

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. W-354, SUB 400

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of

Application by Carolina Water Service,)	DIRECT TESTIMONY OF
Inc. of North Carolina for Authority to)	DANA HILL ON BEHALF OF
Adjust and Increase Rates and Charges)	CAROLINA WATER SERVICE,
for Water and Sewer Utility Service in All)	INC. OF NORTH CAROLINA
Service Areas in North Carolina and)	
Approval of a Three-Year Water and)	
Sewer Investment Plan)	

July 1, 2022

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Dana Hill and my business address is 4494 Parkway Plaza
3 Boulevard, Suite 375, Charlotte, North Carolina 28217.

4 **Q. WHERE ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am a Director of State Operations for Carolina Water Service, Inc. of North
6 Carolina (“CWSNC” or “Company”).

7 **Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL**
8 **BACKGROUND?**

9 A. I have been employed with CWSNC since October of 2018 and have been
10 in the water and sewer profession for 28 years, collectively. Prior to my
11 employment with the Company, I worked for more than 24 years for the
12 Town of Snow Hill, serving most recently as the Utilities Director and Town
13 Manager. I hold certifications in water and sewer treatment as well as utility
14 management.

15 **Q. WHAT ARE YOUR DUTIES AS DIRECTOR OF STATE OPERATIONS**
16 **WITH CWSNC?**

17 A. I am responsible for directing the safe and efficient operations in eastern
18 North Carolina, including personnel, facilities, maintenance, and capital
19 projects, as well as for communicating with state and federal regulators
20 regarding operational and capital issues.

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

1 A. The purpose of my testimony is to provide the North Carolina Utilities
2 Commission (“Commission” or “NCUC”) with an overview of the operations
3 of CWSNC, including the significant capital investments made since the
4 Company’s last rate case. I also provide an update on CWSNC’s investment
5 in new technology in support of operations as well as the continued efforts
6 to address non-revenue water. Furthermore, I will provide an overview of
7 the capital investment plan element of the Water & Sewer Investment Plan
8 (“WSIP”) and describe how this capital methodology will serve our
9 customers’ interests. I then explain how the anticipated capital investment
10 levels were developed and describe the more significant specific capital
11 investment projects. My testimony also addresses the proposed addition of
12 a pretreatment, or “sewer use,” tariff.

13 **Q. PLEASE BRIEFLY DESCRIBE THE COMPANY’S WATER AND SEWER**
14 **OPERATIONS IN NORTH CAROLINA.**

15 A. CWSNC is a wholly owned subsidiary of Corix Regulated Utilities, Inc.
16 (“CRU”). CWSNC is an investor-owned public utility pursuant to N.C. Gen.
17 Stat. (“N.C.G.S.”) § 62-3, does business as a regulated water and sewer
18 utility in North Carolina, and is subject to the regulatory oversight of the
19 Commission. The Company has provided water and sewer service in North
20 Carolina for over 55 years and applies in this case for an adjustment of its
21 water and sewer rates and charges for all the Company’s service areas in
22 North Carolina. The Company is the second-largest Commission-regulated

1 water and sewer public utility in North Carolina. CWSNC presently serves
2 approximately 34,565 water customers and 21,469 sewer customers¹ in
3 North Carolina and operates approximately 93 water systems and 38 sewer
4 systems in the state. The Company's service territory spans 38 counties in
5 North Carolina from Bear Paw in Cherokee County to Corolla in Currituck
6 County. Consequently, CWSNC, as a regulated public utility, has a
7 continuing responsibility to maintain and upgrade the Company's widely
8 dispersed utility infrastructure and to make necessary improvements to
9 ensure its ability to consistently provide adequate, efficient, and reasonable
10 service to its customers as required by N.C.G.S. § 62-131(b).

11 The Company also has an obligation to comply with changing
12 environmental, health, and safety regulations and to fulfil its overall
13 obligation to provide quality, dependable service pursuant to its certificate
14 of public convenience and necessity. To that end, CWSNC will have
15 invested approximately \$17.3 million in capital improvements since its last
16 general rate case that is not yet reflected in rates. These investments are
17 needed to replace and rehabilitate infrastructure and to modernize and
18 increase efficiencies in the Company's systems. In addition, the Company

¹ As of the March 31, 2022 Test Year, there are 31,242 active water customers, 3,323 water availability customers, 20,330 active sewer customers, and 1,139 sewer availability customers.

1 continues to fund required operations and expense (“O&M”) increases to
2 ensure quality and compliant service.

3 **Q. PLEASE DESCRIBE THE COMPANY’S MOST SIGNIFICANT**
4 **INVESTMENTS SINCE ITS LAST GENERAL RATE CASE.**

5 A. Since its last general rate case, the Company has invested in several capital
6 improvement projects. Among the most significant of such capital projects
7 are the following:

8 (1) Wastewater Collection System Improvements:

9 Systems were evaluated through heavy cleaning and closed-circuit
10 television inspections to identify faulty connections, breaks, and
11 other sources of inflow and infiltration. These efforts were
12 undertaken to reduce hydraulic loading caused by the introduction of
13 groundwater and stormwater which decreases treatment capacity
14 and could lead to sanitary sewer overflows. Once areas of concern
15 were identified, repairs or replacements were performed. All work will
16 be completed by August 31, 2022 in the following systems, with the
17 exception of the Mount Carmel project, which will be completed by
18 September 30, 2022:

- 19 • Bradfield Farms, Mecklenburg County- \$598,907
- 20 • Connestee Falls, Transylvania County- \$366,890
- 21 • Abington, Forsyth County- \$677,256

- Mount Carmel, Madison County- \$587,784

(2) Lift Station Replacements: The Company replaced a lift station in Sapphire Valley (Jackson County). This project continues the Company's effort to replace all dry-can style stations with safer wet-well arrangements. These upgrades will also reduce system vulnerability during significant rain events and severe weather by eliminating pumps that may be prone to flood damage. Customers will benefit through fewer service interruptions and potential annual energy savings. Total expenses related to this upgrade were \$543,725, and the project has been placed into service.

(3) Water Supply Improvements: The Company invested in upgrades to Stewarts Ridge Well #1 in Wake County. This project consisted of replacing all existing internal piping and the addition of filtration equipment to remove uranium, iron, and manganese. The project was undertaken to remain compliant with standards as defined by the North Carolina Department of Environmental Quality as well as to provide a redundant source of potable water for the community. The estimated cost of the project is \$87,339, and it is expected to be in service by July 31, 2022.

1 Additionally, in Mount Mitchell (Yancey County), the Company
2 replaced a 30,000-gallon ground storage tank due to end-of-life degradation
3 to improve water quality at a cost of \$624,476, with an estimated in-service
4 date of August 31, 2022. In addition, a booster station was constructed in
5 Sapphire Valley (Jackson County) to allow for the removal of an existing
6 hydro-pneumatic tank that had become a safety concern due to age and
7 condition. A main transmission line was also upgraded as a part of this
8 project to provide increased volume and improved water quality, which is
9 attributed to fewer service interruptions. Total costs were \$525,000, and the
10 project is estimated to be placed into service by September 31, 2022.

11 (4) Leak Detection: The Company performed acoustic
12 leak detection in three systems with above normal water loss to
13 identify and repair leaks and reduce non-revenue water production.
14 In Fairfield Harbour (Craven County), one quadrant has been
15 completed with 16 leaks identified and repaired at a cost of \$140,037,
16 eliminating an estimated water loss of 14,000,000 gallons per year.
17 In Sherwood Forest (Transylvania County), nine leaks were
18 identified and repaired at a cost of \$78,576, eliminating an estimated
19 water loss of 11,037,600 gallons per year. Leak detection efforts in
20 Connestee Falls (Transylvania County) resulted in 22 leaks being
21 located at a cost of \$130,974. This eliminated an estimated water
22 loss of 19,841,200 gallons per year.

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(5) Purchased Water Treatment Improvements: The Company engaged in treatment improvements in Whispering Pines (Moore County). These investments were made to boost the orthophosphate treatment at Entry Point #1 to aid in iron sequestration. This will allow for a significant reduction in system flushing and improve the water quality for customers. This project, which cost \$268,108, is expected to be complete and in service by August 31, 2022.

In addition, the Company has made many other investments in various systems, including water main replacements, tank rehabilitation, and miscellaneous equipment replacements.

Finally, I would add that the cost figures and estimates reflected above, among other detailed estimates, are expressly identified on W1-10, Schedule 2, and the Company intends to update, in this proceeding, all relevant cost estimates with actual costs after the actual costs become available.

Q. PLEASE DESCRIBE THE COMPANY’S INVESTMENT IN CERTAIN TECHNOLOGIES THAT SUPPORT OPERATIONS.

A. The Company continues its Operations Management System (“OMS”) initiative, implementing a comprehensive asset management program through which inspections and preventative maintenance will be scheduled and assigned to staff for all critical equipment. The Company is also

1 implementing a uniform supervisory control and data acquisition (“SCADA”)
2 system in a phased approach as: (1) remediation of identified cyber-security
3 vulnerabilities; (2) transition of systems from obsolete legacy monitoring
4 platforms; and (3) rehabilitation or replacement of facilities. The intent of this
5 approach is to extend the feasible lifespan of our existing monitoring
6 solutions whenever possible. The Company expects to realize reductions in
7 operating expenses as SCADA systems are activated by a reduction in
8 facility visits and the ability to identify and resolve problems remotely.

9 **Q. CAN YOU PROVIDE AN UPDATE ON THE STATUS OF THE**
10 **ADVANCED METERING INFRASTRUCTURE ROLLOUT THROUGHOUT**
11 **THE STATE?**

12 A. The Company has identified and entered into an agreement with a vendor
13 to standardize equipment throughout its service areas. Implementation will
14 be undertaken in a phased approach with priority given to systems in which
15 the geographical characteristics make manual reading challenging, such as
16 mountainous terrain during weather events, as well as systems
17 characterized by high water loss due to meter age and accuracy.

18 **Q. PLEASE SUMMARIZE THE COMPANY’S CONTINUED EFFORTS TO**
19 **ADDRESS NON-REVENUE WATER.**

20 A. The Company has continued to implement its non-revenue water (“NRW”)
21 strategy to define the measures taken by staff, which are focused on three
22 core factors that will lead to better financial and operational sustainability:

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(1) meter accuracy, whereby source meters have been replaced during the past five years and are tested regularly, as are purchase system entry points. Representative residential meters are tested annually, and replacements are made as needed to ensure accuracy;

(2) process water usage is recorded and tracked monthly, such as volumes flushed for water quality, lost to repaired leaks, and used for internal treatment such as chemical feeds, in an effort to quantify true unidentified loss; and

(3) leak identification through district metering in systems with significant unidentified loss. This process consists of installing large diameter meters strategically throughout the system and comparing the volume of water passing into a geographical “sub-area” with the volumes billed to customers to identify specific sections of concern. Acoustic leak detection technology is utilized to locate potential repair needs and has been implemented in several systems with admirable results. American Water Works Association (“AWWA”) water audits are performed on all systems annually, and system specific reviews are conducted monthly by operations staff.

The Company has recently engaged a contractor for satellite assisted leak detection, whereby several systems located in a geographical area can be evaluated at once. Satellite technology has proven to be an

1 effective tool and is particularly valuable in mountainous terrain. As a result
 2 of the continued focus on non-revenue water, most of the purchase systems
 3 decreased in loss percentage in 2021 compared to 2020, as reflected
 4 below:

SYSTEM	2020 % loss	2021 % loss
Whispering Pines	7.6	5.2
Winston Pointe	1.3	1.2
High Vista	35.7	34
Riverbend	35.2	32
Woodrun	31.4	27.4
Kings Grant	26.5	35.8
Riverpointe	8.6	6.6
Carolina Trace	11.7	12.9
Tanglewood	14.6	7.9
Zemosa Acres	22.6	24.9
Carolina Forest	26	15.5
Lamplighter	12.9	1
Yorktown	10.5	7
Bent Creek	5.5	6.4

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 6 This strategy is consistent with the principles of the AWWA M36 Manual
 7 (“Water Audits and Loss Control Programs”) and addresses NRW based
 8 upon the system-specific economic level of intervention. In addition to the
 9 previously described efforts, the Company continues to regularly review
 10 vacancy and zero consumption reports to ensure that all billable volumes
 11 are accurately captured. The Company reviews its strategy on a regular
 12 basis and updates as necessary based on whether tangible results are
 13 achieved.

1 **Q. PLEASE SUMMARIZE THE COMPANY’S THREE-YEAR WSIP**
2 **REQUEST IN THIS PROCEEDING.**

3 A. The Company requests approval of a three-year WSIP, with a test year of
4 the 12 months ending March 31, 2022 (the “Test Year”) with plan year 1
5 ending March 31, 2024, plan year 2 ending March 31, 2025, and plan year
6 3 ending March 31, 2026.

7 **Q. WHAT IS YOUR UNDERSTANDING OF THE NORTH CAROLINA WSIP**
8 **STATUTE AND RULES AS THEY PERTAIN TO CAPITAL**
9 **INVESTMENTS?**

10 A. As part of the WSIP statute (N.C.G.S. § 62-133.1B), the Commission may
11 approve a WSIP, authorizing annual rate changes for a three-year period
12 based, in part, on reasonably known and measurable capital investments.
13 After N.C.G.S. § 62-133.1B was passed, the Commission undertook an
14 exacting investigation to develop the terms, conditions, and procedures for
15 WSIPs (Docket No. W-100, Sub 63). At the conclusion of that investigation,
16 the Commission issued its January 7, 2022 WSIP Order, which set out
17 detailed filing requirements in Commission Rule R1-17A – specifically at
18 subsection (c).²

² CWSNC notes and observes the Commission’s requirement that a WSIP must be consistent with the requirements of Rule R1-17, unless otherwise noted. Rule R1-17 prescribes the requirements associated with filing a traditional, general rate case pursuant to N.C.G.S. § 62-133.

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Subsection (c) requires that the utility’s WSIP include a three-year capital investment plan by rate division that addresses:

- All proposed capital investment projects expected to be placed in service in the period starting on the date immediately following the end date specified by the Commission for the update of utility plant in service and continuing through the conclusion of the Plan for which the utility seeks cost recovery through the Plan mechanism. Rule R1-17A(c)(2)(a);
- A detailed description, including the reason for and scope of each proposed capital investment project. Rule R1-17A(c)(2)(b);
- The estimated in-service date of each proposed capital investment project. Rule R1-17A(c)(2)(c); and
- The asset account per the National Association of Regulatory Utility Commissioners (“NARUC”) Uniform System of Accounts and the annual depreciation rate for each proposed capital investment project. Rule R1-17A(c)(2)(d).

Q. PLEASE IDENTIFY THE CAPITAL INVESTMENT PLAN THAT THE COMPANY IS SUBMITTING IN THIS PROCEEDING.

1 A. I am sponsoring Appendix 11 – Schedule J, which is the Company’s three-
2 year capital investment plan as required in Rule R1-17A(c)(2).

3 **Q. BEFORE REVIEWING ITS CONTENTS, PLEASE DESCRIBE HOW THE**
4 **CAPITAL INVESTMENT PLAN WAS DEVELOPED?**

5 A. CWSNC performed a rigorous review of known capital needs and prioritized
6 those investments based on a range of factors, including environmental
7 regulatory compliance, conditions negatively affecting quality of service,
8 current facility conditions to identify efficiencies in terms of replacement
9 versus rehabilitation, safety concerns, and rate impact to customers. The
10 final capital improvement plan was created and approved by CWSNC staff
11 representing disciplines including engineering, project management,
12 financial planning & analysis, operations, and senior management.

13 **Q. HOW DID THE PLANNING PROCESS IDENTIFY REASONABLY**
14 **KNOWN AND MEASURABLE CAPITAL INVESTMENTS?**

15 A. The Company maintains a replacement and rehabilitation schedule for
16 critical, higher cost facilities as well as initiatives to reduce non-revenue
17 water, inflow and infiltration, and technology implementation. These
18 investments are regularly prioritized based on severity, end of life
19 estimations, and the ability to reduce operation and maintenance expenses.
20 The success of the investments is measured by improved regulatory
21 compliance and the resulting reduction in operational costs.

1 **Q. EXPLAIN IN DETAIL THE ROLE THAT BLACK AND VEATCH PLAYED**
2 **WITH RESPECT TO THE DEVELOPMENT OF THE CAPITAL**
3 **INVESTMENT PLAN.**

4 A. The Company engaged Black and Veatch to evaluate its previously
5 identified schedule for capital investment to verify and authenticate scope
6 of work, schedules, and cost forecasting. CWSNC engineering, project
7 management, and operations staff worked closely with Black and Veatch to
8 produce a formal Capital Improvement Plan to reflect improvements during
9 the forecasted period.

10 **Q. DID BLACK AND VEATCH CHOOSE WHICH PROJECTS WOULD**
11 **COMPRISE THE CAPITAL INVESTMENT PLAN?**

12 A. No. While Black and Veatch participated in the process as I just described,
13 ultimately the Company selected the specific projects which are included in
14 the capital investment plan.

15 **Q. DOES THE CAPITAL INVESTMENT PLAN ALIGN WITH THE**
16 **COMPANY'S BUSINESS GOALS?**

17 A. A Yes. The Company acknowledges that not every forecasted capital
18 project will develop exactly as we currently envision. CWSNC's capital
19 forecast is aligned with its goals, and as a result, the forecast provides a
20 reliable and representative picture of the capital investments that will occur
21 during the WSIP period.

1 **Q. DOES THE CAPITAL INVESTMENT PLAN INCLUDE ALL PROPOSED**
2 **CAPITAL INVESTMENT PROJECTS EXPECTED TO BE PLACED IN**
3 **SERVICE IN THE PERIOD STARTING ON THE DATE IMMEDIATELY**
4 **FOLLOWING THE END DATE SPECIFIED BY THE COMMISSION FOR**
5 **THE UPDATE OF UTILITY PLANT IN SERVICE AND CONTINUING**
6 **THROUGH THE CONCLUSION OF THE PLAN FOR WHICH THE**
7 **UTILITY SEEKS COST RECOVERY THROUGH THE PLAN**
8 **MECHANISM?**

9 A. Yes. All planned capital investment projects are included, though it is not
10 abnormal for critical infrastructure which may not be identified in the Capital
11 Improvement Plan to fail and necessitate an emergency project be
12 undertaken.

13 **Q. DOES THE CAPITAL INVESTMENT PLAN PROVIDE A DETAILED**
14 **DESCRIPTION, INCLUDING THE REASON FOR AND SCOPE OF EACH**
15 **PROPOSED CAPITAL INVESTMENT PROJECT?**

16 A. Yes. Each identified investment is described to include the full scope of work
17 as well as the justified finished product and outcome to align with the
18 priorities listed above.

19 **Q. DOES THE CAPITAL INVESTMENT PLAN STATE THE ESTIMATED IN-**
20 **SERVICE DATE OF EACH PROPOSED CAPITAL INVESTMENT**
21 **PROJECT?**

1 A. Yes. An estimated in-service date is defined for each project based on
2 current market conditions and supply chain restraints.

3 **Q. DOES THE CAPITAL INVESTMENT PLAN SET FORTH THE ASSET**
4 **ACCOUNT PER THE NARUC UNIFORM SYSTEM OF ACCOUNTS?**

5 A. Yes. Each project lists the associated NARUC account coding in
6 compliance with Rule R17-1A(c)(2)(d).

7 **Q. DOES THE CAPITAL INVESTMENT PLAN DESCRIBE THE ANNUAL**
8 **DEPRECIATION RATE FOR EACH PROPOSED CAPITAL INVESTMENT**
9 **PROJECT?**

10 A. Yes. Each project lists the annual depreciation rate as required in Rule R17-
11 1A(c)(2)(d).

12 **Q. PLEASE DESCRIBE THE SOME OF THE TYPES OF CAPITAL**
13 **INVESTMENTS IN THE PLAN.**

14 A. The Capital Improvement Plan identifies a comprehensive list of
15 investments required to maintain continuous, efficient, and safe operations
16 in order to provide quality service to our customers and adequate
17 environmental protection. While not all inclusive, the following projects
18 represent some of the significant investments:

- 19 • Advanced Metering Infrastructure (AMI) - This project will be
20 performed in a phased approach to replace older, inaccurate
21 meters. The technology will improve operational efficiency,

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reduce O&M costs, and improve the accuracy of customer billing.

- Silverton Wellhouse and Interconnection to Bradfield Farms - This project will rehabilitate two existing wells, construct new buildings, and replace internal piping as well as provide a connection to neighboring Bradfield Farms to improve water quality and provide a redundant water source to customers.
- Sugar Mountain WWTP Rehabilitation - These improvements will be implemented in a phased approach to replace the existing chlorination chamber due to end of life condition with an Ultraviolet (UV) system for improved safety. Phase 2 will involve constructing a new influent structure to improve operational efficiency.
- Brandywine Bay WWTP Replacement - The current treated water disposal method has resulted in environmental regulatory non-compliance, and the existing structures are past their useful life. The system will be replaced with Sequencing Batch Reactor (SBR) technology and utilize high-rate infiltration as the disposal method.

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- Danby WWTP Replacement - The existing facility's age and condition has exceeded its useful life and requires improvements to maintain service reliability and environmental compliance.
- Fairfield Harbour WWTP Rehabilitation - This investment will include a complete recoating of the existing steel structures to extend the useful life of the system as well as upgrade blowers and add anoxic zones to achieve environmental compliance related to nutrient removal.

Q. HOW CAN THE COMMISSION BE ASSURED THAT THE COMPANY WILL NOT OVER-COLLECT FOR ITS CAPITAL INVESTMENTS DURING THE WSIP?

A. The safeguards contained in the WSIP Rules – specifically the rate base and earnings reporting, the refunds for “overearnings,” the 5% limit on revenue increases for Plan Years 2 and 3, and the Commission’s ability to modify the WSIP if necessary – will ensure that the Company will not over-collect or over-earn during the WSIP. At the same time, the WSIP will provide the Company with flexibility to manage its business and its capital plans.

Q. CAN YOU ADDRESS HOW THE WSIP ALLOWS FOR FLEXIBILITY WITH REGARD TO ITS CAPITAL PLANS?

1 A. The WSIP will allow the Company to make some changes in the years in
2 which the projects within the Capital Investment Plan are implemented,
3 within certain parameters. The WSIP, by definition, is a forward-looking
4 three-year rate plan that may include future investment in infrastructure
5 projected to be placed in service during the entire WSIP period. The
6 Company will have the flexibility to make reasonable and prudent
7 investment decisions as to which approved projects are implemented in
8 which years. The Public Staff and the Commission will have the opportunity
9 to review the actual infrastructure improvements installed by the Company
10 through the quarterly reporting process discussed below. The regulatory
11 process is improved by having a clearer view of the investment planning
12 and implementation procedures. This is a significant means by which the
13 WSIP benefits customers, regulators, and the Company.

14 **Q. DO THE WSIP STATUTE AND RULES CONTEMPLATE REPORTING**
15 **REQUIREMENTS WITH RESPECT TO THE CAPITAL INVESTMENT**
16 **PLAN?**

17 A. Yes. The WSIP Rules require the utility to file, within 45 days after the end
18 of each Rate Year, an annual report that includes, among other things, a
19 schedule of the estimated capital investment projects to be placed in-
20 service during the remaining Rate Years of the Plan, including total in-
21 service costs; in-service date; applicable rate division; NARUC asset
22 account; and annual depreciation rate. Additionally, the WSIP Rules require

1 the utility to file quarterly reports within the Plan period which include,
2 among other things, a capital investment project status report. Company
3 Witness Drennan's testimony describes these compliance filings in more
4 detail.

5 **Q. DOES THE COMPANY COMMIT TO COMPLY WITH THESE**
6 **REPORTING REQUIREMENTS?**

7 A. Yes.

8 **Q. DOES THE CAPITAL INVESTMENT PLAN INCLUDE ROUTINE**
9 **MAINTENANCE PROJECTS OR EXPENDITURES?**

10 A. No. The Company's WSIP does not consider routine, recurring expenses to
11 qualify as capital investment projects under the Plan. However, while not
12 specifically planned, history and experience have shown that routine
13 maintenance is a necessary and prudent expenditure in running a utility. As
14 such, we are including reasonable estimates for such maintenance in the
15 aggregate. These "high volume, low cost" items represent a significant
16 annual investment of approximately \$7M, often with no clear foresight
17 regarding when the failures will occur or the cost of replacement. Examples
18 of these investments include individual pump and motor replacements
19 (either due to failure or loss of efficiency), main line breaks, electrical
20 component failure, etc. Timely repair or replacement of this ancillary
21 equipment is critical to provide quality service to our customers and
22 adequate environmental protection.

1 **Q. PLEASE EXPLAIN THE COMPANY PROPOSAL WITH RESPECT TO**
2 **THE PRETREATMENT OR “SEWER USE” TARIFF.**

3 A. CWSNC requests Commission approval of both a proposed Sewer Use
4 Rule and related tariff wording applicable to customers who discharge
5 nondomestic or industrial waste into the Company’s wastewater systems.
6 NCUC Rule R10-16 allows disconnection by the utility for “neglect or refusal
7 on the part of a customer to comply with . . . (the Commission’s) . . . rules
8 or the utility’s rules properly filed with the Commission[.]”

9 **Q. WHY DOES CWSNC NEED SUCH A RULE AND THE RELATED**
10 **TARIFF?**

11 A. CWSNC has a demonstrated need for some capability to define discharge
12 limits for sewer customers and to provide a mechanism for requiring pre-
13 treatment, monitoring, and enforcement for the discharge of fats, oils, and
14 grease as well as other contaminants that are harmful to the treatment
15 process, customers, employees, or the environment. These discharges,
16 primarily from commercial users, increase operational expenses and
17 interrupt the biological and mechanical treatment facilities thus posing an
18 environmental risk. As a recent example, a commercial customer disposed
19 of floor stripper through a drain introducing the chemical into the wastewater
20 treatment facility, severely hampering the biological nutrient removal
21 process, and fouling the membrane filtration units. Though CWSNC staff

1 obtained proof of the discharge, the Company has no enforcement authority
2 to hold them responsible for the financial and environmental impact.³

3 **Q. WHAT REGULATORY TOOLS DOES THE COMPANY REQUIRE TO**
4 **ADDRESS THESE ISSUES?**

5 A. CWSNC submits for filing the Sewer Use Rule, appended to my testimony
6 as Schedule F-6 to Appendix 7, and requests the Commission to approve
7 it. Approval of the rule allows the Company to require cooperation and
8 compliance among customers with the potential to cause the kind of
9 damage described, and it gives CWSNC an enforcement mechanism in the
10 form of disconnect. Second, CWSNC files and requests approval of a tariff
11 which addresses the Sewer Use Rule which authorizes disconnection of
12 service for failure to comply with the terms of the rules on disconnection of
13 service pursuant to Rule R10-16.

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

16 A. Yes.

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

³ These requirements are similar to those placed upon certain Publicly Owned Treatment Works by the federal requirements of 40 C.F.R. § 403 and the North Carolina requirements of 15A NCAC 02H.0900. Investor-owned utilities, however, are not subject to these requirements.

1 A. Yes, it does. However, I reserve the right to update or amend this testimony
2 upon receipt of additional relevant data or other information that may
3 become available.