BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-354, SUB 364

In the Matter of Application of Carolina Water Service, Inc., of North Carolina, Post Office Box 240908, Charlotte, North Carolina 28244 for Authority to Adjust and Increase Rates for Water and Sewer Utility Service in All Service Areas in North Carolina	TESTIMONY OF CHARLES JUNIS PUBLIC STAFF – NORTH CAROLINA UTILITIES COMMISSION

CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA
DOCKET NO. W-354, SUB 364

TESTIMONY OF CHARLES JUNIS
ON BEHALF OF THE PUBLIC STAFF –
NORTH CAROLINA UTILITIES COMMISSION

NOVEMBER 4, 2019

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

A. My name is Charles Junis. My business address is 430 North Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am an engineer with the Water, Sewer, and Telephone Division of the Public Staff – North Carolina Utilities Commission (Public Staff).

Q. BRIEFLY STATE YOUR QUALIFICATIONS AND DUTIES.

A. My qualifications and duties are included in Appendix A.

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

A. Carolina Water Service, Inc. of North Carolina (CWSNC or Company) filed an application with the Commission on June 28, 2019, in Docket No. W-354, Sub 364, seeking authority to increase rates for providing water and sewer utility service in all of its service areas in North Carolina.

Q. BRIEFLY EXPLAIN THE SCOPE OF YOUR INVESTIGATION REGARDING THIS RATE INCREASE APPLICATION.

A. My areas of investigation in this proceeding have been the review of the proposed pilot program, consumption adjustment mechanism, and rate design principles.

THE POINT PILOT PROGRAM

Q. HAS THE COMPANY PROPOSED TO IMPLEMENT A PILOT PROGRAM?

A. Yes, in its application and reaffirmed in the supplemental testimony of CWSNC witness Dante DeStefano, the Company has proposed a pilot program to implement tiered inclining block rates to be charged to water customers in The Point Subdivision on Lake Norman in Iredell County.

Q. WHAT IS THE PUBLIC STAFF'S POSITION ON CWSNC'S PROPOSED PILOT PROGRAM?

A. The Public Staff has concerns about the practicability and value of the proposed pilot program. While well-designed inclining block rates can effectively promote conservation, the Public Staff believes the Company's proposed pilot program: 1) is limited and not a representative sample of Uniform Water residential customers, 2) would not "identify a level of conservation by customers or changes

in water use habits"[1] that could be reasonably expected from other Uniform Water residential customers, 3) reverts ratemaking back to system-specific rates as opposed to uniform, 4) ignores the passing of House Bill 529 (Session Law 2019-88) and 5) the potential benefit(s) of the program would be outweighed by the valuable personnel resources of the Company, Public Staff, and Commission required to implement and track the pilot .

Company witness DeStefano states that "the Company concluded that the best path forward in addressing the conservation incentive, in consideration of the Public Staff's comments [in Docket No. W-100, Sub 59], was to implement a trial tariff designed to address and provide analytic data on customer consumption patterns."[2] On pages 12 and 13 of his direct testimony, he provides a list of reasons the Company contends support the selection of The Point subdivision for the pilot program. From this list, it is clear that The Point has significantly higher than average seasonal and non-seasonal usage, makes up "5.75% of the [Company's] pro-forma present rate bills"[3], and has atypical demographics, that are not representative of Uniform Water residential customers. The CWSNC increasing blocks

[1] Direct Testimony of Dante M. DeStefano, filed June 28, 2019, Page 12.

[2] Supplemental Direct Testimony of Dante M. DeStefano, filed August 2, 2019, Pages 7 and 8.

3 Direct Testimony of Dante M. DeStefano, filed June 28, 2019, Page 13.

and rates proposed for The Point are unrealistic for potential future implementation for Uniform Water residential customers.

For the reasons stated above, the Public Staff recommends that the Commission deny the Company's proposal for a pilot program.

Q. IS THE PUBLIC STAFF RECOMMENDING AN ALTERNATIVE TO THE COMPANY'S PILOT PROGRAM?

A. Yes, please see the recommendations in the Rate Design Principles Section presented later in my testimony.

CONSUMPTION ADJUSTMENT MECHANISM

Q. HAS THE COMPANY PROPOSED TO IMPLEMENT A CONSUMPTION ADJUSTMENT MECHANISM?

A. Yes, the Company requested Commission approval to implement a consumption adjustment mechanism (CAM) to be imposed annually and account for variances in average per customer usage from values approved in the Company's most recent general rate case proceeding.

Q. WHAT IS THE PUBLIC STAFF'S POSITION ON CWSNC'S REQUESTED CONSUMPTION ADJUSTMENT MECHANISM?

A. The Public Staff believes the CAM, as proposed by CWSNC, is not in the public interest and recommends that the Commission deny the request to implement the mechanism.

As part of CWSNC's general rate case filed on April 27, 2018, in Docket No. W-354, Sub 360, CWSNC requested Commission approval of a rate adjustment mechanism to account for variability in average monthly consumption per customer. The Commission's Finding of Fact No. 63 stated that "CWSNC failed to demonstrate that its proposed consumption adjustment mechanism is reasonable or justified."

During Aqua North Carolina, Inc.'s (Aqua) general rate case, filed on August 2, 2013, in Docket No. W-218, Sub 363 (Sub 363), the Public Staff and Aqua entered into a stipulation and settlement agreement wherein Aqua agreed to implement a study conducted by the Environmental Finance Center (EFC) at the UNC School of Government in lieu of implementing a CAM. Paragraph No. 13 of the Sub 363 Stipulation provides that:

> Aqua and the Public Staff disagree regarding whether Aqua should be allowed to implement a "consumption adjustment mechanism," as described in the prefiled direct testimony of Aqua witnesses Szczygiel (pp. 10-11) and Roberts (pp. 20-22). Aqua agrees to withdraw this testimony and in lieu of pursuing that mechanism in this case, the Company agrees with the Public Staff that Aqua shall fund a study of mechanisms that address the rate impact to customers and the revenue impact to Aqua from significant changes in customer consumption patterns, such study to be conducted by the EFC at the same time as the volumetric sewer rate study conducted pursuant to Paragraph 12 above. The Stipulating Parties shall work together with the EFC to determine the parameters of the study and shall jointly oversee the performance of the study. Upon completion of the study, a report setting forth the data,

> methodology, assumptions, and findings of the study shall be filed with the Commission by the Stipulating Parties. Aqua may defer the costs of this study on its books and request that such costs be amortized to the cost of providing utility service in the Company's next general rate case; provided, however, that the Public Staff reserves the right during the next rate case to contest the inclusion of such costs in the Company's cost of service.

In the Sub 363 Order, the Commission ordered:

> 15. That the Company shall fund a study of mechanisms that address the rate impact to customers and the revenue impact to Aqua from significant changes in customer consumption patterns, to be conducted by the EFC at the same time as the volumetric sewer rate study. Aqua and the Public Staff shall work together with the EFC to determine the parameters of the study and shall jointly oversee the performance of the study. A report setting forth the data, methodology, assumptions, and findings of the study shall be filed with the Commission within 12 months after the date of this Order.

The EFC met with Aqua personnel and the Public Staff on multiple occasions to discuss the studies and feedback. On March 31, 2016, the final report on "Studies of Volumetric Wastewater Rate Structures and a Consumption Adjustment Mechanism for Water Rates of Aqua North Carolina, Inc." (EFC Report)[4] prepared by the EFC were filed jointly by Aqua and the Public Staff in Docket No. W-218, Sub 363A.

[4] The Report to the Public Staff of the North Carolina Utilities Commission and Aqua North Carolina, Inc. on the Studies of Volumetric Wastewater Rate Structures and a Consumption Adjustment Mechanism for Water Rates of Aqua North Carolina, Inc. prepared by the Environmental Finance Center at the UNC School of Government was filed in Docket No. W-218, Sub 363A on March 31, 2016.

https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=a7fd9d58-46ed-425f-9298-c4419f319a1f

The stated main goals of the studies were to "assess the effect on customer bills and Aqua revenues by implementing a volumetric wastewater rate structure or implementing a consumption adjustment mechanism water rate structures, relative to the status quo."[5]

As part of its next general rate case in Docket No. W-218, Sub 497, Aqua again requested Commission approval of a rate adjustment mechanism to account for variability in average monthly consumption per customer. The Commission's Finding of Fact No. 119 stated that "Aqua NC failed to demonstrate that its proposed consumption adjustment mechanism is reasonable or justified."

In both CWSNC's and Aqua's most recent general rate cases, the Commission found persuasive the evidence presented and gave substantial weight to the arguments made by the Public Staff and Attorney General's Office (AGO). The issues identified by the Public Staff and AGO, including but not limited to, a variance threshold, growth in the number of customers that the Company serves, and discouragement of water conservation measures, from the previous rate cases still exist and CWSNC has made no attempt to address them. The threshold is the allowable variance within a set of parameters and any variance that exceeds that parameter would

[5] *Id.* at p 1.

trigger a response. For example, if average monthly usage per customer is 5,000 gallons and the threshold is set to +/- 1%, then a reduction in usage by 40 gallons would not exceed the threshold of 1% or 50 gallons and no action would be taken. The Company's proposal doesn't include a threshold, which would mean that even the smallest variation in the average monthly usage per customer would trigger a rate adjustment requiring a filing, review, potential approval, and customer notice.

The CAM, requested by CWSNC in this proceeding and previously by Aqua in its last rate case, is proposed to utilize a monthly average usage per customer that overlooks the short-term revenue gains from customer growth. The EFC Report recognized that in the short-term, between rate cases, the revenues exceed the costs of growth.[6] In a year of decreased average usage, customer growth could offset the lower per customer usage and result in the same or greater total usage. In a year of increased usage, growth would contribute to the Company potentially earning above and beyond the Commission's approved rate of return. The CWSNC proposed CAM would allow CWSNC to increase rates with an increment for decreased usage even if customer growth caused the Company to otherwise collect or possibly exceed its revenue requirement. Any mechanism that

[6] *Id.* at pp 10 and 13.

benefits the Company by ensuring it collects its full revenue requirement should also benefit customers by crediting customers with revenue resulting from increased usage and/or customer growth.

A CAM benefits the Company by providing greater certainty in the amount of service revenues collected and as a result materially reduces the Company's risk. The proposed CAM would potentially disincentivize customers from actively conserving water by monitoring their usage, changing their usage habits, and replacing inefficient fixtures and/or appliances. Every dollar saved by reducing usage would be surcharged back onto customers the following year. Digging deeper, that dollar saved by one customer will impact all the other customers in that customer's rate classification. To balance the benefits to the Company, the Company's authorized rate of return should be reduced to account for the transfer of risk from the Company to customers. Rate of return is addressed in detail in the testimony of Public Staff witness Bob Hinton. In addition, rate design should send a more effective pricing signal to customers to promote efficiency and conservation, as further discussed in the Rate Design Principles Section presented later in my testimony.

CWSNC proposes to apply the CAM by rate division. According to the testimony of CWSNC witness DeStefano and his Amended Supplemental Exhibit #1, Page 2 of 2, purchased water/sewer,

residential, commercial, and irrigation customers would be combined to calculate the average monthly usage per customer and the weighted average usage rate by rate division. The Public Staff sent Public Staff Data Request 76 pertaining to the proposed CAM, which is attached as **Junis Exhibit No. 1**, which includes the Company's complete response.

In response to the Public Staff's request[7] for the basis for including purchased water and sewer systems in the proposed CAM, CWSNC stated the following:

> The Company included purchased water and sewer usage so as to include all volumetric activity that can be impacted by conservation efforts and price signaling.

The Company did not provide any additional reasoning or supporting documentation for doing such. Generally, purchased water and sewer systems are charged a pass-through commodity rate that closely matches the commodity expense incurred by the utility from the supplier. The base facility charges and fees from the supplier are included in operating expenses and shared among customers in that rate division. Short-term variability of the purchased water and sewer expenses are almost entirely matched by the variability of the commodity revenues of those systems. The purchased water and

[7] Public Staff Data Request 76 Q1.a.

sewer systems should be excluded from any CAM because of the short-term matching/offsetting of the expenses and revenue.

CWSNC's response to the Public Staff's request[8], for the basis for grouping different volumetric rate customers to calculate the average usage per customer per month, was the following:

> The Company proposes a weighted average of the consumption of the various rate groups in order to produce a consolidated rate adjustment. Using a weighted average for usage per customer stabilizes the potential rate impact by mitigating large swings in a particular rate group's usage activity during the reconciliation period.

The Company did not provide any additional reasoning or supporting documentation for doing such. Moreover, the Company failed to address the request pertaining specifically to the rate groups being combined to calculate the average usage. The Public Staff separately requested the basis for grouping residential and commercial customers[9] and the basis for using the weighted approved volumetric rate for the Rate Division[10]. The Company's responses refer back to the response it provided to Public Staff Data Request 76 Q1.b., discussed above. However, consolidating the rate adjustment disassociates the usage variance from the individual

[8] Public Staff Data Request 76 Q1.b.

[9] Public Staff Data Request 76 Q1.c.

[10] Public Staff Data Request 76 Q1.d.

customer classifications or rate groups. For example, the average usage per customer per month listed in Column B, Line 16, of witness DeStefano's Amended Supplemental Exhibit #1, Page 2 of 2, is the consumption of Volumetric – Uniform Water, Volumetric – Irrigation, and Purchased Water customers totaled and divided by the end of period (EOP) customers times 12 monthly bills. This means if Whispering Pines purchased bulk water customers reduce their consumption but all other customers' usage remains the same, then Whispering Pines, the other Purchased Water, Volumetric – Uniform Water, and Volumetric – Irrigation customers all would receive the same surcharge according to the Company's proposed CAM. Instead, it would be fair and reasonable for customer classifications or rate groups that significantly change their amount of usage to receive the associated surcharge/surcredit instead of mitigating those variances through a weighted average of multiple rate groups.

CWSNC's response to the Public Staff's request[11], for the basis for using a percent-of-bill based charge instead of an increment to the usage rate, was the following:

> The Company proposes a percent-of-bill basis for surcharges in order to send a conservation price signal to high-use (and generally larger metered) customers and mitigate the impact of a surcharge on low-use customers. The percent-of-bill basis is also used for

[11] Public Staff Data Request 76 Q1.f.

> the current CWSNC WSIC/SSIC surcharges and therefore is already familiar to customers.

The Company did not provide any additional reasoning or supporting documentation for doing such. The percent-of-bill surcharge is applied to the base facilities charge and the usage charges. This methodology would be effectively increasing the base facilities charge. The Company proposes that "should actual usage per customer be more than the authorized level, the revenue variance would be credited as a one-time, flat refund per customer."[12] The accuracy of a one-time, flat refund would heavily rely on the customer counts.

To effectively and efficiently implement and track any consumption adjustment mechanism requires accurate, consistent, and practicable billing data. Unfortunately, CWSNC continues to have inconsistent billing data issues that have occurred in multiple rate cases. These issues are discussed in greater detail in the testimony of Public Staff Engineer Gina Casselberry. Customer counts and usage amounts are critical to the calculation of an accurate average monthly usage per customer.

In summary, the Public Staff believes the CAM as proposed by CWSNC is not in the public interest due to the issues presented

[12] Supplemental Direct Testimony of Dante M. DeStefano, filed August 2, 2019, Page 4.

above, including the Company's inconsistent billing data, the surcharge/surcredit methodology, the consolidation of rate groups, the disregard of the short-term benefits of growth, and its failure to address the variance threshold. Therefore, the Public Staff recommends that the Commission deny the Company's request to implement the CAM as part of this proceeding.

ALTERNATIVE RECOMMENDATION

Should the Commission find the concept of a consumption adjustment mechanism to be in the public interest, the Public Staff recommends the Commission approve the implementation of the Public Staff's rate adjustment mechanism to account for usage variations and mitigate the financial risk of a rate design that properly incentivizes water conservation. On October 31, 2019, the Public Staff filed a petition[13] for an order establishing rulemaking proceeding to implement N.C. Gen. Stat. § 62-133.12A, North Carolina Session Law 2019-88[14] (House Bill 529), along with its proposed rules for consumption adjustment mechanisms referred to as the Water Usage Adjustment (WUA) and Sewer Usage Adjustment (SUA). The Public Staff believes it is appropriate and

[13] The Public Staff filed its petition and proposed rules in Docket No. W_100, Sub 61. https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=d2c8cddc-7bec-442c-94cb-2ddef217cc0d

[14] https://www.ncleg.gov/Sessions/2019/Bills/House/PDF/H529v4.pdf

necessary for the Commission to allow input from stakeholders, including CWSNC and other water and sewer utilities such as Aqua North Carolina, Inc. (Aqua)[15], before potentially establishing a rate mechanism with appropriately defined and consistent procedures.

The Public Staff proposed WUA and SUA are further developed consumption adjustment mechanisms that are more practicable, customer protective, and effective at achieving the revenue stability sought by CWSNC. Revenue stability is the consistency and reliability of the total charges collected by the utility from month-to-month and/or year-to-year. The usage adjustment mechanisms detailed in the Public Staff proposed rules account for year-to-year variances in usage revenues from the Commission authorized levels in the most recent general rate case. The revenue variance is then charged/credited through an increment/decrement to the usage rate during the following year. This is consistent with the customer usage tracker or customer utilization adjustment (CUT), which are semi-annual adjustments approved by the Commission for natural gas utilities and more closely correlates usage variances with usage rates. The increment/decrement would be trued-up with an experience modification factor (EMF) as part of the annual WUA

[15] Similar to CWSNC, Aqua requested Commission approval to implement a consumption adjustment mechanism in its past two rate cases in Docket Nos. W-218, Subs 363 and 497.

implementation. The WUA would not zero out during future rate cases like the water and sewer system improvement charges (WSIC and SSIC), because like the CUT, there would be a continuous tracking and accounting for usage and revenue variances.

Growth has been accounted for by focusing on the total usage of each rate classification. The present, Company proposed, Public Staff recommended, and Commission approved service commodity revenues and the newly authorized rates resulting from a general rate case are determined based on the pro forma test year usage. The Company's reliance on an average monthly usage per customer adds the additional and complicating variable of the number of customers in the denominator. The average mitigates the short-term revenue gains from customer growth that are known to exceed the associated expenses and inflates the calculated usage and revenue variance. For example, if average usage decreases but there is enough customer growth to offset the expected shortfall in total usage, then the Company would meet the authorized usage revenue level. Under this scenario, the WUA revenue variance would be zero and the Company's CAM revenue variance would be equal to the average usage decrease multiplied by the usage rate and the number of customers.

The Public Staff's proposed mechanism intentionally has no threshold to protect customers from the Company potentially over

earning. Any potential threshold or allowable percentage of variance that wasn't plus/minus would likely be opposed by the Company if it wasn't financially protective for both the Company and customers. The Public Staff's recommended WUA and SUA are less complicated than the Company proposal, and the monthly reporting requirements will allow for timely review and implementation, thus reducing the time and effort concerns.

The practicably of implementing a consumption adjustment mechanism in this proceeding is in question with the pending rulemaking, however, it is at least partially comparable to the WSIC/SSIC mechanism approved during the Company's general rate case in Docket No. W-354, Sub 336. As part of the stipulation[16] filed on January 10, 2014, in that case, the Company and Public Staff agreed as follows:

> 17. The Parties acknowledge that the rulemaking establishing the procedures for implementing the Water System Improvement Charge ("WSIC") and Sewer System Improvement Charge ("SSIC") mechanism is pending before the Commission, and the final rules on the WSIC / SSIC mechanism have not yet been approved. The Parties agree that approval of the WSIC / SSIC mechanism in this proceeding and the WSIC / SSIC Rulemaking should be coordinated, and, therefore, recommend that this docket be held open, or that the Commission adopt an alternative procedure in this docket, so that the Company can make the requisite filings and qualify for implementation of the

[16] https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=6441d7a6-c16b-46db-aa72-5d26ae3a3389

> system improvement charges under the rules adopted by the Commission without having to make an additional rate filing. The Parties' agreement to support holding the record open for the purpose of implementing the WSIC / SSIC mechanism after final rules have been approved is not intended to delay in any way a decision by the Commission on the ratemaking part of this case. Further, the Parties agree that this docket is the appropriate forum for a decision by the Commission on the Company's request to implement a WSIC / SSIC mechanism.

The Public Staff strongly believes the approval of a consumption adjustment mechanism should be combined with a reduction in the rate of return on equity and rate design that more effectively promotes conservation.

RATE DESIGN PRINCIPLES

Q. WHAT IS THE PUBLIC STAFF'S POSITION ON RATE DESIGN?

A. The Public Staff agrees with the Commission that there is a balance to strike between achieving revenue sufficiency and stability to ensure quality, reliability, and long-term viably for properly operated and well-managed utilities while setting fair and reasonable rates that effectively promote efficiency and conservation. Should the Commission deny the Company's request to implement a consumption adjustment mechanism, the Public Staff recommends a service revenue ratio of 45:55 (base facilities charge:usage charges) for Uniform Water and Treasure Cove/Bradfield Farms/Fairfield Harbour residential customers, which is consistent with the Public Staff's previous recommendations in CWSNC rate

cases and is similar to the stated target of 40:60 in the most recent Aqua rate case.

On March 20, 2019, the Commission issued an *Order Establishing Generic Proceeding and Requiring Comments* (Order) in Docket No. W-100, Sub 59. The Order made the Public Staff, CWSNC, and Aqua parties to the proceeding and required the parties to file initial comments to include "a discussion of rate design proposals that may better achieve revenue sufficiency and stability while also sending appropriate efficiency and conservation signals to consumers." The Order specifically instructed the parties to address in their initial comments (1) "specific objectives that could be achieved from various types of rate structures (for example, but without limitation, irrigation rates, seasonal rates, surcharges when supply is low or in a drought situation, increasing block rates, multiple rate schedules, etc.)"; (2) "the impact on customers' monthly charges"; and (3) "the anticipated impact on efficiency and conservation." On May 22, 2019, the parties filed their initial comments and on June 19, 2019, the parties filed their reply comments. The Public Staff incorporates by reference into this testimony and requests the Commission take judicial notice of these filings, specifically the Comments of the Public

Staff[17] filed on May 22, 2019, and the Reply Comments of the Pubic Staff[18] filed on June 19, 2019. It is not my intent to be repetitive of those comments, however, the content of those filings are applicable to the subject matter at hand in this proceeding.

As described in its 2018 North Carolina Water & Wastewater Rates Report[19] (2018 Report), the EFC states "[a]nother way to measure the strength of the conservation pricing signal of water rates is to determine how much of a financial reward (decrease in water bill) a customer will receive by lowering their water consumption from a high volume (10,000 gallons) to an average level (5,000 gallons)."[20] The EFC states that some utilities "reward customers substantially in terms of bill reduction percentage for cutting back (e.g., nearly halving the bill when customers halve their consumption) whereas other utilities provide relatively little incentive (e.g., only a 30 percent

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[17] https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=39673075-28db-4564-a916-322180eee462

[18] https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=b5079c74-66a2-4ecb-b5d5-51ad570eb051

[19] UNC School of Government Environmental Finance Center and North Carolina League of Municipalities. (2018). *2018 North Carolina Water & Wastewater Rates Report*, page 17.

https://efc.sog.unc.edu/sites/default/files/2018/NCLM_EFC_Annual_Rates_Report_2018.pdf

The document is an appendix to the Comments of the Public Staff filed on May 22, 2019, in Docket No. W-100, Sub 59.

[20] *Id.* at p 20.

reduction in bill)."[21] For CWSNC, the present Uniform Water rate structure provides relatively little incentive, a bill reduction of 36.0%, for customers to significantly reduce their usage by 50%. The middle 80% of EFC surveyed North Carolina water utilities utilizing a uniform rate provide a bill reduction ranging between approximately 32% and 48% and the median bill reduction is 40%.[22]

If Uniform Water residential rates had been implemented at the 45:55 ratio in the Sub 360 rate case utilizing the billing data and average monthly usage per customer from that proceeding, then the bill reduction percentage would have increased from 36.0% to 38.8% as illustrated in the table below.

Junis Table No. 1

CWSNC W-354, Sub 360	52:48	45:55
Water Base facility charge	$27.53	$23.98
Uniform usage charge, per 1,000 gallons	$7.08	$8.31
Bill amount, 10,000 gallons	$98.33	$107.08
Bill amount, 5,000 gallons	$62.93	$65.53
Bill reduction percentage	36.0%	38.8%

[21] *Id.* at pp 20-21.

[22] *Id.* at p 21.

A lower base facility charge reduces the cost burden on customers for access to utility service before the use of any service. It allows customers to have greater control over their total bill by changing their usage through conservation and improved efficiency.

The rate design ratio of 45:55, as discussed above, has been implemented by Public Staff Engineer Gina Casselberry in her testimony and exhibits detailing the Public Staff's billing analysis and proposed rates.

In comparing the Company's proposed rates and the Public Staff's recommended rates, the bill reduction percentages are 37.4% and 38.9%, respectively, as illustrated in the table below.

Junis Table No. 2

CWSNC W-354, Sub 364	Company Proposed	PS Recommended
Water Base facility charge	$29.81	$24.52
Uniform usage charge, per 1,000 gallons	$8.82	$8.56
Bill amount, 10,000 gallons	$118.01	$110.12
Bill amount, 5,000 gallons	$73.91	$67.32
Bill reduction percentage	37.4%	38.9%

Base facilities charges are a frequently discussed and highly controversial issue in electric, natural gas, water, and wastewater

rate cases. There are advantages and disadvantages to the different base to usage ratios for the Company, rate groups, and individual customers. During my career, electric and natural gas residential base facilities charges have remained fairly low in the $10 to $15 range while water base charges have continued to increase and wastewater rates have historically been a flat rate or been a very high percentage of the average residential bill.

If water and wastewater rates were set as the Companies would like, the rates would be almost flat to guarantee revenues. On pages 10 and 11 of the Joint Comments by Aqua and CWSNC[23], the Companies stated the following:

> From a purely financial perspective, a water utility may be best served by a flat-rate water charge, but the Companies acknowledge the danger such a message would send from a conservation perspective and emphatically do not endorse such a structure. Any shift to more fixed fees will lessen the revenue gap caused by further conservation efforts, but as long as there is any commodity charge, utilities incur some risk of under-recovery attributable to declining consumption and seasonal usage fluctuations. As such, the Companies recommended that any future rate design utilize a representative ratio of fixed (and semi-fixed) costs versus variable costs to determine the base facility charge and volumetric components.

Both flat rates and metered rates with moderate to high base facilities charges do not properly balance revenue sufficiency and stability

[23] https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=f0ef1134-a320-4a8a-a02f-5cfc523797a1

with the promotion of efficiency and conservation. A strict straight fixed/variable rate design matching fixed costs to the base facilities charge disassociates the customer level cost of service burden generated by high users. **Flat rates or low volumetric rates promote discretionary usage and wasteful practices.** Under the current regulatory construct, the Companies profit on increasing usage between rate cases and earn an authorized return on capital investment. Increased usage is also an increase in demand that may accelerate and/or necessitate the costly expansion of existing plant capacity or filtration on formerly offline wells. Discretionary usage and wasteful usage can also cause service issues like air in the water, poor water quality, low pressure, and outages.

With metered rates, the price signals can be accentuated when ratepayers are both water and wastewater customers. Presently, the Uniform Water and Treasure Cove/Bradfield Farms/Fairfield Harbour rates are a 52:48 ratio and the Uniform Sewer rate is an 80:20. Bradfield Farms/Fairfield Harbour sewer rate is flat rate. If Uniform Sewer residential rates had been implemented at the 45:55 ratio in the Sub 360 rate case utilizing the billing data and average monthly usage per customer from that proceeding, the bill reduction percentage would have increased from 21.9% to 39.9% as illustrated in the table below.

Junis Table No. 4

CWSNC W-354, Sub 360	80:20	45:55
Sewer Base facility charge	$46.31	$25.99
Uniform usage charge, per 1,000 gallons	$3.62	$10.29
Bill amount, 10,000 gallons	$82.51	$128.89
Bill amount, 5,000 gallons	$64.41	$77.44
Bill reduction percentage	21.9%	39.9%

A price signal measure can simply be the cost of the next 1,000 gallons. In Junis Table No. 4 above, the next 1,000 gallons at a rate of $10.29 (hypothetical 45:55 ratio) is 284% more costly than the present sewer usage rate while the base facilities charge is 44% less costly. It is noteworthy that in the Sub 336 rate case, the Public Staff recommended and the Company stipulated to wastewater rates designed with a 33:67 ratio.[24] The rate structure shift from 80:20 to 45:55 would be anticipated to result in significant rate shock for customers. While the average bill remains nearly the same, low users' bills would decrease and high users' bills would increase. As a means of mitigating rate shock while still progressing toward an

[24] The rate structure was reconsidered and changed to a 74:26 ratio as part of the correction to the Uniform Sewer rate design error.

effective price signal, the Public Staff recommends an incremental approach to a 65:35 ratio for Uniform Sewer residential customers. In comparing the Company's proposed rates and the Public Staff's recommended rates, the bill reduction percentages are 24.6% and 31.2%, respectively, as illustrated in the table below.

Junis Table No. 5

CWSNC W-354, Sub 364	Company Proposed	PS Recommended
Sewer Base facility charge	$59.67	$47.84
Uniform usage charge, per 1,000 gallons	$5.80	$7.95
Bill amount, 10,000 gallons	$117.67	$127.34
Bill amount, 5,000 gallons	$88.67	$87.59
Bill reduction percentage	24.6%	31.2%

ALTERNATIVE RECOMMENDATION

Should the Commission find the concept of a consumption adjustment mechanism to be in the public interest, the Public Staff recommends the Commission approve the implementation of a 30:70 ratio target for Uniform Water and Treasure Cove/Bradfield Farms/Fairfield Harbour residential customers as part of rate design contemporaneously with the proposed WUA and SUA.

If Uniform Water residential rates had been implemented at the 30:70 ratio in CWSNC's Sub 360 rate case utilizing the billing data and average monthly usage per customer from that proceeding, the bill reduction percentage would have increased from 36.0% to 43.4% as illustrated in the table below.

Junis Table No. 6

CWSNC W-354, Sub 360	52:48	30:70
Water Base facility charge	$27.53	$16.52
Uniform usage charge, per 1,000 gallons	$7.08	$10.90
Bill amount, 10,000 gallons	$98.33	$125.52
Bill amount, 5,000 gallons	$62.93	$71.02
Bill reduction percentage	36.0%	43.4%

In Junis Table No. 6 above, the next 1,000 gallons at a rate of $10.90 (hypothetical 30:70 ratio) is 154% more costly than the present water usage rate while the base facilities charge is 40% less costly.

The same facts support the 30:70 ratio as they did the 45:55 ratio, and the further reduction of the base facilities charge to 30% is justified by the revenue stability that can be provided by the Public Staff's consumption adjustment mechanisms. The 30:70 ratio paired with the WUA better achieves revenue stability while also sending

appropriate efficiency and conservation signals to consumers. The former risk posed by a decrease in usage to revenue stability is mitigated by the annual comparison to the authorized usage revenue level and, if necessary, the implementation of an increment. The reverse is also true, protecting ratepayers from being overcharged and the Company overearning.

The rate design ratio of 30:70, as discussed above, has been implemented by Public Staff Engineer Gina Casselberry in her testimony and exhibits detailing the Public Staff's billing analysis and proposed rates.

In comparing the Company's proposed rates and the Public Staff's recommended rates, the bill reduction percentages are 37.4% and 43.5%, respectively, as illustrated in the table below.

Junis Table No. 7

CWSNC W-354, Sub 364	Company Proposed	PS Recommended
Water Base facility charge	$29.81	$16.92
Uniform usage charge, per 1,000 gallons	$8.82	$11.26
Bill amount, 10,000 gallons	$118.01	$129.52
Bill amount, 5,000 gallons	$73.91	$73.22
Bill reduction percentage	37.4%	43.5%

The sewer base facilities charge should also be reduced to send a better price signal to promote efficiency and conservation. If Uniform Sewer residential rates had been implemented at the 30:70 ratio in the Sub 360 rate case utilizing the billing data and average monthly usage per customer from that proceeding, then the bill reduction percentage would have increased from 21.9% to 44.2% as illustrated in the table below.

Junis Table No. 8

CWSNC W-354, Sub 360	80:20	30:70
Sewer Base facility charge	$46.31	$17.38
Uniform usage charge, per 1,000 gallons	$3.62	$13.12
Bill amount, 10,000 gallons	$82.51	$148.58
Bill amount, 5,000 gallons	$64.41	$82.98
Bill reduction percentage	21.9%	44.2%

In Junis Table No. 8 above, the next 1,000 gallons at a rate of $13.12 (hypothetical 30:70 ratio) is 362% more costly than the present sewer usage rate while the base facilities charge is 62% less costly. The rate structure shift from 80:20 to 30:70 would be anticipated to result in significant rate shock for customers. As a means of mitigating rate shock while still progressing toward an effective price signal, the

Public Staff recommends an incremental approach to 55:45 for Uniform Sewer residential customers.

In comparing the Company's proposed rates and the Public Staff's recommended rates, the bill reduction percentages are 24.6% and 35.8%, respectively, as illustrated in the table below.

Junis Table No. 9

CWSNC W-354, Sub 364	Company Proposed	PS Recommended
Sewer Base facility charge	$59.67	$40.62
Uniform usage charge, per 1,000 gallons	$5.80	$10.27
Bill amount, 10,000 gallons	$117.67	$143.32
Bill amount, 5,000 gallons	$88.67	$91.97
Bill reduction percentage	24.6%	35.8%

The Public Staff will consider and recommend other rate designs, including the ones discussed in Docket No. W-100, Sub 59, in future rate cases. The Public Staff's rate design recommendations in this proceeding are a step toward better achieving a balance between revenue sufficiency and stability with price signals to promote efficiency and conservation. The guiding principle of "just and reasonable rates and service" remains at the forefront of the Public Staff's investigation.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Appendix A

Charles M. Junis

I graduated from North Carolina State University in 2011, earning a Bachelor of Science Degree in Civil Engineering. I have 8 years of engineering experience, and since joining the Public Staff in April 2013, have worked on utility rate case proceedings, new franchise and transfer applications, emergency operations, customer complaints, and other aspects of utility regulation. Prior to joining the Public Staff, I worked for Farnsworth Group, an engineering and architectural consulting firm. I am a licensed Professional Engineer in North Carolina.

Carolina Water Service, Inc. of NC
Docket No. W-354, Sub 364
Public Staff Data Request # 76
Date Requested: October 3, 2019
Date Due: October 11, 2019

Public Staff Technical Contact: **Charles Junis**
Phone #: (919) 733-0891
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Public Staff Legal Contact: **John Little**
Phone #: (919) 733-0976
Email: john.little@psncuc.nc.gov

Subject of Data Request: <u>Consumption Adjustment Mechanism</u>

Please provide any available responses electronically in a searchable format. If in Excel format, be sure to include all working formulas. In addition, please include (1) the name and title of the individual who has the responsibility for the subject matter addressed therein, and (2) the identity of the person making the response by name, occupation, and job title.

1. Pertaining to the requested water and wastewater customer usage tracking rate adjustment mechanism described in the Supplemental Direct Testimony and Amended Exhibit of Dante M. DeStefano, please provide the following:
    a. Please provide the basis for including purchased water and sewer systems in the proposed CAM.
    b. Please provide the basis for the different volumetric rate customers, such as Volumetric – Uniform Water and Volumetric – Irrigation, being grouped together to calculate the average usage per customer per month.
    c. Please provide the basis for grouping residential and commercial customers within each Rate Group.
    d. On page 4, line 12, please provide the basis for using the weighted approved volumetric rate for the Rate Division.
    e. On page 4, line 13, please explain whether EOP customers is the number of EOP customers as approved in the most recent general rate case or the 12-month period subsequent to the Commission's Order.
    f. On page 4, lines 15-17, please provide the basis for using a percent-of-bill based charge instead of an increment to the usage or commodity rate.
    g. Is it the Company's intent to apply interest equal to the Company's authorized overall rate of return to the deferred balance?

When preparing your responses, please produce all documents which you relied upon, including, but not limited to, all workpapers and/or analysis prepared by Mr. DeStefano or the Company that relate to this Request.

RESPONSE:

a.) The Company included purchased water and sewer usage so as to include all volumetric activity that can be impacted by conservation efforts and price signaling.

b.) The Company proposes a weighted average of the consumption of the various rate groups in order to produce a consolidated rate adjustment. Using a weighted average for usage per customer stabilizes the potential rate impact by mitigating large swings in a particular rate group's usage activity during the reconciliation period.

c.) See response to B above.

d.) This method is consistent with the weighted usage method described in B above.

e.) EOP customers authorized in the rate case for comparison of actual and authorized consumption per customer.

f.) The Company proposes a percent-of-bill basis for surcharges in order to send a conservation price signal to high-use (and generally larger metered) customers and mitigate the impact of a surcharge on low-use customers. The percent-of-bill basis is also used for the current CWSNC WSIC/SSIC surcharges and therefore is already familiar to customers.

g.) The Company has not proposed an interest rate on any deferred debit or credit balance generated by the CAM. However, should an interest rate be authorized for the CAM deferral, the Company would propose the LIBOR 12-month rate, currently at 1.896% as of 10/10/19 (to be adjusted annually) be applied to any net debit/credit deferral balance. This rate is proposed as the deferral will be refunded/surcharged within approximately one year of accrual.