onslow Water and Sewer Authority (OWASA) provides water utility service in White Oak Estates and bills for sewer utility service on behalf of CWSNC. After the hearing, CWSNC and the Public Staff met with Mr. Campbell and answered his questions. In addition, CWSNC reviewed Mr. Campbell's bill and sent a copy of its review to Mr. Campbell and the Public Staff. The Public Staff is satisfied that the customer was billed correctly.

Currituck Hearing

1 Ten customers testified at the hearing in Currituck: six customers
2 from CLMS, and four customers from Nags Head. The customers
3 testifying were Teresa Blaxton, Hugh McCain, Lynn Hoffmann,
4 Karen Gaiganski, Don Cheek, Dave Philips, Barbara Gernat, Meade
5 Gwinn, John Ratzenberger and Cliff Ogburn.

6
7 All six witnesses in CLMS testified concerning the magnitude of the
8 rate increase and the impact of metered sewer rates. They were
9 particularly concerned that sewer customers are charged based on
10 100 percent of the water usage and that CWSNC does not take into
11 account the water that does not flow back to the treatment plant, such
12 as water used for filling pools, hot tubs, out-door showers or for
13 power washing homes. Ms. Hoffman further testified that she
14 contacted Southern Outer Banks Water System (SOBWS) and
15 SOBWS installed a second meter for outside use. She provided data
16 illustrating that her domestic sewer bill was reduced and that
17 CWSNC was not charging her for outdoor water usage.

18
19 The six witnesses also testified that CLMS is a seasonal resort
20 community and that a large percentage of the homeowners, ranging
21 from 75 to 80 percent, rent their properties.

22

1 The Public Staff stands by its recommendation in Docket No. W-354,
2 Sub 327, for metered sewer service for CLMS. The flat sewer rate
3 did not take into account that many of the larger homes in CLMS are
4 rental property with multiple bedrooms and bathrooms. The Public
5 Staff believes it is inappropriate for smaller single-family homes to
6 effectively subsidize the provision of sewer service for larger houses
7 used as rental property by paying the same flat rate. Additionally, as
8 Ms. Hoffman testified, customers who use large quantities of water
9 for outdoor use can contact SOBWS and have a second meter
10 installed. This is consistent with the policy of most municipalities with
11 regard to installing a separate meter for irrigation.

12
13 Dr. Teresa Blaxton, a customer and board member of the Corolla
14 Light Community Association (CLCA), entered into the record a
15 Resolution adopted unanimously by the Board of Directors, stating
16 the Board's objections and recommendations as follows:

- 17 1. Strongly oppose the magnitude of the rate increase
18 2. Strongly oppose being singled out for higher rates than any
19 other service area and recommend moving toward uniform rates
20 3. The notice to customers was not given in a timely manner

21

22 Regarding item 1 of CLCA's petition, the Public Staff has conducted
23 a thorough audit of CWSNC's books and records, and our findings

1 are reflected in my testimony and exhibits, as well as the testimony
2 and exhibits of other Public Staff witnesses.

3

4 Item 2 is discussed on pages 28-34 of my testimony.

5 In regard to item 3, the Commission now follows a practice of holding
6 hearings in courthouses to protect the security of those conducting
7 and participating in the hearings and because courtrooms are
8 equipped so that court reporters can obtain an accurate record of the
9 proceedings. However, for future customer hearings, perhaps Dare
10 County Courthouse would provide a more convenient location for
11 both the Nags Head and CLMS service areas. In addition, due to the
12 difficulty in scheduling hearings throughout North Carolina and
13 providing adequate time for the Company and the Public Staff to
14 investigate and file comments and/or testimony concerning customer
15 complaints, the Commission's Reissued Order Scheduling Hearing
16 and Requiring Customer Notice was issued on May 26, 2015, and
17 the time to notify customers was reduced from 30 days to 15 days.
18 On June 8, 2015, CWSNC filed its Certificate of Service as required.

19

20 None of the witnesses indicated that they had any service issues or
21 were aware of any service problems.

22

1 Barbara Gernat, Meade Gwinn, John Ratzenberger and Cliff Ogburn,
2 who all reside in Nags Head, testified concerning the magnitude of
3 the rate increase and the odor from the WWTP. Mr. Ratzenberger
4 also testified that he was concerned with the capacity of the WWTP
5 and recommended metered rates.

6 On June 24, 2015, I inspected the Nags Head WWTP with CWSNC
7 Regional Manager, Danny Lassiter, Area Manager, Eddie Baldwin
8 and Lead Operator, Joel Norris. To help eliminate odors at the
9 WWTP, CWSNC has installed odor control chemicals, odor control
10 misters at the headworks (location of bar screens, equalization basin
11 (EQ) and influent) and tertiary filter area near train 4, covered the bar
12 screen with a plastic bag, installed a special proprietary influent
13 device that screens the influent and processes the screening for
14 disposal, replaced the last of the aging AeroMod units, submitted
15 plans to install new tertiary filters, and recently contracted with an
16 engineering firm to conduct an odor study. During my inspection, I
17 did detect an odor near the bar screens and EQ basin/Headworks
18 (located in the northwest corner of the plant approximately 450 feet
19 from Ms. Gernat's property). I did not, however, detect any odor near
20 the detention pond, on the far side of the fairway near Ms. Gernat's
21 property line, near or around the main lift station (located
22 approximately 30 feet north of the EQ basin/Headworks) or any other
23 areas of the plant. I did not detect any odor from the drying beds,

1 nor did I see any pooling of effluent. The drying beds were in
2 excellent condition. I also reviewed DEHNR Compliance Inspection
3 Reports, dated April 7, 2015 and July 7, 2014, and a Division of Air
4 Quality (DAQ) Complaint Investigation Report filed on July 10, 2014.
5 In all three reports, only typical EQ basin/Headwork odor was
6 reported, which is consistent with what would be expected.

7
8 In addition, on July 30, 2015, CWSNC provided the Public Staff with
9 a copy of the report titled, Evaluation of Odors and Odor Sources In
10 The Village At Nags Head Wastewater Collection And Treatment
11 Systems, prepared by John F. Phillips, P.E., Diehl & Phillips, P.A.
12 Based on the report, 38 hydrogen sulfide gas measurements were
13 taken on May 28, 2015, and 29 measurements were taken on May
14 30, 2015, in the collection system area (outside of the wastewater
15 treatment plant and high rate infiltration site), which according to Ms.
16 Gernat's letter filed with the Commission on June 15, 2015, were
17 within the 16-day period that Ms. Gernat logged and recorded the
18 most nauseating odors. The 38 measurements ranged from 0.000 to
19 0.003 parts per million and the 29 measurements range from 0.000
20 to 0.003 ppm, well below the goal value of 0.005 ppm; and no odor
21 was detected by the personnel taking the samples. In addition, 16
22 measurements were taken at the influent bar rack on May 28, 2015,
23 ranging from 0.000 to 0.004 ppm; and eight measurements taken on

1 May 29, 2015, ranging from 0.000 to 0.004 ppm, with the exception
2 of one reading of 0.007 ppm measured within the dumpster receiving
3 filtered effluent from the filter and a value of 0.01 ppm at the
4 northeast corner wall of the WWTP. The 0.01 ppm reading was
5 taken during a force main discharge into the nearby influent bar rack.
6 Based on the data collected on May 28, 2015 through May 30, 2015,
7 I agree with Engineer Phillips's opinion that there were no offsite
8 odors detected during the period. In addition, Mr. Phillips made
9 several recommendations, such as installing a gas monitoring data
10 logger near the influent bar rack so a longer sample period could be
11 evaluated. In a letter to the Public Staff, CWSNC stated that they
12 plan to proceed with a longer sampling period using a data logger
13 and pursue other recommendations from the engineer. It is the
14 Public Staff's opinion that CWSNC has in good faith tried to eliminate
15 odors as much as can be expected at the WWTP.

16
17 In regard to capacity, on December 11, 2009, the Division of Water
18 Quality issued Permit No. WQ0000910 specifying, by Special Order
19 by Consent, that the facility be rerated from 500,000 gallons per day
20 (gpd) to 400,000 gpd. Based on my review of the flow data for 2013
21 and 2014, the average daily flow was 131,000 gpd and the maximum
22 daily flow in August was 322,000 gpd; the average daily flow was
23 128,000 gpd and the maximum daily flow in August was 313,000 gpd

respectively. Based on the flow data, the WWTP at Nags Head is within its permitted capacity.

Raleigh Hearing

One customer testified at the hearing in Raleigh, Eleanora Tate, who lives in Ashley Hills North Subdivision and is a sewer only customer. CWS Systems, Inc., provides water utility service. Ms. Tate testified concerning the magnitude of the rate increase, and her opposition to the imposition of a sewer system improvement charge (SSIC) without customer notification. She also stated that there was a strong odor coming from the WWTP.

On May 5, 2015, Ms. Tate filed a letter with the Commission opposing the SSIC increase without the input of the public. On June 3, 2015, the Public Staff responded with a letter explaining the SSIC program and noting that one of the SSIC projects directly benefitted the subdivision in which she lives. Improvements were made to the Ashley Hills WWTP to remove the wastewater treatment tertiary effluent filters along with their actuated valves, clearwell/mudwell and backwash pumps and replace them with new style cloth media style effluent filters. The total cost of the project was \$354,153.

1 On July 16, 2015, I inspected the WWTP at Ashley Hills North
2 Subdivision with Regional Manager, Danny Lassiter and Area
3 Manager, Steve Harrell. With the exception of a five-foot landing
4 where the filter bar screen is located and a special proprietary
5 influent device that screens the influent and processes the screening
6 for disposal, I did not detect any strong odors other than an earthy
7 smell typical for a WWTP. I also checked both cul-de-sacs closest
8 to the WWTP and did not detect any odors coming from the treatment
9 plant. The area that I surveyed included Ms. Tate's property, which
10 is approximately 360 feet from the WWTP. At the end of one of the
11 cul-de-sac, I was able to walk within 20 feet of the fence surrounding
12 the WWTP. The WWTP digester was on the other side of the fence,
13 and I did not detect any odor.

14

15 Charlotte Hearing

16 Five customers testified at the hearing in Charlotte. The customers
17 testifying were Brian Allenspach, Chessley Singleton, Brain Lucas,
18 President of Riverpointe Homeowners Association, William Schell,
19 and Jack Ritterskamp. The subdivisions represented include Harbor
20 House Estates, Riverpointe, and Hemby Acres. Hemby Acres is
21 sewer only. All five customers objected to the magnitude of the
22 increase. Mr. Allenspach, who lives in Harbor House Estates, and
23 Mr. Singleton, who lives in Riverpointe, both testified concerning how

1 CWSNC's rates compare to rates charged by the county and
2 municipalities in the surrounding area. Mr. Lucas, President of the
3 Riverpointe Homeowners Association, testified that it was unfair that
4 Riverpointe's usage charge was increasing while other subdivisions'
5 usage charges were decreasing. Mr. Singleton and Mr. Lucas both
6 testified that there are no water quality issues now that 100 percent
7 of the water is purchased from Charlotte Water (CLTWater), formerly
8 Charlotte-Mecklenburg Utilities; and CWSNC has purchased a
9 portable generator for lift stations in the event of a power outage.

10

11 There are several reasons why the rates of a regulated water utility
12 and the rates of municipal water systems are not comparable.

13

- 14 1. The operational costs per customer are lower for customers of
15 municipalities because of economies of scale. For example,
16 CWSNC has approximately 18,000 water customers in 31
17 counties, whereas CLTWater has over 834,000 customers in
18 one county, a much larger customer base from which to recover
19 its fixed costs.
- 20 2. Municipalities are not regulated and can recover some of their
21 costs through tax revenues.
- 22 3. Municipalities qualify for grants and low interest bonds and loans,
23 unlike private utilities.

1 4. Private utilities have the right to an opportunity to earn a rate of
2 return on their investment in addition to recovering their
3 operating expenses.

4
5 Riverpointe is one of the subdivisions that fall under CWSNC's new
6 purchased water rates. The monthly water bill is based on two
7 components, the base facility charge and the usage charge.
8 Regardless as to who the supplier is, the base facility is the same for
9 all metered customers, based on the size of the meter. The usage
10 charge varies based on the supplier's rates. CLTWater charges
11 CWSNC \$6.30 per 1,000 gallons, which accounts for much of the
12 proposed 19.1% increase in the average monthly bill. The usage
13 rate is established by CLTWater and not CWSNC, and is passed
14 directly on to Riverpointe customers. Other purchased water
15 subdivisions may not see an increase because the municipality or
16 county charges a lower usage charge per 1,000 gallons. For
17 example, the Town of Southern Pines charges \$2.23 per 1,000
18 gallons, resulting in a 22.5% decrease compared to the current
19 average monthly bill.

20
21 Mr. Ritterskamp, who lives in Hemby Subdivision, testified that
22 CWSNC charges a flat rate for sewer service and he proposed a
23 metered rate. Union County provides water service for Hemby

216

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Oct 15 2015

1 Subdivision. I recommend CWSNC investigate the possibility of
2 obtaining meter readings from Union County to see whether metered
3 sewer rates could be applied in Hemby Subdivision in its next general
4 rate case.

5

6 Boone Hearing

7 Three customers testified at the hearing in Boone. The customers
8 testifying were Linda Lillo Norman, Brenda Councill, Ski Mountain
9 POA Board Member, and David Lane, Sugar Mountain Town
10 Manager. The subdivisions represented included Misty Mountain,
11 Ski Mountain, and Sugar Mountain. All three public witnesses
12 testified as to the magnitude of the increase. Ms. Norman was also
13 concerned with the amount of water consumed in Misty Mountain.
14 None of the witnesses had any service or water quality issues.

15

16 In 2015, CWSNC conducted a helium test of Misty Mountain's water
17 mains and was able to detect several leaks, which were repaired.
18 Now that CWSNC has installed individual meters, customers will be
19 able to monitor their consumption.

20

21 Asheville Hearing

22 Eight customers testified at the hearing in Asheville. The customers
23 testifying were Connie Brown, Emil Revala, Ken Allen, Sean

1 O'Meara, Keith Rice, James Tanner, Ken Jarvis, and Mark Innes.
 2 The subdivisions represented included Mt. Carmel, Woodhaven and
 3 Water Glen. Ken Allen, president of the Woodhaven Property
 4 Owners Association, presented a protest letter and petition with 53
 5 signatures from residents of the Woodhaven Subdivision, and 13
 6 signatures from residents of the Pleasant Hills Subdivision.

7
 8 All eight public witnesses testified regarding the magnitude of the
 9 rate increase, especially when compared to the rates of surrounding
 10 municipalities and other non-profit utility systems. As previously
 11 stated, it is inappropriate to compare CWSNC's rates to those of
 12 municipalities or county systems.

13
 14 Mr. O'Meara testified that the Commission consistently grants 50
 15 percent of CWSNC's proposed rate increase.

16
 17 The percentage of a utility's requested increase that is ultimately
 18 approved by the Commission depends on the evidence presented in
 19 a particular case. The Public Staff investigates each company
 20 individually and makes its recommendations based on its findings.
 21 Rates are established based on a utility's verified cost of providing
 22 service, with adjustments recommended by the Public Staff and
 23 adopted by the Commission. The Public Staff conducts a thorough

1 audit of the company's books, records, and general ledgers to
 2 determine a revenue requirement. The revenue requirement is the
 3 amount necessary to enable the company to recover its reasonable
 4 operational expenses and earn a reasonable return on its plant
 5 investment.

7 There were no service related issues.

9 **Q. PLEASE EXPLAIN THE REASON FOR UPDATING THE TEST**
 10 **YEAR PERIOD, FOR THE 12 MONTHS ENDING DECEMBER 31,**
 11 **2014.**

12 **A.** The Public Staff conducted a thorough audit of CWSNC's billing
 13 system, in which it compared the Company's billing data to the number
 14 of active customers and usage reported under its new filing
 15 requirement (NCUC Form W-26), required pursuant to Commission
 16 Order in Docket No. W-354, Sub 336. The Public Staff also compared
 17 the billing data and the active customers and usage report with the
 18 billing units used by the Company to calculate present and proposed
 19 revenue. Based on the audit, the Public Staff determined that, for
 20 some service areas, the number of customers and usage billed by the
 21 Company did not match the number of customers and usage reported
 22 in its active customer and usage report (Form W-26 filing). Other
 23 service areas, which switched from flat rate sewer to metered sewer in

1 March 2014, were still billed as flat rate customers well after the switch;
2 and the active customer report did not match the billing data. In
3 addition, several service areas or parts of the service area are still
4 being billed twice in one month and not at all the next. The billing data
5 provided to the Public Staff also included an error. The data that was
6 downloaded by the Company doubled all of the usage for all of its
7 service areas for the month of July 2014.

8
9 In addition, the Public Staff discovered that CWSNC has a number
10 of service areas that have multi-residential flat and metered water
11 customers and multi-residential flat sewer customers. As a result,
12 the number of total bills used to calculate revenue at present and
13 proposed rates did not take into account multiple dwelling units
14 behind the master meter. For example, Nags Head has two multi-
15 residential flat rate sewer customers, one with 24 dwelling units
16 behind the master meter and the other with 36 dwellings units behind
17 the master meter. CWSNC renders only one bill to each customer,
18 one for $24 \times \$62.81$ and the other for $36 \times \$62.81$. Thus, while only
19 two billing units are used to calculate monthly revenues (two bills \times
20 $\$62.81 = \125.62) there are actually 60 billing units ($60 \times \$61.81 =$
21 $\$3,768.60$).

22

1 Due to the number of issues concerning CWSNC's billing data, the
2 accuracy of CWSNC's active customer report, and because the
3 Company has less than twelve months of usage data for metered
4 sewer, the Public Staff updated the revenues to the twelve months
5 ending June 30, 2015.
6

7 **Q. WHAT IS YOUR RECOMMENDATION CONCERNING CWSNC'S**
8 **BILLING SYSTEM?**

9 **A.** I recommend that CWSNC in its next general rate case provide an
10 accurate active customer and usage report (W-26 filing), and, in the W-
11 1 filing, CWSNC provide a separate report that identifies each multi-
12 residential water and multi-residential sewer customer for both flat rate
13 and metered rate customers, for each meter size, for each service area
14 and provide the number of dwelling units behind each meter for each
15 multi-residential water and sewer customer identified. I further
16 recommend that CWSNC specify in its filing whether the active
17 customer report (W-26) includes multi-residential water and sewer
18 customers in its total active customers, or whether dwelling units from
19 the separate report need to be added to total active customers.
20

21 **Q. HAVE YOU RECOMMENDED ANY ADJUSTMENTS TO**
22 **EXPENSES RELATED TO WATER AND SEWER OPERATIONS?**

1 A. Yes, I have provided Public Staff Accountant Henry with
2 recommendations for testing expenses, chemical expenses,
3 purchased water, purchased sewer and maintenance and repair
4 expenses.

5

6 TESTING EXPENSES

7 My recommendation for testing expenses reflects new testing
8 requirements, changes to the number or frequency of each test, and
9 current testing costs, represented over the required frequency
10 (monthly, annually, and every three, six, or nine years) for each test
11 under the Safe Drinking Water Act and CWSNC's wastewater
12 permits. For CWSNC's uniform rate systems, I recommend testing
13 expenses of \$114,771 for water operations and \$186,911 for sewer
14 operations, which includes new testing requirements for the
15 Company's Belvedere WWTP. I recommend testing expenses for
16 sewer operations of \$42,835 for CLMS and \$7,990 for Nags Head.
17 My calculations are shown in Casselberry Exhibit Nos. 4, 5, 6, and
18 7.

19

20 CHEMICAL EXPENSES

21 Based on Company records, I removed \$3,573 for chemical
22 expenses associated with the WWTP at College Park. College Park
23 is a purchased sewer system, and 100 percent of the treatment is

1 provided by the Town of Dallas. I recommended chemical expenses
2 of \$296,290 for water operations and chemical expenses of
3 \$168,115 for sewer operations for CWSNC's uniform rate systems,
4 chemical expenses of \$42,226 for CLMS and \$14,112 for Nags
5 Head.

6
7 PURCHASED WATER

8 Based on invoices provided by the Company, I have updated
9 purchased water expense to reflect the gallons purchased for twelve
10 months ended June 30, 2015, resulting in the amount of \$1,009,890.
11 I reduced purchased water expense by \$45,143 for losses greater
12 than 15 percent. I recommend \$964,747 for purchased water
13 expense.

14
15 PURCHASED SEWER TREATMENT

16 Based on invoices provided by the Company, I have updated
17 purchased sewer treatment to reflect gallons treated for twelve
18 months ended June 30, 2015. As of November 2014, College Park
19 purchases 100 percent of its sewer treatment from the Town of
20 Dallas. I estimated an amount for 12 months based on the gallons
21 sold for the test year (2,428,760) multiplied by the usage rate (\$6.34
22 per 1,000 gallons), plus the monthly base charge (\$13.33) for a total
23 of \$15,558. I also updated purchased sewer treatment for Mt.

1 Carmel to reflect the Metropolitan Sewerage District's current rates,
2 effective July 1, 2015. I recommend \$247,481 for purchased sewer
3 treatment.

4

5

MAINTENANCE AND REPAIR EXPENSES

6

7

8

9

10 **Q. BRIEFLY EXPLAIN YOUR BILLING ANALYSIS.**

11 A. In determining end of period (EOP) customers, I compared the EOP
12 customers from Item-26 in the Form W-1 filing with the billing data
13 for each service area, for each meter type, for the twelfth months
14 ended June 30, 2015. I also compared total consumption from Item-
15 26 with total consumption billed for each service area, for each meter
16 type for twelve months ended June 30, 2015. My billing analysis for
17 CWSNC water and sewer EOP customers and consumption is
18 shown in Casselberry Exhibit Nos. 8, 9, 10 and 11.

19

20 **Q. WHAT ARE THE ANNUAL SERVICE REVENUES UNDER**
21 **PRESENT AND PROPOSED RATES?**

22 A. My revenue calculations reflect all of the changes to EOP customers
23 and consumption determined in my billing analysis. CWSNC's

1 present and proposed service revenues for the twelve month ended
 2 June 30, 2015, are shown below:

3 SERVICE REVENUES

4 Water Utility Service:

	<u>Present</u>	<u>Proposed</u>
5 CWSNC	\$9,369,220	\$10,951,484

8 Sewer Utility Service:

	<u>Present</u>	<u>Proposed</u>
10 CWSNC	\$5,711,794	\$6,830,366
12 CLMS	\$1,117,239	\$1,426,387
14 NH	\$ 693,575	\$ 859,815

16 For the calculations, see Casselberry Exhibit Nos.12, 13, 14, 15, 16
 17
 18 17, 18 and 19.

19
 20 **Q. PLEASE EXPLAIN WHY YOUR REVENUES AT EXISTING AND**
 21 **PROPOSED RATES ARE DIFFERENT FROM THE COMPANY'S.**

22 **A.** CWSNC made multiple errors in calculating its present and proposed
 23 revenues for water and sewer service.

24 1) CWSNC did not include Linville Ridge Subdivision in
 25 either its existing or proposed revenue calculations for water service.

26 2) CWSNC did not take into account that the mountain
 27 systems would be metered by the hearing date and that the revenues
 28 at proposed rates should reflect this change.

1 3) CWSNC did not include multi-residential flat rate water
2 and sewer customers in its calculations for both existing and
3 proposed rates.

4 4) The revenues at proposed rates did not reflect the
5 proposed usage rates for purchased water and purchased sewer
6 customers.

7 5) CWSNC used total billing units versus EOP customers
8 to calculate sewer revenues at existing and proposed rates. As a
9 result, the revenues at proposed rates were calculated using flat rate
10 customers for approximately three months and metered customers
11 for approximately nine months. The consumption was also under
12 reported.

13 6) The revenues for existing and proposed rates did not
14 include the sewer collection charge for Mt. Carmel.

15 7) In calculating revenues at existing and proposed rates
16 for Nags Head, CWSNC did not include revenues for multi-residential
17 flat rate customers, revenues associated with the minimum monthly
18 charge, and revenue for a 6-inch commercial customer.

19 8) CWSNC calculated revenues at present and proposed
20 rates based on the total number of bills produced for 12 months
21 versus EOP customers.

1 Q. HOW DID YOU CALCULATE REVENUES AT PROPOSED RATES
2 FOR FLAT RATE WATER CUSTOMERS WHO ARE NOW
3 METERED WATER CUSTOMERS?

4 A. As discussed earlier in my testimony, in Docket No. W-354, Sub 336,
5 CWSNC agreed to install meters for all of the customers in its seven
6 mountain systems by the hearing date in their next general rate case.
7 Since most of the meters have been installed in the past few months,
8 no actual usage data is available at this time. Therefore, I used 3,000
9 gallons per customer as a reasonable amount of usage based on
10 three full months of usage in the summer and six partial months of
11 usage during April through December. This is the same estimated
12 usage per customer used to calculate the flat rate in Docket No. W-
13 354, Sub 336.

14
15 Q. HOW DID YOU CALCULATE REVENUES AT PROPOSED RATES
16 FOR PURCHASED WATER AND SEWER CUSTOMERS?

17 A. Based on the billing records provided by the Company, I used the
18 total amount of water sold multiplied by the proposed usage charge
19 for each purchased water service area listed in its application. I also
20 updated EOP customers to reflect total metered water and total
21 purchased water customers. I did the same for purchased sewer.

22

1 Q. BRIEFLY DESCRIBE THE HISTORY BEHIND SYSTEM SPECIFIC
2 (NON-UNIFORM) RATES FOR THE OUTER BANKS (OBX)
3 SYSTEMS.

4 A. In Docket No. W-354, Sub 314, it was the Public Staff's position that
5 the OBX systems, which included the CLMS, Currituck Club, and
6 Nags Head service areas (OBX systems), should be treated
7 separately from CWSNC's uniform water and sewer customers and
8 have system specific rates, because of the unique circumstances
9 and issues pertaining to those systems.

10
11 In order to solve the water quality issues concerning high levels of
12 chloride and trihalomethanes, CWSNC had to purchase 100 percent
13 of its water from Currituck County at a relatively high price. The
14 Company also had to incur costs to maintain 42 shallow wells in
15 Corolla Light and Monteray Shores while it obtained plan approval to
16 construct a reverse osmosis (RO) treatment facility, which the
17 Company believed necessary to solve its water quality issues. The
18 estimated cost of installing the RO facility was 4.2 million dollars, and
19 the costs associated with operating the facility were unknown. In the
20 meantime, CWSNC was in the process of expanding the wastewater
21 treatment plant serving the CLMS service area, which also was at a
22 substantial cost. In addition, CWSNC had entered into a Utility
23 Asset Acquisition Agreement with Algonquin Water Resources of

1 North Carolina, Inc. (Algonquin), for the sale of water and wastewater
2 utility assets for all of the OBX systems.

3
4 In light of the fact that CLMS was the only CWSNC service area with
5 an RO facility and a costly expansion of the wastewater treatment
6 plant underway, the Public Staff determined that the revenue
7 requirement associated with these costly and unique projects that
8 were specific to providing service to only customers in the CLMS
9 service area should not be included in CWSNC's uniform rates for its
10 other service areas. For this reason, the Public Staff recommended
11 specific rates for water and sewer utility service in CLMS, a specific
12 sewer rate for Nags Head, and a specific water rate for Currituck
13 Club, until the OBX systems were sold to Algonquin. An additional
14 consideration was the impact on the rates of CWSNC's remaining
15 ratepayers if the costs and revenues associated with CLMS had
16 been included in calculating uniform rates and the systems
17 subsequently sold. On November 4, 2008, the stipulation between
18 CWSNC and the Public Staff was filed with the Commission,
19 accepting the Public Staff's recommended rates. On January 9,
20 2009, the Commission approved the Public Staff's recommended
21 rates.

22

1 Q. WHAT IS THE PUBLIC STAFF'S POSITION CONCERNING
2 UNIFORM RATES FOR CLMS AND NAGS HEAD?

3 A. As previously discussed, CLMS was designated for separate rate
4 treatment based, in part, on anticipated changes in the water
5 systems serving those areas, the cost of the substantial upgrade of
6 the wastewater treatment plant that was to serve the CLMS service
7 area, and the expectation that all of the OBX systems, which included
8 CLMS and Nags Head, would be sold. Only one of these changes –
9 the upgrade of the wastewater treatment plant – actually occurred.
10 The water systems were sold to Currituck County, and the sale of the
11 sewer systems did not take place. As a result of the establishment
12 of separate rates, the customers of the OBX systems experienced
13 significantly higher percentage sewer rate increases in Docket No.
14 W-354, Sub 327, than customers in other areas served by the
15 Company under uniform rates. In recognition of these circumstances
16 and events, in Docket No. W-354, Sub 336, the Public Staff entered
17 into a stipulation with the other parties to the proceeding to keep the
18 sewer rates for CLMS unchanged, thus beginning the process of
19 moving CLMS toward uniform rates.

20
21 In the present docket, the Public Staff again evaluated the rate
22 disparity between the customers in CLMS and Nags Head when
23 compared to CWSNC's uniform sewer customers, the unique

1 character of the OBX service area, which distinguishes it from other
 2 uniform sewer service areas, and the significant impact on the
 3 Company's uniform sewer rates if CLMS and Nags Head were rolled
 4 back in. While it is the Public Staff's opinion that system-specific
 5 sewer rates for the OBX should eventually be eliminated, in order to
 6 prevent "rate shock" for CWSNC's uniform sewer customers, the
 7 process should be implemented gradually and reevaluated in future
 8 rate case proceedings to determine the appropriate consideration
 9 that should be given to uniform rate customers and OBX customers
 10 in light of the facts and circumstances that exist at that time.
 11 Therefore, as a further step in the process, the Public Staff
 12 recommends that in this proceeding the current system-specific
 13 sewer rates for CLMS and Nags Head remain unchanged from those
 14 previously established.

15
 16 **Q. WHAT IS YOUR RECOMMENDATION CONCERNING CWSNC'S**
 17 **PROPOSED RATES?**

18 A. The Public Staff's recommended service revenues are listed below:

19			
20		<u>Service Revenues</u>	
21		Water Utility Service	
22		CWSNC	\$10,729,188
23			
24		Sewer Utility Service	

1
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Combined

\$ 8,908,680

My revenue calculations are shown on Casselberry Exhibit Nos. 20 and 21. CWSNC's present, proposed and the Public Staff's recommended rates are shown on Casselberry Exhibit No. 22.

Q. WHAT IS YOUR RECOMMENDATION CONCERNING OTHER CHARGES?

A. The Public Staff's does not oppose increasing CWSNC's new sewer customer charge from \$20.70 to \$22.00, increasing the return check fee from \$14.11 to \$25.00 for Nags Head; nor does it oppose increasing the meter testing fee from \$19.20 to \$20.00, new water customer charge from \$25.92 to \$27.00, reconnection charge for commercial customers from \$25.92 to \$27.00, and return check charge from \$24.00 to \$25.00 for the Linville Ridge Subdivision.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

1 MS. HOLT: Ms. Casselberry is available for
2 cross examination.

3 CHAIRMAN FINLEY: Does any party have any
4 questions of Ms. Casselberry?

5 MR. BENNINK: No, sir.

6 CHAIRMAN FINLEY: The Commission has some
7 questions, Ms. Casselberry. I hope you've seen those
8 before you come in this morning.

9 THE WITNESS: I have.

10 CHAIRMAN FINLEY: Okay.

11 EXAMINATION

12 BY CHAIRMAN FINLEY:

13 Q In Decretal Paragraphs 8, 9 and 10 of the final
14 Order issued in the Sub 336 rate proceeding, the
15 Commission required the Company to make certain
16 modifications to its billing system; provide
17 additional billing analysis information in the
18 Company's next general rate case application; and
19 maintain accurate records for all metered sewer
20 customers for use in future billing analyses. On
21 pages 20 through 22 of your testimony in this
22 proceeding, you explain the reasons why the
23 Public Staff updated the December 31, 2014 test
24 period to the 12-month period ended June 30,

1 2015. You also made various recommendations
2 concerning the Company's billing system. Has the
3 billing analysis information provided by the
4 Company improved any since the last general rate
5 case proceeding or are there the same issues
6 continuing as to this problem?

7 A The answer to the question is, yes, that it has
8 improved. The W-Item 26 was the first time the
9 Company filed that particular item. And when
10 they filed it in the original Application, there
11 were some issues that we had and we clarified
12 those to the Company. And so we updated the test
13 year and the issues that we had were corrected
14 and the Public Staff was satisfied with the
15 updated Item 26 that was filed by the Company.

16 Q On page 21, line 3 of your testimony you state
17 "several service areas or parts of the service
18 area are still being billed twice in one month
19 and not at all the next [emphasis added]". Would
20 you comment on that please?

21 A The Public Staff doesn't necessarily have a
22 problem with them billing, sending out two bills
23 in one month. We had the problem that when we
24 tried to compile the data to determine the number

1 of end-of-period customers, that we were getting
2 a double count. And so with the W-26 -- Item 26
3 filing, we now have active customers and so we
4 know how -- exactly how many active customers
5 they have at the end of the month. In the last
6 rate case we didn't have that item, and so we
7 would have to go back and determine which service
8 areas were double counted in determining the
9 end-of-period customers. We do understand that
10 when they send their bills out -- they might read
11 the meters the first of the month, send the bill,
12 and then in December read the meters again at the
13 20 something or 28th and then another billing
14 will go out. It's not necessarily they're
15 billing twice for the same usage, it's just two
16 bills in one month. But it created a problem
17 when we were trying to compile the data to
18 determine the number of end-of-period customers.

19 Q So you're satisfied that that's no longer a
20 problem that prevents the Public Staff from
21 making its audit?

22 A Yes.

23 Q Beginning on page 7 of your testimony you discuss
24 the Currituck public hearing. Some customers

1 expressed concern that sewer customers are
2 charged based on 100 percent of the water usage
3 and that the Company does not take into account
4 the water that does not flow back to the
5 treatment plant, such as water used for filling
6 pools, hot tubs, outdoor showers, or for power
7 washing homes. You noted in your discussion that
8 customers who use large quantities of water for
9 outdoor use can contact Southern Outer Banks
10 Water System and have a second meter installed at
11 the customer's expense. In general, under what
12 circumstances would be the Public Staff
13 recommend, if it would, a cap on the water usage,
14 for example, 7500 gallons or 10,000 gallons, be
15 taken into consideration when computing the sewer
16 bill versus recommending that the customer
17 install a separate irrigation meter.

18 A That is not something that we looked at in this
19 rate case; however, it might be something we can
20 look at in the next rate case. And so I can't
21 really answer that question because we didn't
22 really take that into consideration. But we
23 could look into that in the next rate case and
24 determine how that would affect the rates and

1 what an appropriate amount would be.

2 Q Does that sound like that's something -- that's
3 an idea the Public Staff might be interested in
4 pursuing?

5 A Possibly.

6 Q Possibly not?

7 A Possibly not.

8 Q Okay. On page 23 of your testimony you discuss
9 your adjustment to testing fees. You testified
10 that your recommendation for testing fees
11 reflects, among other things, new testing
12 requirements. Could you please describe and
13 explain what these new testing requirements are?

14 A Yes. That might be a little misleading. The EPA
15 has not come out with new testing requirements;
16 it's still the same testing requirements.
17 However, some of the service areas and the
18 wastewater treatment plant has additional
19 requirements which are the same as they used to
20 be. There's no new tests under the EPA, for
21 instance, they might be testing effluent now
22 under their permit so that would be additional
23 samples that they need to take. But I was a
24 little misleading to think -- to give you the

1 impression that there's new test requirements
2 under the EPA. It's still the same test just
3 maybe new tests for a particular system where
4 they didn't have to test that particular test
5 before.

6 CHAIRMAN FINLEY: Let's see if there are
7 other questions by the Commissioners?

8 (No response.)

9 I don't see there are. Are there questions
10 by the parties on any of the Commission's questions?

11 MR. BENNINK: Mr. Chairman, I have just a
12 few questions.

13 CHAIRMAN FINLEY: All right, Mr. Bennink.

14 EXAMINATION

15 BY MR. BENNINK:

16 Q Ms. Casselberry, in response to the questions
17 about the Currituck situation and the cap on
18 water usage, for purposes of calculating the
19 sewer bills, I want to ask you a couple of
20 questions. If the Commission were to set a cap
21 and, for instance, they used the example of 7500
22 gallons or 10,000 gallons, and that was --
23 something like that was adopted in the next rate
24 case, a cap would require you to recalculate

1 rates, would it not, in the sense that you have
2 fixed costs for operating the sewer system, and
3 those costs are generally, in terms of rate
4 design, are spread over the number of gallons of
5 water today that the customers use; is that
6 correct?

7 A Yes, we use a percentage.

8 Q And so, if you set a cap, you've got to spread
9 those same fixed costs over a lesser number of
10 gallons?

11 A That's correct.

12 Q And so the effect of that would be potentially
13 that rates would go up for all users because you
14 design rates based on a lesser number of gallons
15 of usage?

16 A That's correct.

17 Q And so that's a consideration that has to be made
18 in making that decision?

19 A That is correct.

20 Q And, as a hypothetical matter, let's assume that
21 we had a cap of 7500 gallons. In this particular
22 area there are large homes, I mean, what sizes
23 are we talking about? What's the range?

24 A Some of the homes in Monterey Shores may be 6, 8,

1 10 bedroom homes or, we call them mini hotels;
2 they might have 20 people in there.

3 Q And so, as a matter of a hypothetical question,
4 if you had a cap of 7500 gallons, let's say, and
5 a customer actually used 10,000 gallons of water,
6 it's conceivable that, based on that size home,
7 that every gallon went down the sewer system;
8 isn't that correct?

9 A No, because you have the domestic sewer and then
10 you would have the outdoor usage and that's where
11 we come up with -- we create the problem and some
12 of that does not go back to the sewer. That's
13 why we recommend putting in a separate meter. We
14 also recommend putting in a separate meter for an
15 irrigation system to capture just the domestic
16 usage.

17 Q All right.

18 A So it would be hard to tell exactly what's going
19 back to the sewer plant unless you had that
20 second meter. You'd have to make some kind of an
21 assumption.

22 MR. BENNINK: Those are all the questions.

23 MR. DWIGHT ALLEN: I just have a couple of
24 questions.

EXAMINATION

1
2 BY MR. DWIGHT ALLEN:

3 Q Ms. Casselberry, customer perceptions are
4 important, too, aren't they?

5 A That's correct.

6 Q And the Public Staff and, presumably the Company,
7 would want their customers to feel like they are
8 being treated fairly; is that correct?

9 A Yes.

10 Q So in a situation where you have a certain amount
11 of water usage and a lower amount of sewer usage,
12 it's reasonable for customers to have the
13 perception that they are paying for something
14 they're not receiving; isn't that right?

15 A Yes.

16 Q So, if you went to a system where you actually
17 charge the customers for what they received
18 rather than having a perception that they were
19 paying for something they were not getting, that
20 would be better from a customer perception
21 standpoint, wouldn't it?

22 A It would be; however, their rates would go up
23 higher because they would have to capture those
24 additional costs in either the base rate or the

1 usage rate.

2 Q And there used to be a saying "if you can't put
3 it on the maters, you've got to put it on the
4 tators" and I understand that. But, nonetheless,
5 customers would then know that they were actually
6 paying for something they were receiving.

7 A I would agree with that.

8 MR. DWIGHT ALLEN: Thank you. No further
9 questions.

10 CHAIRMAN FINLEY: For the benefit of the
11 Court Reporter, how do you spell maters?

12 MR. DWIGHT ALLEN: I spell it with an "O"
13 but eastern North Carolina people, I think, it's
14 E-R-S.

15 CHAIRMAN FINLEY: Have you got that,
16 Ms. Court Reporter?

17 (The Court Reporter replies "Yes,
18 sir.")

19 CHAIRMAN FINLEY: Any other questions for
20 Ms. Casselberry?

21 (No response.)

22 Thank you, Ms. Casselberry.

23 (The witness is excused.)

24 CHAIRMAN FINLEY: And we will receive the

1 Public Staff exhibits into evidence that have been
2 premarked for the filing.

3 MS. HOLT: And I move the admission of, if I
4 haven't already, the admission of Ms. Casselberry's --

5 CHAIRMAN FINLEY: (Interposing) I just
6 accepted her --

7 MS. HOLT: -- testimony into the --

8 CHAIRMAN FINLEY: -- I just accepted her
9 exhibits.

10 MS. HOLT: Thank you.

11 Henry Exhibit 1

12 (Admitted)

13 Casselberry Exhibits 1 - 22

14 (Admitted)

15 CHAIRMAN FINLEY: I would like it,
16 Mr. Bennink, if you would call Mr. Lashua.

17 MR. BENNINK: Yes, we'll call Mr. Lashua to
18 the stand now.

19 MARTIN LASHUA; was duly sworn and
20 testified as follows:

21 DIRECT EXAMINATION

22 BY MR. BENNINK:

23 Q Mr. Lashua, would you identify yourself for the
24 record, please, and your business address and

1 title?

2 A Yes, my name is Martin Lashua. I'm Vice
3 President of Operations with Carolina Water
4 Service, Inc., of North Carolina. Business
5 address is 5701 Westpark Drive, Suite 101,
6 Charlotte, North Carolina.

7 MR. BENNINK: Mr. Chairman, Mr. Lashua is
8 available for Commission questions.

9 CHAIRMAN FINLEY: All right, thank you.

10 **EXAMINATION**

11 BY CHAIRMAN FINLEY:

12 Q Mr. Lashua, I hope you've had an opportunity to
13 see the questions that we're going to ask you
14 already?

15 A Yes, sir, I have.

16 Q Let's go through them then please. On pages 3
17 through 4 of the Public Staff Witness
18 Casselberry's testimony, she discusses whether or
19 not the Company provides metered water service in
20 all of its service areas. On page 4, beginning
21 on line 3, Ms. Casselberry comments that all of
22 the mountain systems that the Company was
23 required by Commission Order in Docket 354, Sub
24 336, the last rate case, are now metered. She

1 further states that the only system where meters
2 have not been installed is Linville Ridge in
3 Avery County, which the Company acquired since
4 the last rate case proceeding in the fall of
5 2013. On lines 7 and 8, Ms. Casselberry
6 testified that the Public Staff believes it would
7 be appropriate for the Company to install meters
8 in Linville Ridge as soon as reasonably
9 practicable. What are the Company's plans with
10 regard to that please?

11 A That was a very good summary. I think if
12 Linville Ridge had been in the Company at the
13 last rate case, I'm sure it would have been
14 included, but the Company is receptive to
15 metering Linville Ridge. It's the last one in
16 the Company that is not metered so it makes
17 logical sense to proceed that way, and we're
18 working with the Public Staff on terms and
19 timing, but we are receptive.

20 Q As a general matter, what might the timing be?

21 A We would probably anticipate, if similar type
22 conditions, that it would be in before the next
23 evidentiary hearing of the next rate case.

24 Q Um, when might that be?

1 A I'm not sure.

2 Q I don't want to pin you down too far. Beginning
3 on page 15 of the Public Staff Witness
4 Casselberry's testimony, she discusses the public
5 hearings -- public hearing held in Charlotte,
6 North Carolina. Three residents of the
7 Riverpointe Subdivision in Charlotte testified at
8 the hearing concerning the magnitude of the
9 proposed rate increase, a 19.1 percent increase
10 over existing rates. One of these customers is
11 the president of the homeowners association. On
12 page 17, beginning at line 5, Witness Casselberry
13 explained that Riverpointe is one of the
14 subdivisions that falls under the Commission's,
15 the Company's new purchased water rates and
16 Riverpointe's usage rates would be the
17 supplier's, Carolina Water -- Charlotte water
18 Rate. Witness Casselberry stated that Charlotte
19 Water charges the Company \$6.30 per 1000 gallons.
20 Is there a contract between the Company and
21 Charlotte Water for that?

22 A No, sir.

23 Q Would the Company be willing to contact Charlotte
24 Water to determine whether the lower rate per

1 1000 gallons would be -- could be negotiated?

2 A Yes, sir. If I may elaborate a little bit,
3 Riverpointe, as many of the Commissioners may
4 know, has had historical concerns with, when we
5 were on a groundwater system, with very hard
6 water and inadequate supply to meet the demand in
7 the summer months when there was very heavy
8 irrigation. And the community asked us
9 repeatedly to purchase water from Charlotte
10 Water, formally Charlotte Mecklenburg Utility
11 Department, and that was finally able to happen
12 with some line extensions and some improvements
13 that Charlotte Water had in February of 2012. We
14 now purchase 100 percent of the water from
15 Charlotte Water at the community's request. When
16 we did the interconnect, Charlotte Water
17 explained that they did not feel we needed a
18 contract, that we were just simply a customer.
19 But they did establish a, what they called a bulk
20 customer, bulk residential customer rate of a
21 tier three. They have four inclining block tiers
22 and all of their bulk residential customers,
23 similar situations where you might have an
24 apartment complex or something like that, get the

1 tier three rate. They have a higher rate, a tier
2 four rate which is almost double what they're
3 charging us which would be appropriate -- which
4 would be more appropriate to charge us if you
5 looked at the usage that we're using. So, in
6 Charlotte Water's eyes, they were already
7 affording us savings. However, that does not
8 mean that we could not go back and ask them if
9 there was any special rate that could be
10 negotiated and have that to at least satisfy the
11 community that we've tried.

12 I'm not sure there's any
13 opportunity because they do have a very firm
14 policy of having uniform rates. Anybody that is
15 in a certain situation is charged the same amount
16 and they feel that we fall into that bulk
17 residential category. But, to answer the
18 question, we are receptive to contacting
19 Charlotte Water again to discuss that and at
20 least have some official response from them that
21 we have tried.

22 Q My assumption is that the Charlotte Water rates
23 are online somewhere within the city's website?

24 A They are, yes.

1 Q Do they -- when they -- when the city changes its
2 rates, does it give notice to its customers that
3 it's considering changing the rates?

4 A Yes, sir, they do. And that is one reason why we
5 have requested in this case to have specific line
6 items for all of the systems where we have
7 100 percent purchased water or 100 percent
8 purchased sewer so that we could pass through
9 exactly what we're being charged from the
10 provider. And, with rare exceptions, there may
11 be an opportunity to go down. It's unusual that
12 that happens but in a case like, for example, a
13 negotiated contract, if you were able to get a
14 better rate than having specific line item usage
15 rates that we've requested in this case, would
16 benefit in that regard.

17 Q Refresh my recollection, Mr. Lashua, is
18 Riverpointe the one on the lake out there where
19 you've got a lot of irrigation usage in the
20 summertime?

21 A Yes, sir. It's just south of Charlotte at Lake
22 Wylie near the Buster Boyd Bridge and the State
23 Line; very affluent community with very, very
24 heavy irrigation in the summer.

1 Q And when you were serving that service area with
2 wells there was some issues in the summertime?

3 A Tremendous issues. We often had to ask for
4 conservation because the wells were unable to
5 keep up. We added several wells and just -- as
6 close as we were to the lake, it was surprising
7 that we couldn't somehow get some of that lake
8 water to fill those wells but we just had
9 insufficient supply to meet the demand.

10 Q And are the Riverpointe consumers seem to be very
11 pleased with their service since you went to city
12 water?

13 A Very much so. I think in the testimony that they
14 were pleased with the quality. Again, we
15 purchase 100 percent and the groundwater wells
16 are deactivated and offline so everything is
17 coming from Charlotte Water.

18 Q With respect to other subdivisions that would
19 fall under the Company's new purchased water
20 rates, on Stipulation Exhibit D, page 1 of 3, the
21 various affected subdivisions, the bulk water
22 providers, and the usage charge per 1000 gallons
23 are listed. The Commission notes that the rate
24 per 1000 gallons from the City of Winston-Salem

1 is \$5.01 and from the City of Concord \$5.27. Are
2 there contracts between the Company and the City
3 of Winston-Salem and the City of Concord? And
4 would the Company be willing to contact these
5 bulk providers to determine whether lower rates
6 per 1000 gallons could be negotiated?

7 A Yes, sir; if I may, kind of split them up. We do
8 not have a contract with either provider. With
9 the City of Winston-Salem, this is for our
10 Yorktown system, it's a fairly small system of
11 just over 100 customers and it's outside the city
12 boundary. When we started purchasing all of the
13 water, Winston-Salem again, as Charlotte Water
14 did, felt that a contract was unnecessary and
15 that we were simply a customer and that they
16 were -- they wanted to charge us whatever the
17 prevailing rate was that their regulatory body
18 authorized, and that's where we are now. We
19 really don't have much opportunity, but again,
20 very much receptive to at least trying to
21 negotiate a better rate and at least having
22 something that we did do so.

23 With the City of contract, excuse
24 me, the City of Concord, we also do not have a

1 contract there. That is for our Zemosa Acres
2 system. The -- again, the City of Concord felt
3 that we were simply a customer and they wanted to
4 be able to charge the prevailing rate, but they
5 have a special line item. Unlike Charlotte
6 Water, they consider us a
7 commercial / institutional use, inside city rate,
8 so they're already affording us almost their
9 lowest rate possible. They're charging \$5.27 a
10 1000 and their cheapest rate is \$5.22 a 1000 so
11 we're almost at their best rate already. And,
12 surprisingly, they are giving us the benefit of
13 the commercial / institutional rate rather than
14 some of their higher rates, but we are receptive
15 to reaching out to the City of Concord to see if
16 there is anything that we could negotiate and at
17 least have that as a matter of record.

18 Q With respect to the usage charge per 1000 gallons
19 that the Company is charged from the bulk sewer
20 providers, as listed on Stipulation Exhibit D,
21 page 2 of 3, are there contracts between the
22 Company and these providers: Johnston County,
23 Two Rivers Utilities and the Town of Dallas? And
24 would the Company be willing to contact these

1 bulk providers to determine whether lower rates
2 per 1000 gallons could be negotiated?

3 A All three providers, we do have contracts with
4 them. With Johnston County, we initiated that
5 contract back in 1999 and they run for 10-year
6 periods. That was heavily negotiated at the time
7 of contract initiation and, typically, our next
8 opportunity is at renewal period but we do have
9 that as a matter of record to negotiate whenever
10 we come ready for renewal of any contract.

11 With Two Rivers, we started
12 negotiations with -- at that town, excuse me, at
13 that time the Town of Cramerton in 2011, and that
14 utility system was transferred to Two Rivers,
15 which is kind of an amalgamation of Gastonia and
16 Cramerton. Our contract now expires in 2031.
17 It's a 20-year period. And we negotiated as best
18 we could but they were very firm that they wanted
19 to be able to charge the prevailing rate that
20 whatever their regulatory body authorized at the
21 time, and they wanted to be -- as most of our
22 providers have explained -- that they wanted to
23 be consistent with any other similar users
24 throughout their territory.

1 The Town of Dallas is a fairly new
2 interconnect. We had a very small treatment
3 plant at College Park. That was just initiated
4 in 2014, May of 2014. The contract expires in
5 2024. And, again, any time we have a renewal
6 period we will try to negotiate rates at that
7 time. But the Town of Dallas was very firm that
8 they wanted to be able to charge whatever the
9 then effective rate was, prevailing rate, so they
10 could increase our rates at whatever opportunity
11 their regulatory body authorized.

12 Q Mr. Lashua, would be so kind as to provide us the
13 contracts that you just mentioned there in your
14 last answer for the record?

15 A Yes, sir, of course.

16 Q Concerning the Charlotte public hearing, Witness
17 Casselberry discusses on page 17 -- pages 17 and
18 18 of testimony, that one customer who lives in
19 Hemby Subdivision testified that the Company
20 charges a flat rate for sewer service and that he
21 would prefer a metered rate. Witness Casselberry
22 stated that Union County provides the water
23 service for Hemby Subdivision. Would the Company
24 be willing to investigate the possibility of

1 obtaining meter readings from Union County to see
2 whether metered sewer rates could be applied in
3 Hemby Subdivision in the next general rate case,
4 as recommended by the Public Staff?

5 A Yes, sir, Mr. Chairman. Actually, we already
6 have started that process. We started
7 communicating with Union County back in July and,
8 after the several follow-ups, finally received an
9 answer earlier this month in October that they
10 were not receptive to providing that information
11 and did not have any other such agreements.
12 However, I have escalated the question to another
13 supervisor level just to make sure that just
14 because they don't have any other agreements that
15 they would be receptive in starting one. There
16 usually is some minor administrative cost
17 involved when another utility provides that
18 information, so they may be reluctant to provide
19 it or feel that there's some sort of security
20 issue that providing customers' information but
21 we will continue to explore that, but as of now
22 the answer has been that they were not receptive
23 to providing that information.

24 Q Well, that seems like reasonable requests that

1 you've made and, if you would, please continue to
2 escalate that if you will. And, if you don't
3 mind, file a report with the Commission as to
4 what you find out based on your escalation of
5 that request.

6 A Yes, sir.

7 Q On page 24 of Public Staff Witness Casselberry's
8 testimony she explains her adjustment to
9 purchased water expense. She states on lines 11
10 and 12 that she has reduced purchased water
11 expense for losses greater than 15 percent. What
12 is the Company presently doing or planning to do
13 in order to reduce its percentage of water loss?

14 A I think the Company has always been very
15 proactive and responsive whenever we find that
16 our -- we use a new term "non-revenue water" is
17 escalating. We're very proactive in trying to
18 make sure that we investigate any possible cause.
19 We are very timely in repairing any known leaks;
20 they are repaired immediately. But in many
21 cases, especially in the mountains, for example,
22 leaks may not surface. The water that is leaking
23 out of the pipes may not actually be visible so
24 they go on for quite some time. But any time we

1 have anything brought to our attention or we find
2 it, we repair it immediately.

3 We have done some fairly
4 innovative new testing techniques. You
5 Commissioners probably remember some testimony
6 from Mrs. Norman in the Misty Mountain system
7 during this case, and there has been a number of
8 testimony in the past at Misty Mountain about
9 prevailing leaks. And we used a new technique
10 called helium leak detection where the helium is
11 actually pumped into the distribution system and
12 very fine detectors are able to pinpoint the
13 leaks much more accurately than some of the other
14 methods. And, of course, as soon as they -- we
15 were right behind the crew in repairing any leaks
16 that we found. But as we've -- in Misty Mountain
17 in particular, as we've discussed during this
18 case, the customers were previously unmetered so
19 we don't really have a good way to document the
20 impact of our actions, but we are very
21 proactive in trying to explore any opportunity.

22 We would respectfully disagree
23 with Ms. Casselberry's use of the 15 percent. We
24 don't believe that that's an appropriate

1 methodology anymore. AWWA has gotten away from
2 use of a specific percentage rate. Back in 2003,
3 they came out with the recommendations that
4 percentages no longer be used and that an
5 analysis be done on each individual system. Some
6 regulatory, excuse me, some regulatory
7 authorities used as much as 20 percent and it did
8 fluctuate. But, again, the AWWA has -- has kind
9 of moved away from the terminology of unaccounted
10 for water and gone with what they prefer to call
11 and recommend as "non-revenue water".

12 Every system is very unique and
13 there are lots of different things that need to
14 be considered. In Ms. Casselberry's review, she
15 took the amount of purchased water and subtracted
16 the amount of water sold and came up with the
17 difference between those two numbers. But there
18 are many other factors such as flushing, or fire
19 fighting, or leaks known or unknown, that go into
20 account when you have -- those numbers are
21 different from ideal. No system will ever get to
22 be a perfect one-for-one exchange or zero
23 percent. There is some amount of leakage in all
24 systems.

1 The AWWA methodology, in terms of
2 doing water audits, really looks at what is the
3 economic leakage level in the system. And after
4 a period of time, after -- you're spending more
5 money trying to find where the water is going
6 than the water is costing. So, again, trying to
7 move away from a set percentage rate to more of a
8 system-specific analysis. And we have done quite
9 a bit in the past, again, to make sure that we're
10 conscience of what these rates are and moving
11 towards any kind of resolution if we see
12 increases.

13 One tool is a water audit.
14 Another tool is even using a third-party
15 specialist to do water cap analysis to do a very,
16 very detailed dive of the system information in
17 trying to determine what that economic level of
18 leakage is. And we look forward to working with
19 Staff and, hopefully, the Commission, if given
20 the opportunity, to perhaps have some third-party
21 specialist come in and give presentations about
22 the non-revenue water techniques and the water
23 audits.

24 In the focus on this issue, it was

1 primarily purchased water systems and there were
2 a number of systems that exceeded in
3 Ms. Casselberry's review of that 15 percent mark.
4 One, in particular, was Carolina Forest where we
5 have purchased water from the City of Montgomery,
6 Montgomery County, excuse me. And, in that
7 particular situation, we provided information to
8 Ms. Casselberry that we had been working very
9 diligently in repairing a lot of the leaks and
10 the trend was coming back down again and we hope
11 that will continue. A contractor had gone
12 through the community and was doing a lot of work
13 on electric line clearing and had broken service
14 lines and mains that were off road. And, again,
15 as I mentioned earlier, they did not surface;
16 they were not known for quite some time. But we
17 have made a lot of effort in making those
18 repairs. In that particular system, we have seen
19 a market decrease in the leakage level. So to --
20 a long response but we are very proactive and
21 responsive in reviewing this.

22 CHAIRMAN FINLEY: Let's see if there are
23 other questions by other Commissioners.

24 Commissioner Brown-Bland has a question.

EXAMINATION

BY COMMISSIONER BROWN-BLAND:

Q Mr. Lashua, with respect to the questions that were earlier asked of Ms. Casselberry regarding improvements in the billing system, do you have anything that you can add or expand, or what's the Company's thoughts about improvements in the billing system?

A Yes, I'll do my best. I'm not a billing expert by any means but hopefully I can help a little bit. One thing is, as Ms. Casselberry explained, I did want to clarify, is the issue of the two bills in one month. We're not double billing the customers. It's just a period of overlap where you might get two bills in one month and none the next. So the usage periods are sequential. There's not a double billing problem there. We have, as Ms. Casselberry explained earlier, that with the W-26 filing and some other mechanisms, we're working very closely with the Public Staff to improve how we file so that we can do so in a manner that meets their requirements. It's a lot of work on Staff to have to ask questions and dive down deep and do things. But with our

1 billing system the way -- and our Company the way
2 it is -- we have, you know, we're in a lot of
3 states and there's a lot of requirements. So
4 sometimes it was more difficult to focus on one
5 group's requirements and how they'd like the
6 information presented. But we have gone, as of
7 February of last year, we've kind of broken into
8 more of a regional approach. And with North
9 Carolina and Tennessee as our, what we call, our
10 Atlantic region, we have our own core financial
11 and regulatory team now in Charlotte. So I think
12 that gives us a much better opportunity to work
13 directly with Staff to make sure that we present
14 things in a manner that they are requesting.
15 And, as Ms. Casselberry mentioned, I think there
16 has been some improvement in that regard.

17 Q So has the Company seen any effects yet or had
18 time to see effects from the more regional
19 approach?

20 A I think it gives us a much greater opportunity to
21 work closely with the regulatory commissions in
22 the state in which those regions are. We still
23 have what we call shared services where we have a
24 group of people like HR, IT and some financial

1 functions that are better provided for the entire
2 Company. But we now have our core financial and
3 regulatory team located in our regional office in
4 Charlotte so I think it's a much better approach.

5 Q Does the Company view it as a problem with its
6 customers; the bills that come twice in a month
7 and then not the next month?

8 A We can see how the customers might feel if
9 they're being billed too frequently. But again,
10 as I mentioned, they're not getting a bill the
11 following month. It's just a matter of a few
12 days of timing. And, unfortunately, the way that
13 our billing system works, we're not able to delay
14 the billing so that it would just print out and
15 send it in a few later days; it has to come out
16 right away after the meters are read. But what
17 we're hoping to do is to take a very close look
18 at the billing cycles to see if -- where those
19 are situations where you have billing cycles that
20 end at the end of the month, which is what's
21 causing the problem -- that perhaps we would
22 slide those cycles a few days so that we don't
23 have that type of read, potential for having that
24 problem. That may cause some other problems with

1 read cycles so we have to be careful not to
2 create problems, but we are definitely looking
3 into that to see if there's a way to slide those
4 cycles so that that won't happen again.

5 Q Are you frequently getting any complaints on that
6 issue?

7 A We don't; not very often. We have had them in
8 the past, as Ms. Casselberry testified to, but
9 it's not a very frequent problem. And I think
10 most customers realize that, you know, if you
11 look at it from a perspective of an aggregate of
12 two months that it's -- we're not billing, double
13 billing -- it's the sequential usage periods but
14 just so happens that the mail comes twice in one
15 month or not one in the other.

16 Q Either in the past or currently, are you able to
17 provide communications to the customers so that
18 they understand that?

19 A We haven't done anything on any kind of a mass
20 approach, but our customer service
21 representatives explain -- when customers have
22 called complaining about that, they're careful to
23 point out on the bill that the usage period is
24 clearly shown and once the customer realizes that

1 the second bill is picking up in a sequential
2 fashion, they're usually satisfied with that
3 explanation.

4 COMMISSIONER BROWN-BLAND: Thank you.

5 A Yes, ma'am.

6 EXAMINATION

7 BY COMMISSIONER BAILEY:

8 Q Good morning, Mr. Lassiter, Lashier.

9 CHAIRMAN FINLEY: Lashua.

10 Q (COMMISSIONER BAILEY) Sorry about that. One
11 question for you. Other than the Riverpointe --
12 I remember some testimony on that I guess in the
13 last rate case -- are there any other situations
14 where you have a well-fed community like that
15 that you're having serious secondary water
16 quality problems with?

17 A No, sir. We -- from the last rate case we were
18 requested or ordered to file secondary water
19 quality reports which we do every six months, and
20 we haven't identified really any system that does
21 not meet secondary requirements or has any kind
22 of complaint history. I would caution though
23 that Riverpointe, one of their primary quality
24 issues was hardness, which is not regulated. So

1 in terms of calling it secondary, or in the
2 report it might not reflect accurately when
3 you're referring to a hardness or unregulated
4 parameter. But to answer your question, no.

5 COMMISSIONER BAILEY: Okay. Thank you.

6 COMMISSIONER DOCKHAM: Mr. Chairman.

7 CHAIRMAN FINLEY: Commissioner Dockham.

8 **EXAMINATION**

9 BY COMMISSIONER DOCKHAM:

10 Q Mr. Lashua, I'm sure I misunderstood, but this
11 was always -- well, when I was in the Legislature
12 this was a sticking point with me, and I probably
13 misunderstood when you were giving your long
14 answer about the leakage situation. Did I
15 understand you to say that there reached a point
16 where it was more economically feasible just to
17 live with the leak than it was to spend money to
18 try to find where the leak was? Did I
19 misunderstand what you were saying?

20 A No, sir, you understood. In that -- that kind of
21 presents a perception problem. Yes, there is,
22 when you look at it from a pure cost perspective,
23 there reaches a point that every dollar spent
24 trying to find where these mysterious leaks might

1 be exceeds the cost of the water itself. But
2 that doesn't sit well when you look at it from an
3 environmental perspective or a customer
4 perspective who thinks that you're being wasteful
5 and inefficient. But if you look at it from
6 purely a cost perspective and trying to make sure
7 that you're acting as efficiently with the
8 customer's money, there gets to be a point where
9 you're not really spending money wisely. But
10 therein lies a problem that utilities are going
11 to face, if you use that discussion point, is
12 that there is a -- will always be a customer
13 perception that you're being wasteful.

14 CHAIRMAN FINLEY: Other questions from the
15 Commission?

16 (No response.)

17 Questions on the Commission's questions?

18 MR. BENNINK: I have some if the other
19 parties don't.

20 CHAIRMAN FINLEY: Mr. Bennink.

21 **EXAMINATION**

22 BY MR. BENNINK:

23 Q Following up on the last question, I assume that
24 that situation is the exception rather than the

1 rule in terms of where it would be not
2 economical, so to speak, to go out and find the
3 leak and track it down?

4 A I'm not sure I would say that. I don't know that
5 there is a good way to characterize that but it
6 would be very system-specific. Every situation
7 is a little different. Mountain systems, for
8 example, as I mentioned earlier, where water
9 leaks never surface and sound detection leak
10 studies and helium leak studies still have not
11 found it; it gets very difficult and very costly
12 to try to pinpoint where those leakages may be.
13 So I think the key there is to try to treat it on
14 a system-specific basis and look at it in that
15 manner.

16 Q Going back to the question about double bills for
17 customers. Is it your understanding that the
18 Public Staff testimony on that issue was premised
19 not primarily on complaints from customers about
20 receiving double bills, but the difficulty that
21 it presented the Public Staff in coming up with
22 an accurate customer count for purposes of
23 billing and revenues?

24 A Yes. I wouldn't use the word "double billed",

1 just the timing frequency that two are received
2 in one month. But, no, we're not aware of any
3 widespread complaints, but it did present
4 financial calculation challenges to the Public
5 Staff when they were reviewing the numbers.

6 Q And, as a matter -- as a hypothetical matter --
7 let me pose a hypothetical and see if this fits
8 the situation where you have a customer receiving
9 two bills in a month. Let's say at the end of
10 September, September 28th, and it happens to be a
11 Friday, your meter readers read the bill. It's
12 my understanding you don't issue bills over the
13 weekend so that bill would go out on Monday which
14 would be October 1st?

15 A That's correct.

16 Q And then at the end of that month on, let's say
17 October 28th, the meter reader goes out -- and
18 that's a Tuesday, hypothetically -- reads the
19 meter, that bill may go out on the next day or
20 the following day?

21 A Right.

22 Q So the customer would receive a bill for one
23 billing period on October 1st and then for the
24 second billing period at the end of October?

1 A Yes.

2 Q That's really the situation in which this
3 happens?

4 A Yes. And, again, the real problem situations are
5 where there's a billing cycle that falls at or on
6 the end of the month and you have a situation
7 just as you've described.

8 Q And, again, at least today, you're not receiving
9 significant or any, necessarily any -- few, if
10 any, customer complaints about this billing?

11 A That's correct.

12 Q In terms of your regional reorganization which I
13 think you said happened in about February of
14 2014.

15 A Yes, sir.

16 Q Can you maybe give the Commission some
17 explanation of the difficulties that, I mean, I
18 know it's got benefits but it also created some
19 difficulties I think in the state level, at the
20 state level, for instance, in filing this rate
21 case. Can you give us a little bit of an
22 explanation of the people involved in this rate
23 case, filing the current rate case verses those
24 who did it before?

1 A Yes. We have a very young group of people, not
2 young in age but young in experience as our
3 financial and regulatory team, and none of them
4 were involved in previous rate cases for North
5 Carolina. So when we changed the regional
6 approach and team members went to different
7 respective regions -- tried to absorb the people
8 that we had and just moved them into the
9 different regions -- and then additional staff
10 was added. We added one financial analyst in our
11 Charlotte region, for example, but they were not
12 involved in any of the previous rate cases. So,
13 again, the beauty of the way that we're set up
14 now is that we have the opportunity to work much
15 more closely with the Public Staff, and look
16 forward to doing that after the conclusion of
17 these rate cases, to try to go in with the Public
18 Staff and make sure that we understand the way
19 that they like things presented so that we can do
20 that in the future.

21 Q And I think there was testimony from
22 Ms. Casselberry, for instance, in Item 26, there
23 were some problems when that was initially filed
24 with the rate case application which were

1 remedied and that was done by your local people
2 in the region or in Charlotte --

3 A (Interposing) That's correct, yes.

4 Q -- getting that information together in the
5 fashion that finally satisfied the Public Staff?

6 A Yes.

7 Q In, regarding the adjustment that the Public
8 Staff made for purchased water, the -- I think,
9 according to Ms. Casselberry's testimony, your
10 purchased water for the 12 months ending June
11 30th was a little bit more than \$1 million and
12 she eliminated \$45,143 from the cost of service;
13 is that correct --

14 A Yes.

15 Q -- pursuant to her adjustment? And the Company
16 has agreed to that in this case?

17 A Yes.

18 Q Although you may have some disagreement
19 ultimately with the methodology, we have agreed
20 to that adjustment in this case?

21 A Yes, we have.

22 Q And that's part of the Stipulation?

23 A Yes, sir.

24 Q In terms of some of the recommendations that

1 Ms. Casselberry made about the billing system on
2 page 22 of her testimony, she recommends that the
3 Company in its next general rate case provide an
4 accurate active customer usage report which is
5 the W-26 filing, which is part of the W-1. And,
6 again, the Company agrees to that recommendation;
7 do you not?

8 A We do.

9 Q And, in fact, that's what you did in terms of
10 updating the W-26 in this Item 26 in this rate
11 case?

12 A That's correct.

13 Q Next, she asked that the Company provide a
14 separate report that identifies each
15 multi-residential water and multi-residential
16 sewer customer for both flat rate and metered
17 rate customers, for each meter size, for each
18 service area and provide the number of dwelling
19 units behind each meter for each
20 multi-residential water and sewer customer
21 identified. Does the Company agree to abide by
22 that request?

23 A We do.

24 Q And last, the Public Staff through Witness

1 Casselberry, recommended that CWSNC specify in
2 its filing whether the active customer report,
3 the Item 26, includes multi-residential water and
4 sewer customers in its total active customers or
5 whether dwelling units from the separate report
6 need to be added to total active customers. And,
7 there again, does the Company agree with that
8 recommendation?

9 A We do.

10 Q Thank you. Following up on the Commission's
11 questions concerning the cap on sewer usage in
12 response to the Currituck public hearing, do you
13 have a response you want to offer or any comments
14 you want to offer on that issue?

15 A Well, we think that in that particular situation,
16 as testimony has been given at the public hearing
17 in Currituck, it's a fairly different situation
18 with very, very large homes and lots of usage.
19 And one customer provided testimony that they had
20 added a second irrigation meter to put all of
21 their usage on that other meter that did not go
22 to the sewer. And even with the county's tap fee
23 or connection fee, they had a fairly rapid pay
24 back. I think, if I'm not mistaken, there was

1 about a three-year pay back that they were able
2 to see a reduced sewer bill that compensated them
3 for the cost of the connection fee for a separate
4 meter. So we feel that that is a more
5 appropriate mechanism in that community because
6 of the very, very high usage. It's very
7 difficult to pick a cap that you would know was
8 accurately depicting what went to the sewer so,
9 if you had a second meter, then you would
10 obviously know exactly what was going to the
11 sewer and be billing appropriately.

12 MR. BENNINK: Those are all of the questions
13 I have.

14 **EXAMINATION**

15 BY MR. DWIGHT ALLEN:

16 Q Mr. Lashua, referring to Corolla Light, have you
17 done a study of how many homes in Corolla Light
18 you believe to be what you term "large homes"?

19 A No, sir, not a study. No, sir.

20 Q Do you know of any homes down there that have 12
21 or 14 bedrooms?

22 A I do know of a couple that are --

23 Q (Interposing) In Corolla Light?

24 A Yes, sir, I think so.

1 Q How -- how many, do you know?

2 A I don't have an accurate count but it's my
3 understanding that there are some quite large.

4 Q It's your understanding or have you gone down
5 there and --

6 A (Interposing) No analysis.

7 Q -- in determination of yourself?

8 A No, sir; no determination.

9 Q Just word you happened to hear on the street?

10 A And from builders and people like that; yes, sir.

11 Q How long has Corolla Light been a subdivision, do
12 you know?

13 A No, sir, I do not.

14 Q In terms of Corolla Light, are you aware that, in
15 terms of rentals, that they have a limit of 12
16 people that can stay in one of their houses at a
17 given time?

18 A I was not aware of that.

19 Q Have you asked anybody what kind of restrictions
20 they have on that --

21 A (Interposing) No, sir.

22 Q -- kind of thing? The percentage of water usage
23 for Corolla Light is what, about 17 percent more
24 than your average customer, the uniform?

1 A That seems about right, yes.

2 Q Nags Head in comparison is what, more than twice?

3 A I don't have that information.

4 Q It's a lot higher than it is in Corolla Light;
5 isn't it?

6 A I don't honestly know.

7 Q And you would have to make those determinations
8 before you can say with any degree of certainty
9 who has high usage, who has big homes and --

10 A (Interposing) Sure.

11 Q -- what the treatment ought to be?

12 A Absolutely. Yes. I just don't -- I think it
13 would be difficult to -- some analysis would have
14 to be done. And in picking a cap you would have
15 to be careful to make sure that that cap was
16 sufficient to not cause revenue issues.

17 Q And you'd have to be certain that there really
18 was a very disparate amount of usage in one area
19 over another --

20 A (Interposing) Sure.

21 Q -- to just speculate?

22 A Sure. Yes. Absolutely.

23 MR. DWIGHT ALLEN: Okay, that's all. Thank
24 you.

EXAMINATION

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BY CHAIRMAN FINLEY:

Q You mentioned the -- Mr. Lashua, you mentioned the tap fee that you can recover in a short period of time based on your analysis. What is that fee?

A Mr. Chairman, I can't remember the testimony that the customer gave. I want to say that it was \$1600 but that's, again, speculation.

Q In your understanding, it's in the record from the Corolla hearing?

A It is if I'm not mistaken. I believe that testimony was given on the cost of the tap fee as well as an exhibit that was given that showed the difference in rates and the pay-back period for that connection.

CHAIRMAN FINLEY: Thank you. Anything else for Mr. Lashua?

(No response.)

Thank you, Mr. Lashua.

(The witness is excused.)

CHAIRMAN FINLEY: To the extent that we have failed to admit any exhibits or include any testimony in the record, all of that testimony that has been

1 prefilled is copied into the record as though given
2 orally from the stand and all of the exhibits are
3 admitted.

4 MR. BENNINK: Can I ask one question for
5 clarification? I do not remember. Did we move the
6 Stipulation?

7 MS. HOLT: No.

8 MR. BENNINK: We would like to move the
9 Stipulation into evidence.

10 MR. DWIGHT ALLEN: Thank you, Mr. Bennink.

11 CHAIRMAN FINLEY: Without objection, the
12 Stipulation is accepted into evidence.

13 Stipulation

14 (Admitted)

15 CHAIRMAN FINLEY: Anything else?

16 (No response.)

17 Well, well, well, it's nice to get things
18 settled. What is your pleasure with respect to
19 post-hearing filings?

20 MR. BENNINK: We would propose 30 days from
21 the date of the transcript.

22 CHAIRMAN FINLEY: Any objection to that?
23 Without objection, it shall be so ordered. Anything
24 else?

1 MS. HOLT: We would like a week to provide
2 the late-filed exhibit.

3 CHAIRMAN FINLEY: That will be acceptable.

4 MR. BENNINK: And we will provide ours
5 within the same time period.

6 CHAIRMAN FINLEY: That's acceptable.
7 Anything else?

8 (No response.)

9 That concludes our hearing. Thank you very
10 much.

11 (WHEREUPON, the proceedings adjourned at 10:50 a.m.)

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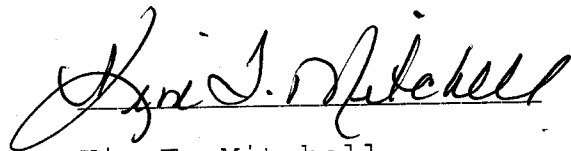
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C E R T I F I C A T E

I, KIM T. MITCHELL, DO HEREBY CERTIFY that
the Proceedings in the above-captioned matter were
taken before me, that I did report in stenographic
shorthand the Proceedings set forth herein, and the
foregoing pages are a true and correct transcription
to the best of my ability.



Kim T. Mitchell
Court Reporter II