

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:

### 13 WATER OPERATIONS

14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
		<u>Service Area</u>	<u>Average Usage</u>	<u>Existing</u>	<u>Proposed</u>	<u>Percentage</u>											
		Carolina Forest	4,200	\$41.10	\$35.87	(12.7%)											
		High Vista Estates	4,200	\$41.10	\$35.70	(13.1%)											
		Riverpointe	4,200	\$41.10	\$48.93	19.1%											
		Whispering Pines	4,200	\$41.10	\$31.84	(22.5%)											
		White Oak/Lee Forest	4,200	\$41.10	\$36.12	(12.1%)											
		Winston Plantation	4,200	\$41.10	\$36.12	(12.1%)											
		Winston Pointe	4,200	\$41.10	\$36.12	(12.1%)											
		Woodrun	4,200	\$41.10	\$35.87	(12.7%)											
		Yorktown	4,200	\$41.10	\$43.51	5.9%											
		Zemosa Acres	4,200	\$41.10	\$44.60	8.5%											
		Linville Ridge (flat rate)	n/a	\$31.68	\$42.51	34.2%											
		All other water systems	4,200	\$41.10	\$50.61	23.1%											

### 32 SEWER OPERATIONS

34			Average		
35	<u>Service Area</u>	<u>Usage</u>	<u>Existing</u>	<u>Proposed</u>	<u>Percentage</u>
36					
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

8 One witness testified at the hearing in Jacksonville, Larry Campbell,  
9 who lives in White Oak Estates and is a sewer only customer.  
10 Witness Campbell opposed the magnitude of the increase and had  
11 several questions concerning charges that appeared on his water  
12 and sewer bill.

13

14 Onslow Water and Sewer Authority (OWASA) provides water utility  
15 service in White Oak Estates and bills for sewer utility service on  
16 behalf of CWSNC. After the hearing, CWSNC and the Public Staff  
17 met with Mr. Campbell and answered his questions. In addition,  
18 CWSNC reviewed Mr. Campbell's bill and sent a copy of its review  
19 to Mr. Campbell and the Public Staff. The Public Staff is satisfied  
20 that the customer was billed correctly.

21

22 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 Galganski, 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

1           respectively. Based on the flow data, the WWTP at Nags Head is  
2           within its permitted capacity.

3

4

Raleigh Hearing

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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

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.

6  
7           There were no service related issues.

8  
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 I removed \$8,217 for maintenance and repair expenses for College  
7 Park. Since College Park purchases 100 percent of its sewer  
8 treatment from the Town of Dallas, the WWTP is no longer in service.

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

present and proposed service revenues for the twelve month ended  
June 30, 2015, are shown below:

### SERVICE REVENUES

#### Water Utility Service:

	<u>Present</u>	<u>Proposed</u>
CWSNC	\$9,369,220	\$10,951,484

#### Sewer Utility Service:

	<u>Present</u>	<u>Proposed</u>
CWSNC	\$5,711,794	\$6,830,366
CLMS	\$1,117,239	\$1,426,387
NH	\$ 693,575	\$ 859,815

For the calculations, see Casselberry Exhibit Nos.12, 13, 14, 15, 16  
17, 18 and 19.

**Q. PLEASE EXPLAIN WHY YOUR REVENUES AT EXISTING AND  
PROPOSED RATES ARE DIFFERENT FROM THE COMPANY'S.**

**A.** CWSNC made multiple errors in calculating its present and proposed  
revenues for water and sewer service.

1) CWSNC did not include Linville Ridge Subdivision in  
either its existing or proposed revenue calculations for water service.

2) CWSNC did not take into account that the mountain  
systems would be metered by the hearing date and that the revenues  
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 Service Revenues

21 Water Utility Service

22 CWSNC \$10,729,188

23

24 Sewer Utility Service



1 Combined \$ 8,908,680

2

3

4

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.

6

7

8 **Q. WHAT IS YOUR RECOMMENDATION CONCERNING OTHER**  
9 **CHARGES?**

10 A. The Public Staff's does not oppose increasing CWSNC's new sewer  
11 customer charge from \$20.70 to \$22.00, increasing the return check  
12 fee from \$14.11 to \$25.00 for Nags Head; nor does it oppose  
13 increasing the meter testing fee from \$19.20 to \$20.00, new water  
14 customer charge from \$25.92 to \$27.00, reconnection charge for  
15 commercial customers from \$25.92 to \$27.00, and return check  
16 charge from \$24.00 to \$25.00 for the Linville Ridge Subdivision.

17

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

19 A. Yes.

Carolina Water Service, Inc. of North Carolina  
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For the 12 Months Ending June 30, 2015

Casselberry  
Exhibit No. 1  
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Service Areas for Water Utility Service

System No.	System Name
2	Abington
9	Bahia Bay
16	Bear Paw
18	Beechbrook
21	Belvedere Plantation
22	Bent Creek
28	Brandywine Bay
37	Buffalo Creek
47	Carolina Forest
57	Chapel Hills
69	College Park
73	Country Club Annex
75	Country Hills
87	Crestview Estates
92	Crystal Mountain
96	Danby/Lamplighter Village South
105	Eagle Crossing
107	Eastwood Forest
123	Forest Brook/Old Lamp Place
140	Grandview at T-square
150	Harbor House Estates
161	Heathfield
163	Hestron Park
171	High Meadow
172	High Vista
185	Holly Acres
187	Hound Ears
189	Huntington Forest
211	Kings Grant - Gaston
234	Larkhaven
238	Lemmond Acres
259	Meadow Glen
267	Misty Mountain
270	Monterray
275	Mt. Mitchell
279	Nero - Amherst
291	Oakdale Terrace
304	Olde Point
322	Pinnacle Shores
332	Powder Horn
339	Quail Ridge
340	Queens Harbor

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Service Areas for Water Utility Service

System No.	System Name
353	Riverpointe
356	Riverwood
362	Saddlewood
381	Sherwood Forest
382	Sherwood Park
387	Ski Mountain
409	Stone Hollow
412	Suburban Heights
413	Sugar Mountain
427	The Harbour/Point
457	Vander-E.Gate/Tanglewood
465	Watauga Vista
469	Waterglen
476	Westwood Forest
478	Whispering Pines
480	White Oak Plantation
484	Wildlife Bay
485	Wildwood Green
487	Willowbrook
498	Wolf Laurel
499	Wood Trace
501	Woodhaven Manor
505	Woodrun
511	Yorktown
512	Zemosa Acres
526	Manson Landing
530	Linville Ridge

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Service Areas for Sewer Utility Service

System No.	System Name
2	Abington/InterLaken
7	Ashley Hills
16	Bear Paw
21	Belvedere Plantation
22	Bent Creek
28	Brandywine Bay
48	Carolina Pines
69	College Park
71	Corolla Light
96	Danby/Lamplighter Village South
163	Hestron Park
187	Hound Ears
197	Hemby Acres/Beacon Hill
211	Kings Grant - Gaston
212	Kings Grant - Raleigh
216	Kynwood
269	Monteray Shores
273	Mt. Carmel/Lee Ridge
278	Nags Head
279	Nero - Amherst
304	Olde Point
340	Queen's Harbor
345	Regalwood
353	Riverpointe
362	Saddlewood
413	Sugar Mountain
479	White Oak Estates
480	White Oak Plantation
487	Willowbrook
498	Wolf Laurel

## CAROLINA WATER'S PRESENT AND PROPOSED RATES

### WATER RATES AND CHARGES

#### MONTHLY METERED SERVICE: (Residential and Commercial)

	<u>Existing</u>	<u>Proposed</u>
Base Facilities Charges (zero usage)		
< 1" meter	\$ 18.25	\$ 22.47
1" meter	\$ 45.63	\$ 56.19
1-1/2" meter	\$ 91.25	\$ 112.37
2" meter	\$146.00	\$ 179.80
3" meter	\$273.75	\$ 337.12
4" meter	\$456.25	\$ 561.87
6" meter	\$912.50	\$1,123.74

	<u>Existing</u>	<u>Proposed</u>
Usage Charge, per 1,000 gallons		
Treated Water/1,000 gallons	\$ 5.44	\$ 6.70
Untreated Water/1,000 gallons (Brandywine Bay Irrigation Water)	\$ 3.60	\$ 3.60

#### Purchased Water for Resale/1,000 gallons

<u>Service Area</u>	<u>Bulk Provider</u>	<u>Proposed</u>
Carolina Forest	Montgomery County	\$ 3.19
High Vista Estates	City of Hendersonville	\$ 3.15
Riverpointe	Charlotte Water	\$ 6.30
Whispering Pines	Town of Southern Pines	\$ 2.23
White Oak Planation		
/Lee Forest	Johnston County	\$ 3.25
Winston Plantation	Johnston County	\$ 3.25
Winston Pointe	Johnston County	\$ 3.25
Woodrun	Montgomery County	\$ 3.19
Yorktown	City of Winston-Salem	\$ 5.01
Zemosa Acres	City of Concord	\$ 5.27

<u>MONTHLY FLAT RATE SERVICE:</u>	\$ 34.52	\$ 42.51
-----------------------------------	----------	----------

#### AVAILABILITY RATES (semi-annual):

Applicable only to property owners in Carolina Forest and Woodrun Subdivision in Montgomery County	\$ 21.60	\$ 26.60
---	----------	----------

#### LINVILLE RIDGE SUBDIVISION:

#### MONTHLY METERED SERVICE:

	<u>Existing</u>	<u>Proposed</u>
Base Facility Charges (zero usage)		
Common Facility only	\$ 72.00	N/A

	<u>Existing</u>	<u>Proposed</u>
Base Facilities Charges (zero usage)		
Residential and Commercial		
< 1" meter	N/A	\$ 22.47
1" meter		\$ 56.19
1-1/2" meter		\$ 112.37
2" meter		\$ 179.80
3" meter		\$ 337.12
4" meter		\$ 561.87
6" meter		\$1,123.74
Usage Charge, per 1,000 gallons (Treated Water)	\$ 3.08	\$ 6.70
Flat Residential Rate (Actual taps)	\$ 31.68	\$ 42.51
Flat Availability Rate (non-user only)	\$ 10.80	\$ 10.80

#### SEWER RATES AND CHARGES

##### MONTHLY METERED SERVICE:

Base Facility Charges (based on meter size with zero usage)		
Residential	<u>Existing</u> \$ 33.02	<u>Proposed</u> \$ 39.57
Commercial		
< 1" meter	\$ 33.02	\$ 39.57
1" meter	\$ 82.55	\$ 98.92
1-1/2" meter	\$ 165.10	\$ 197.84
2" meter	\$ 264.16	\$ 316.55
3" meter	\$ 495.30	\$ 593.53
4" meter	\$ 825.50	\$ 989.21
6" meter	\$1,651.00	\$1,978.42
Usage Charge per 1,000 gallons (based on metered water usage)	\$ 2.46	\$ 2.95

##### MONTHLY METERED PURCHASED SEWER SERVICESERVICE:

Collection Charge (Residential and Commercial/SFE)	<u>Existing</u> N/A	<u>Proposed</u> \$ 30.86
Usage Charge, per 1,000 gallons based on purchased water		

<u>Service Area</u>	<u>Bulk Provider</u>	
White Oak Planation		
Lee Forest/Winston		
Planation	Johnston County	\$ 4.55
Kings Grant	Two Rivers Utility	\$ 3.80
College Park	Town of Dallas	\$ 5.70

<u>MONTHLY FLAT RATE SERVICE:</u>	\$ 44.70	\$ 53.56
-----------------------------------	----------	----------

MONTHLY COLLECTION SERVICE ONLY:

(When sewage is collected by utility and transferred to another entity for treatment)

	<u>Existing</u>	<u>Proposed</u>
Single Family Residence	\$ 16.09	N/A
Commercial/SFE	\$ 16.09	N/A

MT. CARMEL SUBDIVISION SERVICE AREA:

Monthly Base Facility Charge	\$ 6.00	\$ 6.44
Usage Charge/1,000 gallons (based on metered water usage)	\$ 5.45	\$ 5.60
Monthly Collection Charge (Residential and Commercial/SFE)	\$ 16.09	\$ 24.42

REGALWOOD AND WHITE OAK ESTATES SUBDIVISION SERVICE AREAS:

MONTHLY FLAT RATE SEWER SERVICE:

	<u>Existing</u>	<u>Propose</u>
Residential Service	\$ 44.70	\$ 53.56
White Oak High School	\$1,386.90	\$1,661.95
Child Castle Daycare	\$ 172.40	\$ 206.59
Pantry	\$ 91.85	\$ 110.07

COROLLA LIGHT AND MONTERAY SHORES

**SEWER RATES AND CHARGES**

MONTHLY METERED SERVICE: (Residential and Commercial)

	<u>Existing</u>	<u>Proposed</u>
Base Facilities Charges (zero usage)		
< 1" meter	\$ 52.26	\$ 66.72
1" meter	\$ 130.65	\$ 166.81
1-1/2" meter	\$ 261.30	\$ 333.62
2" meter	\$ 418.08	\$ 533.80
3" meter	\$ 783.90	\$1,000.87
4" meter	\$1,306.50	\$1,668.11
6" meter	\$2,613.00	\$3,336.23
Usage Charge per 1,000 gallons (based on metered water usage)	\$ 6.65	\$ 8.49

**NAGS HEAD SERVICE AREA**

**SEWER RATES AND CHARGES**

**MONTHLY METERED SERVICE:** (Residential and Commercial)

	<u>Existing</u>	<u>Proposed</u>
Base Facilities Charges (zero usage)		
< 1" meter	\$ 18.48	\$ 22.39
1" meter	\$ 46.22	\$ 56.01
1-1/2" meter	\$ 92.42	\$ 111.99
2" meter	\$ 147.88	\$ 179.20
3" meter	\$ 277.27	\$ 335.99
4" meter	\$ 462.12	\$ 560.00
6" meter	\$ 924.24	\$1,924.24
Usage Charge per 1,000 gallons (based on metered water usage)	\$ 9.33	\$ 11.31
Minimum Monthly Charge	\$ 62.81	\$ 76.11
<b><u>MONTHLY FLAT RATE:</u></b>	\$ 62.81	\$ 76.11



Carolina Water Service Inc. of North Carolina  
Docket No. W-354, Sub 344  
For the 12 Months Ending June 30, 2015

Casselberry  
Exhibit No. 4

CWSNC Water Testing

Test	Number of Samples	Frequency	Test Per year	Cost Per test	Annual Cost
Bacteriology	4	Monthly	48.00	\$ 20.00	\$ 960
Bacteriology	23	Monthly	276.00	\$ 21.00	\$ 5,796
Bacteriology	22	Monthly	264.00	\$ 22.00	\$ 5,808
Bacteriology	15	Monthly	180.00	\$ 25.00	\$ 4,500
Bacteriology	15	Monthly	180.00	\$ 26.25	\$ 4,725
Bacteriology	7	Monthly	84.00	\$ 30.00	\$ 2,520
Bacteriology	2	Monthly	24.00	\$ 45.00	\$ 1,080
Bacteriology	1	Monthly	12.00	\$ 50.00	\$ 600
Bacteriology	1	Quarterly	4.00	\$ 25.00	\$ 100
HPC	4	Monthly	48.00	\$ 50.00	\$ 2,400
DBP stage 2	40	Every 3 yrs.	13.33	\$ 153.61	\$ 2,048
DBP stage 2	37	Annual	37.00	\$ 153.61	\$ 5,684
DBP stage 2	18	Quarterly	72.00	\$ 153.61	\$ 11,060
Lead/Copper	465	Every 3 yrs.	155.00	\$ 24.25	\$ 3,759
Lead/Copper	30	Annual	30.00	\$ 24.25	\$ 728
Lead/Copper	5	6 Months	10.00	\$ 24.25	\$ 243
Asbestos	42	Every 9 yrs.	4.67	\$ 123.00	\$ 574
Inorganics	148	Every 3 yrs.	49.33	\$ 214.62	\$ 10,588
Chloride	2	Annual	2.00	\$ 13.00	\$ 26
Nitrate	158	Annual	158.00	\$ 13.00	\$ 2,054
VOC	158	Every 3 yrs.	43.67	\$ 105.10	\$ 4,590
VOC	131	Annual	32.00	\$ 105.10	\$ 3,363
SOC - Complete	157	Every 3 yrs.	52.33	\$ 613.72	\$ 32,116
SOC - Complete	4	Annual	4.00	\$ 613.72	\$ 2,455
SOC (505 & 506)	3	Annual	3.00	\$ 86.73	\$ 260
Rads - Gross Alpha	123	Every 9 yrs.	13.67	\$ 55.00	\$ 752
Rads - Gross Alpha	20	Every 6 yrs.	3.33	\$ 55.00	\$ 183
Rads - Gross Alpha	3	Every 3 yrs.	1.00	\$ 55.00	\$ 55
Rads - Gross Alpha	5	Annual	5.00	\$ 55.00	\$ 275
Rads - Uranium	111	Every 9 yrs.	12.33	\$ 50.00	\$ 617
Rads - Uranium	33	Every 6 yrs.	5.50	\$ 50.00	\$ 275
Rads - Uranium	2	Every 3 yrs.	0.67	\$ 50.00	\$ 34
Rads - Uranium	5	Annual	5.00	\$ 50.00	\$ 250
Combines Rad (228 & 226)	109	Every 9 yrs.	12.11	\$ 170.00	\$ 2,059
Combines Rad (228 & 226)	29	Every 6 yrs.	4.83	\$ 170.00	\$ 821
Combines Rad (228 & 226)	7	Every 3 yrs.	2.33	\$ 170.00	\$ 396
Combines Rad (228 & 226)	6	Annual	6.00	\$ 170.00	\$ 1,020
				\$	\$ 114,771

CWSNC Sewer Testing

Service Area	Test	No. of Samples	Frequency	Test Per year	Cost Per test	Annual Cost
Abington	BOD	1	Weekly	52	\$ 25.00	\$ 1,300
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 15.00	\$ 780
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 15.00	\$ 780
	Fecal Coliform	1	Weekly	52	\$ 10.00	\$ 520
	Total Kjeldahi Nitrogen (TKN) (QTRLY)	4	Annually	4	\$ 35.00	\$ 140
	Total Phosphorous (Qtrly)	4	Annually	4	\$ 15.00	\$ 60
Amherst	BOD	1	Weekly	52	\$ 22.31	\$ 1,160
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 12.61	\$ 656
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 17.46	\$ 908
	Fecal Coliform	1	Weekly	52	\$ 18.43	\$ 958
	Total Kjeldahi Nitrogen (TKN)	2	Monthly	24	\$ 33.95	\$ 815
	Total Phosphorous	2	Monthly	24	\$ 17.46	\$ 419
	Sludge testing (for land use)	1	Annually	1	\$ 1,953.34	\$ 1,953
Ashely Hills	BOD (3/wk effluent.; 1/wk at each Plant)	6	Weekly	312	\$ 22.31	\$ 6,961
	BOD (influent)	2	Monthly	24	\$ 22.31	\$ 535
	Total Suspended Solids (TSS)	3	Weekly	156	\$ 12.61	\$ 1,967
	Total Suspended Solids (TSS) (influent)	2	Monthly	24	\$ 12.61	\$ 303
	Ammon Nitrogen (NH3 as N)	3	Weekly	156	\$ 17.46	\$ 2,724
	Ammon Nitrogen (NH3 as N) (influent)	2	Monthly	24	\$ 17.46	\$ 419
	Fecal Coliform	3	Weekly	156	\$ 18.43	\$ 2,875
	Total Kjeldahi Nitrogen (TKN)	1	Weekly	52	\$ 33.95	\$ 1,765
	Total Kjeldahi Nitrogen (TKN) (influent)	2	Monthly	24	\$ 33.95	\$ 815
	Total Phosphorous	2	Monthly	24	\$ 17.46	\$ 419
	Total Phosphorous (influent)	2	Monthly	24	\$ 17.46	\$ 419
	Sludge testing (for land use)	1	Annually	1	\$ 1,953.34	\$ 1,953
Bear Paw	BOD	1	Weekly	52	\$ 25.00	\$ 1,300
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 15.00	\$ 780
	Ammon Nitrogen (NH3 as N)	2	Monthly	24	\$ 20.00	\$ 480
	Total Kjeldahi Nitrogen (TKN)	2	Annually	2	\$ 50.00	\$ 100
	Total Phosphorous	2	Annually	2	\$ 30.00	\$ 60
Belvedere	Effluent: BOD, TSS, Ammonia, Nitrogen, Fecal Coliform (2/wk)	2	Weekly	104.00	\$ 70.00	\$ 7,280
	Effluent: Nitrogen, Nitrate, Total (2/wk)	2	Weekly	104.00	\$ 40.00	\$ 4,160
	Effluent: Total Nitrogen/TKN/Total Phosphorus (2/wk)	2	Weekly	104.00	\$ 50.00	\$ 5,200
	Effluent: Chloride, TDS (3/yr)	3	Annually	3.00	\$ 35.00	\$ 105
	Influent: Chloride, TDS (3/yr)	3	Annually	3.00	\$ 35.00	\$ 105
	Influent: Enterococci (3/yr)	3	Annually	3.00	\$ 40.00	\$ 120
	Monitoring wells (4 total)	12	Annually	12.00	\$ 200.00	\$ 2,400
Bent Creek	BOD	1	Weekly	52	\$ 25.00	\$ 1,300
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 10.00	\$ 520
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 18.00	\$ 936
	Fecal Coliform	1	Weekly	52	\$ 25.00	\$ 1,300
	Total Kjeldahi Nitrogen (TKN) (QTRLY)	2	Annually	2	\$ 40.00	\$ 80
	Total Phosphorous	2	Annually	2	\$ 18.00	\$ 36
Brandywine Bay	Effluent: BOD, TSS, Ammonia, Nitrogen, Nitrate Nitrogen Fecal Coliform	2	Monthly	24	\$ 90.00	\$ 2,160
	Effluent: TDS, TOC, Chloride	3	Annually	3	\$ 55.00	\$ 165
	Influent: TDS, TOC, Chloride	3	Annually	3	\$ 55.00	\$ 165
	Monitoring wells (6 total)	18	Annually	18	\$ 200.00	\$ 3,600
	Voc (wells 6-total 3/yr)	6	Annually	6	\$ 110.00	\$ 660
	Lab Sample Pick-up	2	Monthly	24	\$ 10.00	\$ 240
	Field Lab certification	1	Annually	1	\$ 620.00	\$ 620
	Sludge testing (for land use)	1	Annually	1	\$ 375.00	\$ 375
Carolina Pines	BOD	1	Weekly	52	\$ 22.31	\$ 1,160
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 12.61	\$ 656
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 17.46	\$ 908
	Total Kjeldahi Nitrogen (TKN/NN)	1	Weekly	52	\$ 33.95	\$ 1,765
	Total Phosphorous	1	Weekly	52	\$ 17.46	\$ 908
	Enterococci	1	Weekly	52	\$ 32.01	\$ 1,665
	Sludge testing (for land use)	1	Annually	1	\$ 375.00	\$ 375
Danby/Lamp. S	BOD	1	Weekly	52	\$ 20.00	\$ 1,040
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 12.00	\$ 624
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 19.00	\$ 988
	Fecal Coliform	2	Weekly	104	\$ 25.00	\$ 2,600
	Total Phosphorous (Qtrly)	1	Weekly	52	\$ 26.00	\$ 1,352
	Field Lab Certification	1	Annually	1	\$ 314.27	\$ 314
	Instream Biological Assessment	1	Every 5/yr	0.2	\$ 1,650.00	\$ 330

Service Area	Test	No. of Samples	Frequency	Test Per year	Cost Per test	Annual Cost
Hemby	BOD	1	Weekly	52	\$ 20.00	\$ 1,040
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 12.00	\$ 624
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 19.00	\$ 988
Service Area	Test	No. of Samples	Frequency	Test Per year	Cost Per test	Annual Cost
	Fecal Coliform (Effluent up/down stream)	3	Weekly	156	\$ 25.00	\$ 3,900
	Total Kjeldahi Nitrogen (TKN) (QTRLY)	4	Annually	4	\$ 52.00	\$ 208
	Total Phosphorous (Qtrly)	4	Annually	4	\$ 26.00	\$ 104
	Sludge testing (for land use)	1	Every 3 yrs	0.33	\$ 704.00	\$ 232
	Field Lab Certification	1	Annually	1	\$ 585.87	\$ 586
Hestron Park	Effluent: BOD, TSS, Ammonia, Fecal Coliform, Nitrate Nitrogen 1/mo.	1	Monthly	12	\$ 90.00	\$ 1,080
	Effluent: TDS, Chloride (Mar Jul Nov)	3	Annually	3	\$ 30.00	\$ 90
	Influent: TDS, Chloride (Mar Jul Nov)	3	Annually	3	\$ 30.00	\$ 90
	Monitor wells	15	Annually	15	\$ 215.00	\$ 3,225
	VOC	5	Annually	5	\$ 110.00	\$ 550
	Sludge testing (for land use)	1	Annually	1	\$ 375.00	\$ 375
	Lab sample pick up	20	Annually	20	\$ 10.00	\$ 200
Hound Ears	BOD	1	Weekly	52	\$ 16.00	\$ 832
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 9.60	\$ 499
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 14.40	\$ 749
	Fecal Coliform	1	Weekly	52	\$ 13.60	\$ 707
	Oil and grease	2	Monthly	24	\$ 35.00	\$ 840
	Total Kjeldahi Nitrogen (TKN)	2	Annually	2	\$ 44.00	\$ 88
	Total Phosphorous	2	Annually	2	\$ 35.00	\$ 70
Kings Grant Raleigh	BOD	1	Weekly	52	\$ 22.31	\$ 1,160
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 12.61	\$ 656
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 17.46	\$ 908
	Fecal Coliform	1	Weekly	52	\$ 18.43	\$ 958
	Total Kjeldahi Nitrogen (TKN/NN)	1	Annually	52	\$ 33.95	\$ 1,765
	Total Phosphorous	2	Monthly	24	\$ 17.46	\$ 419
	Chronic Toxicity (Qtrly)	4	Annually	4	\$ 400.00	\$ 1,600
	Sludge testing (for land use)	1	Annually	1	\$ 1,953.34	\$ 1,953
Olde Point	Effluent: BOD, TSS, Ammonia Nitrogen, Fecal Coliform 2/mo. Apr-Oct	14	Annually	14	\$ 70.00	\$ 980
	Effluent: BOD, TSS, Ammonia Nitrogen, Fecal Coliform 1/mo. Apr-Oct	5	Annually	5	\$ 70.00	\$ 350
	Effluent: TDS, TOC, Chloride, Nitrate Nitrogen	3	Annually	3	\$ 75.00	\$ 225
	Influent: TDS, TOC, Chloride, Nitrate nitrogen	3	Annually	3	\$ 75.00	\$ 225
	Influent: Enterococci	3	Annually	3.00	\$ 40.00	\$ 120
	Monitor wells (3 total)	9	Annually	9	\$ 220.00	\$ 1,980
	Sludge testing (for land use)	1	Annually	1	\$ 375.00	\$ 375
	VOC (3 wells 1/yr)	3	Annually	3	\$ 110.00	\$ 330
The Pointe/Harbor	Chloride	3	Monthly	36	\$ 19.80	\$ 713
	Copper (3/Qrt)	12	Annually	12	\$ 22.00	\$ 264
	Iron (3/Qrt)	12	Annually	12	\$ 22.00	\$ 264
	Lead	3	Monthly	36	\$ 11.00	\$ 396
	Manganese	3	Monthly	36	\$ 11.00	\$ 396
	TDS	6	Annually	72	\$ 11.00	\$ 792
	Total Suspended Solids (TSS)	6	Annually	72	\$ 11.00	\$ 792
	Zink (3/Qrt)	12	Annually	12	\$ 11.00	\$ 132
	Chronic Toxicity (#/Qrt)	12	Annually	12	\$ 487.50	\$ 5,850
	Processing & Deposit Fee	6	Annually	72	\$ 3.00	\$ 216
	Turbidity	3	Annually	36	\$ 19.80	\$ 713

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Service Area	Test	No. of Samples	Frequency	Test Per year	Cost Per test	Annual Cost
Queens Harbor	BOD	1	Weekly	52	\$ 20.00	\$ 1,040
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 12.00	\$ 624
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 19.00	\$ 988
	Fecal Coliform	1	Weekly	52	\$ 20.00	\$ 1,040
	Total Kjeldahi Nitrogen (TKN/NN) (Qrtly)	4	Annually	4	\$ 52.00	\$ 208
	Total Phosphorous (Qrtly)	4	Annually	4	\$ 26.00	\$ 104
	Sample Pick-up fee	1	Monthly	12	\$ 15.00	\$ 180
Regalwood	BOD	3	Weekly			
	Total Suspended Solids (TSS)	3	Weekly			
	Ammon Nitrogen (NH3 as N)	1	Weekly			
	Enterococci	3	Weekly			
	Total Kjeldahi Nitrogen (TKN) (Qrtly)	4	Annually			
	Total Phosphorous	1	Weekly			\$ 14,400
	Sludge testing (for land use)	1	Annually	1	\$ 375.00	\$ 375
River Pointe	BOD	1	Weekly	52	\$ 20.00	\$ 1,040
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 12.00	\$ 624
	Ammon Nitrogen (NH3 as N)	2	Weekly	24	\$ 19.00	\$ 456
	Fecal Coliform	1	Weekly	52	\$ 20.00	\$ 1,040
	Total Kjeldahi Nitrogen (TKN) (Qrtly)	4	Annually	4	\$ 52.00	\$ 208
	Total Phosphorous (Qrtly)	4	Annually	4	\$ 26.00	\$ 104
	Sample Pick-up fee (monthly)	1	Monthly	12	\$ 15.00	\$ 180
Saddlewood	BOD	1	Weekly	52	\$ 20.00	\$ 1,040
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 12.00	\$ 624
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 19.00	\$ 988
	Fecal Coliform	1	Weekly	52	\$ 20.00	\$ 1,040
	Sample Pick-up fee (monthly)	1	Monthly	12	\$ 15.00	\$ 180
Sugar Mt.	BOD	3	Weekly	156	\$ 16.00	\$ 2,496
	Total Suspended Solids (TSS)	3	Weekly	156	\$ 9.60	\$ 1,498
	Ammon Nitrogen (NH3 as N)	3	Weekly	156	\$ 14.40	\$ 2,246
	Fecal Coliform	3	Weekly	156	\$ 13.60	\$ 2,122
	Total Kjeldahi Nitrogen (TKN)	2	Annually	2	\$ 44.00	\$ 88
	Total Phosphorous	2	Annually	2	\$ 35.00	\$ 70
	Chronic Toxicity (Qrtly)	4	Monthly	4	\$ 250.00	\$ 1,000
White Oak Est	BOD	3	Weekly	156		
	Total Suspended Solids (TSS)	3	Weekly	156		
	Ammon Nitrogen (NH3 as N)	1	Weekly	52		
	Enterococci	3	Weekly	156		
	Total Kjeldahi Nitrogen (TKN) (Qrtly)	4	Annually	4		
	Total Phosphorous	1	Weekly	52		\$ 14,400
	Sludge testing (for land use)	1	Annually	1	\$ 375.00	\$ 375
Willowbrook	BOD	1	Weekly	52	\$ 22.31	\$ 1,160
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 12.61	\$ 656
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 17.48	\$ 909
	Fecal Coliform	1	Weekly	52	\$ 18.43	\$ 958
	Total Kjeldahi Nitrogen (TKN)	1	Annually	52	\$ 33.95	\$ 1,765
	Total Phosphorous	2	Annually	24	\$ 17.46	\$ 419
	Chronic Toxicity (Qrtly)	4	Monthly	4	\$ 400.00	\$ 1,600
	Gross Alpha (Qrtly)	4	Annually			
	Combine Rad (Qrtly)	4	Annually			
	Gross Beta (Qrtly)	4	Annually			
	Uranium (Qrtly)	4	Annually			\$ 1,800
	Sludge testing (for land use)	1	Annually	1	\$ 1,932.00	\$ 1,932
Wolf Laurel	BOD	1	Weekly	52	\$ 16.00	\$ 832
	Total Suspended Solids (TSS)	1	Weekly	52	\$ 9.60	\$ 499
	Ammon Nitrogen (NH3 as N)	1	Weekly	52	\$ 14.40	\$ 749
	Fecal Coliform	1	Weekly	52	\$ 13.60	\$ 707
						\$ 186,911

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Casselberry  
Exhibit No. 6

Nags Head Wastewater Testing

Test	No. of Samples	Frequency	Test Per year	Cost Per test	Annual Cost
Effluent: BOD, TSS, Ammonia, Nitrogen, Fecal Coliform (1/wk), May-Aug	16	Annually	16	\$ 90	\$ 1,440
Effluent: BOD, TSS, Ammonia, Nitrogen, Fecal Coliform (2/Mo.) Sep-Apr	16	Annually	16	\$ 90	\$ 1,440
Effluent: TOC, TDS, Chlorides (3/yr) Mar, Jul, Oct	3	Annually	3	\$ 55	\$ 165
Influent: TOC, TDS, Chlorides Nitrate Nitrogen (3/yr) Mar, Jul Oct	3	Annually	3	\$ 75	\$ 225
Monitoring Wells (4 total - 3/yr Mar, Jul, Oct Color, Depth, Ammonia Nitrogen, Gallons, Odor, TOC, TDS, Chloride, fecal Coliform, Nitrate Nitrogen, Temp, pH	12	Annually	12	\$ 215	\$ 2,580
VOC (Monitoring wells; Plant #1; total - 1/yr)	4	Annually	4	\$ 110	\$ 440
Sludge Testing (for land application)	1	Annually	1	\$ 1,700	\$ 1,700
Total				\$	\$ 7,990

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Casselberry  
Exhibit No. 7

Corolla Light/Monteray Shores Wastewater Testing

Corolla Light	Test	No. of Samples	Frequency	Test Per year	Cost Per test	Annual Cost
Plant #1 Effluent: BDD, TSS, Ammonia Nitrogen, Fecal Coliform, Total Nitrogen (1/week May - Set)		20	Annually	20	\$ 90	\$ 1,800
Plant #1 Effluent: BDD, TSS, Ammonia, Fecal Coliform, Total Nitrogen (1/month Oct - Apr)		7	Annually	7	\$ 90	\$ 630
Plant #1 Effluent: TDC, Chlorides, Total Phosphorous, TDS (4/yr)		4	Annually	4	\$ 75	\$ 300
Plant #1 Influent: TDC, Chlorides, Total Phosphorous, TDS (4/yr)		4	Annually	4	\$ 75	\$ 300
Plant #1 Monitoring Wells (7 total 4/yr) Color, Depth, Ammonia Nitrogen, Gallons, Ddor, TDC, TDS, Chloride, fecal Coliform, Nitrate Nitrogen, Temp, ph.		28	Annually	28	\$ 200	\$ 5,600
VDC (Monitoring wells; Plant #1; total - 1/yr)		7	Annually	7	\$ 110	\$ 770
Plant #2 Effluent & Influent: BDD (2), TSS (2), Fecal Coliform (1), (2/mom Jun - Sep)		8	Annually	8	\$ 90	\$ 720
Plant #2 Monitoring Wells (6 total 2/yr) Color, Depth, Ammonia Nitrogen, Gallons, Ddor, TDC, TDS, Chloride, fecal Coliform, Nitrate Nitrogen, Temp, ph.		12	Annually	12	\$ 225	\$ 2,700

Monteray Shores	Test	No. of Samples	Frequency	Test Per year	Cost Per test	Annual Cost
Plant #2 Monitoring Wells (6 total 1/yr Nov only) Color, Depth, Ammonia Nitrogen, Gallons, Ddor, TDC, TDS, Chloride, fecal Coliform, Nitrate Nitrogen, Temp, pH, TDX		6	Annually	6	\$ 335	\$ 2,010
Plant #1 Sludge testing (for land application)		1	Annually	1	\$ 500	\$ 500
Plant #2 Sludge testing (for land application)		1	Annually	1	\$ 500	\$ 500
Effluent: BDD, TSS, Ammonia, Fecal Coliform, Nitrate Nitrogen, Total Nitrogen, Total Phosphorous		3	Weekly	156	\$ 110	\$ 17,160
Effluent: Fecal Coliform		1	Weekly	52	\$ 20	\$ 1,040
Effluent: TDS, Chlorides		3	Annually	3	\$ 30	\$ 90
Influent: TDC, TDS, Chlorides, Nitrate Nitrogen		3	Annually	3	\$ 75	\$ 225
GWLS Effluent: BDD, TSS, Ammonia Nitrogen, Fecal Coliform, Total Nitrogen, Total Phosphorous		1	Weekly	52	\$ 115	\$ 5,980
GWLS Effluent: TDS, Chlorides, TDC		3	Annually	3	\$ 60	\$ 180
GWLS Effluent: Voc		1	Annually	1	\$ 110	\$ 110
Monitoring Wells (2 total 3/yr) Color, Depth, Ammonia Nitrogen, Gallons, Ddor, TDC, TDS, Chloride, fecal Coliform, Nitrate Nitrogen, Temp, ph.		6	Annually	6	\$ 250	\$ 1,500
VDC (Monitoring wells; Plant #1; 2 total - 1/yr)		2	Annually	2	\$ 110	\$ 220
Sludge testing (for land application)		1	Annually	1	\$ 500	\$ 500
Total					\$	42,835

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Billing Analysis for End of Period Customers

Minus Availib.

CWSNC Water

Service Area	5/8 R	3/4 R	1 R	1.5 R	2 R	3 R	4 R	6 R	Flat R	5/8 C	1 C	1.5 C	2 C	3 C	4 C	6 C	Car. For availib	woodrun availib	Linville availib	Total	
																				EOP	EOP x 12 mo.
Abington/InterLarken	596									1										597	7164
Bahia Bay	117																			117	1404
Bear Paw	334	3								5	1									343	4116
Beechbrook	36																			36	432
Belvedere Plantation	1146		3							4	2		7	3						1165	13980
Bent Creek	303									1										304	3648
Brandywine Bay	837		3		1					9	3	1								854	10248
Buffalo Creek	280																			280	3360
Carolina Forest	205		1							4	1	1					744			212	2544
Chapel Hill	93																			93	1116
College Park	79																			79	948
Country Club Annex	23																			23	276
Country Hills	67																			67	804
Crestview	38																			38	456
Crystal Mountain	0								47											47	564
Lamplight/Danby/Wdsd Fall	1266		3							3	2	1	1							1276	15312
Eagle Crossing	77																			77	924
Eastwood Forest	130									1										131	1572
Forest Brook/Ole lamp Place	126	1									1									128	1536
Grandview at T-Square	75									1										76	912
Harbor House Estates	60																			60	720
Heathfield	64										1									65	780
Hestron Park	0									1		2	7							10	120
High Meadows	0								264	2	1		1							268	3216
High Vista	232		1							1			2							236	2832
Holly Acres	53										2									55	660
Hounds Ear	414		5		1					8	2		2							432	5184
Huntington Forest	55																			55	660

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Billing Analysis for End of Period Customers

Minus Availb.

CWSNC Water

Service Area	5/8 R	3/4 R	1 R	1.5 R	2 R	3 R	4 R	6 R	Flat R	5/8 C	1 C	1.5 C	2 C	3 C	4 C	6 C	Car. For availb	woodrun availb	Linville availb	Total	
																				EOP	x 12 mo.
Kings Grant	177		1							1										179	2148
Larkhaven	146	16																		162	1944
Lemmond Acres	33									1										34	408
Meadow Glen	30																			30	360
Misty Mountain	0								137											137	1644
Monteray	26																			26	312
Mt Mitchell									219	2		2	1							224	2688
Nero	128																			128	1536
Oakdale terrace	43																			43	516
Olde Point	199		3							1			1							204	2448
Pinnacle Shores	152									9										161	1932
Powder Horn Mountain									227		1									228	2736
Quail Ridge	171		2							1										174	2088
Queen's Harbor	115									1					1					117	1404
Riverpointe	187									5										192	2304
Riverwood	181		1									1	1							184	2208
Saddlewood	124																			124	1488
Sherwood Forest	247									5		1	1							254	3048
Sherwood Park	97											1								98	1176
Ski Mountain	253																			253	3036
Stone Hollow	222									1										223	2676
Suburban Heights	26																			26	312
Sugar Mountain	1322		1						71	60	4	3	22	1						1484	17808
The Harbor	1462		1							17	2		3			2				1487	17844
Vander	266									1			1							268	3216
Watauga Vista	0								138											138	1656
Waterglyn	40																			40	480
Westwood Forest	117																			117	1404
Whispering Pines	1490		14							27	7	5	1		1					1545	18540



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Minus Avalib.

## Minus Avalib.

**Total**

Oct 15 2015

407 LinvRidge  
1446 Availib  
1103 Mt sys.  
19,784

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## Billing Analysis for Total Consumption

## CWSNC Water

Service Area	5/8 R	3/4 R	1 R	1.5 R	2 R	Total Residential	5/8 C	1 C	1.5 C	2 C	3 C	4 C	6 C	TOTAL COMMERCIAL	Grand Total
Abingdon/InterLarken	31,378,737	-	-	-	-	31,378,737	247,040	-	-	-	-	-	-	247,040	31,625,777
Bahia Bay	5,125,711	-	-	-	-	5,125,711	-	-	-	-	-	-	-	-	5,125,711
Bear Paw	4,452,854	49,720	-	-	-	4,502,574	382,020	890,740	-	-	-	-	-	1,072,760	5,575,334
Beechbrook	1,753,010	-	-	-	-	1,753,010	-	-	-	-	-	-	-	-	1,753,010
Belvedere Plantation	60,089,676	-	250,580	-	-	60,340,256	128,030	98,680	-	1,830,400	4,938,340	-	-	7,093,450	67,433,706
Bent Creek	12,929,015	-	-	-	-	12,929,015	18,177	-	-	-	-	-	-	18,177	12,947,192
Brandywine Bay	33,428,822	-	90,220	-	32,601	33,551,643	223,012	445,850	318,300	-	-	-	-	987,162	34,538,805
Buffalo Creek	12,103,921	-	-	-	-	12,103,921	-	-	-	-	-	-	-	-	12,103,921
Carolina Forest	6,286,140	-	29,460	-	-	6,315,600	93,610	125,640	72,100	-	-	-	-	291,350	6,606,950
Chapel Hill	3,508,598	-	-	-	-	3,508,598	-	-	-	-	-	-	-	-	3,508,598
College Park	4,289,060	-	-	-	-	4,289,060	-	-	-	-	-	-	-	-	4,289,060
Country Club Annex	1,006,541	-	-	-	-	1,006,541	-	-	-	-	-	-	-	-	1,006,541
Country Hills	3,756,830	-	-	-	-	3,756,830	-	-	-	-	-	-	-	-	3,756,830
Crestview	1,044,860	-	-	-	-	1,044,860	-	-	-	-	-	-	-	-	1,044,860
Crystal Mountain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lamplight/Danby/Wdsd Fall	66,673,761	-	245,800	-	-	67,119,561	217,280	94,970	135,600	58,900	-	-	-	506,750	67,626,311
Eagle Crossing	3,608,240	-	-	-	-	3,608,240	-	-	-	-	-	-	-	-	3,608,240
Eastwood Forest	5,605,380	-	-	-	-	5,605,380	910	-	-	-	-	-	-	910	5,606,290
Forest Brook/Ole lamp Place	6,624,510	31,850	-	-	-	6,656,160	-	143,930	-	-	-	-	-	143,930	6,800,090
Grandview at T-Square	3,349,929	-	-	-	-	3,349,929	66,200	-	-	-	-	-	-	66,200	3,416,129
Harbor House Estates	2,902,960	-	-	-	-	2,902,960	-	-	-	-	-	-	-	-	2,902,960
Heathfield	7,199,630	-	-	-	-	7,199,630	-	250,280	-	-	-	-	-	250,280	7,449,910
Heston Park	-	-	-	-	-	-	39,660	-	613,800	3,750,390	-	-	-	4,404,050	4,404,050
High Meadows	-	-	-	-	-	-	317,660	246,510	-	24,030	-	-	-	588,400	588,400
High Vista	10,265,370	-	68,430	-	-	10,333,800	117,930	-	-	1,036,300	-	-	-	1,156,230	11,490,030
Holly Acres	2,416,164	-	-	-	-	2,416,164	-	150,800	-	-	-	-	-	150,800	2,566,964
Hounds Ear	11,067,031	-	58,600	6,650	-	11,132,281	390,880	420,550	-	489,660	-	-	-	1,301,090	12,433,371
Huntington Forest	2,988,058	-	-	-	-	2,988,058	-	-	-	-	-	-	-	-	2,988,058
Kings Grant	6,036,200	-	181,220	-	-	6,217,420	39,540	-	-	-	-	-	-	39,540	6,256,960
Larkhaven	7,733,730	745,880	-	-	-	8,479,610	-	-	-	-	-	-	-	-	8,479,610
Lemmond Acres	2,267,431	-	-	-	-	2,267,431	67,610	-	-	-	-	-	-	67,610	2,335,041
Meadow Glen	1,419,980	-	-	-	-	1,419,980	-	-	-	-	-	-	-	-	1,419,980
Misty Mountain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monteray	1,343,590	-	-	-	-	1,343,590	-	-	-	-	-	-	-	-	1,343,590
Mt. Mitchell	-	-	-	-	-	-	192,950	-	407,420	604,700	-	-	-	1,205,070	1,205,070
Nero	6,669,140	-	-	-	-	6,669,140	-	-	-	-	-	-	-	-	6,669,140
Oakdale terrace	2,036,970	-	-	-	-	2,036,970	-	-	-	-	-	-	-	-	2,036,970
Olde Point	9,344,728	-	114,720	-	-	9,459,448	-	68,110	-	237,900	-	-	-	306,010	9,765,458
Pinnacle Shores	10,617,682	-	-	-	-	10,617,682	1,610,640	-	-	-	-	-	-	1,610,640	12,228,322
Powder Horn Mountain	-	-	-	-	-	-	-	188,560	-	-	-	-	-	200,800	200,800
Quali Ridge	8,732,102	-	71,700	-	-	8,803,802	169,210	-	-	-	-	-	-	169,210	8,973,012

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Billing Analysis for End of Period Customers

CWSNC Sewer

Service Area	5/8 R	1 R	1.5 R	2 R	3 R	Flat R	5/8 C	1 C	1.5 C	2 C	3 C	4 C	6 C	Mt Carmel	Regalwood	White oak	Other	Total
Abington/InterLarken	596					36	1											633
Ashley Hills	1,160					25												1,185
Bear Paw	66						3											69
Belvedere Plantation	689	2				1	1			4	2							699
Bent Creek	303																	303
Brandywine Bay	750	3		1		47	3											804
Carolina Pines						353	1											354
College Park	49					1			0									50
Lamplight/Danby/Wdsd F	1,264	3				8	325		1	2								1,603
Hestron Park						1	1		2	7								11
Hounds Ear	177	3					6	1		2								189
Huntwick transferred	-																	-
Hemby Acres/Beacon Hill						678												678
Kings Grant	177	1				0			0									178
Kings Grant - Raleigh	-					117												117
Kynwood						67												67
Mt. Carmel/Lees Ridge														37B				378
Nero	128																	128
Olde Point	122	3								1								126
Queen's Harbor	114						1					1						116
Regalwood	-					0									362			362
Riverpointe	187						1											188
Saddlewood	18																	18
Sugar Mountain	1,081	1				16	34	2	2	19	1							1,156
White Oak Estates	-					0										673		673
White oak High School	-					0											1	1
Child Daycare	-					0											1	1
White Oak Plantation	354					0			0									354
Willowbrook	163																	163

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Billing Analysis for End of Period Customers

CWSNC Sewer

Service Area	5/8 R	1 R	1.5 R	2 R	3 R	Flat R	5/8 C	1 C	1.5 C	2 C	3 C	4 C	6 C	Mt Carmel	Regalwood	White oak	Other	Total
Wolf Laurel	54									2								56
Total EOP	7,452	16	0	1	0	1350	377	3	5	37	3	1	0	378	362	673	2	10,660
<b>Multiple Dwelling Units</b>																		
Belvedere Plantation						2												
Brandywine Bay						1												
Hemby Acres/Beacon Hill						6												
Sugar Mountain						121												
Total	7,452	16	0	1	0	1480	377	3	5	37	3	1	0	378	362	673	2	10,790
Purchased Sewer	580	1	0	0	0	1	-	-	-	0	0	0	0	0	0	0	0	582
Minus Purchased Sewer	6,872	15	0	1	0	1,479	377	3	5	37	3	1	0	378	362	673	2	10,208
Total																		10,790

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Billing Analysis for Consumption

CWSNC Sewer

Service Area	5/8 R	1 R	2 R	Total Residential	5/8 C	1 C	1.5 C	2 C	3 C	4 C	Total Commercial	Grand Total	Mt. Carmel
Abington/InterLarken	31,239,720	-	-	31,239,720	247,040	-	-	-	-	-	247,040	31,486,760	
Ashley Hills	57,981,768			57,981,768							-	57,981,768	
Bear Paw	466,497			466,497	81,690						81,690	548,187	
Belvedere Plantation	31,999,534	164,780		32,164,314	89,710			1,764,100	4,249,240		6,103,050	38,267,364	
Bent Creek	12,794,306			12,794,306							-	12,794,306	
Brandywine Bay	28,999,468	90,220	32,601	29,122,289	53,020						53,020	29,175,309	
Carolina Pines	-			-	304,510						304,510	304,510	
College Park	2,428,760			2,428,760							-	2,428,760	
Lamplight/Danby/Wdsd Falls	66,003,715	245,800		66,249,515	19,744,876		135,600	497,450			20,377,926	86,627,441	
Hestron Park	-			-	39,860		613,800	3,750,390			4,404,050	4,404,050	
Hounds Ear	4,350,467	43,500		4,393,967	316,430	54,700		489,660			860,790	5,254,757	
Huntwick transferred	-			-							-	-	
Independ/Hemby Acres/Beacon	-			-							-	-	
Kings Grant	8,000,358	181,220		8,181,578							-	8,181,578	
Kings Grant - Raleigh	-			-							-	-	
Kynwood	-			-							-	-	
Mt. Carmel/Lees Ridge				-							-	-	16,504,637
Nero	6,669,140			6,669,140							-	6,669,140	
Olde Point	4,527,434	114,720		4,642,154				237,900			237,900	4,880,054	
Queen's Harbor	4,302,570			4,302,570	264,370					412,700	677,070	4,979,640	
Regalwood	-			-							-	-	
Riverpointe	12,583,630			12,583,630	90,690						90,690	12,674,320	
Saddlewood	770,090			770,090							-	770,090	
Sugar Mountain	15,127,640	125,810		15,253,450	1,318,970	261,420	1,089,808	6,905,445	3,613,200		13,188,843	28,442,293	
White Oak Estates	-			-							-	-	
White oak High School	-			-							-	-	
Child Daycare	-			-							-	-	
White Oak Plantation	17,246,729			17,246,729							-	17,246,729	
Willowbrook	6,021,269			6,021,269							-	6,021,269	

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Billing Analysis for Consumption

CWSNC Sewer

Service Area	5/8 R	1 R	2 R	Total Residential	5/8 C	1 C	1.5 C	2 C	3 C	4 C	Total Commercial	Grand Total	Mt. Carmel	Total
Wolf Laurel	1,069,380			1,069,380				396,200			396,200	1,465,580		Total
Total	312,582,475	966,050	32,601	313,581,126	22,551,166	316,120	1,839,208	14,041,145	7,862,440	412,700	47,022,779	360,603,905	16,504,637	377,108,542
Purchased Sewer	27,675,847	181,220	-	27,857,067	-	-	-	-	-	-	-	27,857,067	-	27,857,067
Without purchased Sewer	284,906,628	784,830	32,601	285,724,059	22,551,166	316,120	1,839,208	14,041,145	7,862,440	412,700	47,022,779	332,746,838	16,504,637	349,251,475
Total														377,108,542

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Public Staff's Present Revenue at Company's Present Rates

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
Flat Residential	-		-	1,126	13,512	34.52	466,434	466,434
5/8" Residential Metered	831,662,875	5.44	4,524,246	16,423	197,076	18.25	3,596,637	8,120,883
3/4" Residential Metered	912,305	5.44	4,963	21	252	18.25	4,599	9,562
1" Residential Metered	2,419,870	5.44	13,164	43	516	45.63	23,545	36,709
1.5" Residential Metered	6,650	5.44	36	1	12	91.25	1,095	1,131
2" Residential Metered	32,601	5.44	177	1	12	146.00	1,752	1,929
<b>Total Residential Metered</b>	<b>835,034,301</b>		<b>4,542,587</b>	<b>16,489</b>	<b>197,868</b>		<b>3,627,628</b>	<b>8,170,215</b>
5/8" Commercial Metered	10,632,353	5.44	57,840	186	2,232	18.25	40,734	98,574
1" Commercial Metered	5,948,841	5.44	32,362	48	576	45.63	26,283	58,645
1.5" Commercial Metered	4,323,388	5.44	23,519	19	228	91.25	20,805	44,324
2" Commercial Metered	19,000,512	5.44	103,363	55	660	146.00	96,360	199,723
3" Commercial Metered	8,549,540	5.44	46,509	4	48	273.75	13,140	59,649
4" Commercial Metered	413,400	5.44	2,249	2	24	456.25	10,950	13,199
6" Commercial Metered	4,364,400	5.44	23,742	2	24	912.50	21,900	45,642
<b>Total Commercial Metered</b>	<b>53,232,434</b>		<b>289,584</b>	<b>316</b>	<b>3,792</b>		<b>230,172</b>	<b>519,756</b>



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Public Staff's Present Revenue at Company's Present Rates

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
<b>Linville Ridge</b>								
Flat Residential	-		-	337	4,044	31.68	128,114	128,114
Flat Common Area	2,604,250	3.08	8,021	7	84	72.00	6,048	14,069
<b>Total Linville Ridge</b>	<b>2,604,250</b>		<b>8,021</b>	<b>344</b>	<b>4,128</b>		<b>134,162</b>	<b>142,183</b>
Availability	-		-	1,446	2,892	21.60	62,467	62,467
Availability Linville Ridge	-		-	63	756	10.80	8,165	8,165
<b>Total Availability</b>				<b>1,509</b>	<b>3,648</b>		<b>70,632</b>	<b>70,632</b>
<b>Total</b>	<b>890,870,985</b>		<b>4,840,192</b>	<b>19,784</b>	<b>222,948</b>		<b>4,529,028</b>	<b>9,369,220</b>

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Public Staff's Proposed Revenue at Company's Proposed Rates

CWSNC Water

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
Flat Residential	-		-	23	276	42.51	11,733	11,733
<b>New Metered Residential (prior flat rate mountain customers average usage 3,000/customer</b>	39,708,000	6.70	266,044	1,103	13,236	22.47	297,413	563,457
5/8" Residential Metered	666,355,714	6.70	4,464,583	13,071	156,852	22.47	3,524,464	7,989,048
3/4" Residential Metered	827,250	6.70	5,543	20	240	22.47	5,393	10,935
1" Residential Metered	1,344,690	6.70	9,009	25	300	56.19	16,857	25,866
1.5" Residential Metered	6,650	6.70	45	1	12	112.37	1,348	1,393
2" Residential Metered	32,601	6.70	218	1	12	179.80	2,158	2,376
<b>Total Residential Metered</b>	<b>668,566,905</b>		<b>4,479,398</b>	<b>13,118</b>	<b>157,416</b>		<b>3,550,220</b>	<b>8,029,619</b>
5/8" Commercial Metered	8,628,471	6.70	57,811	145	1,740	22.47	39,098	96,909
1" Commercial Metered	3,984,141	6.70	26,694	37	444	56.19	24,948	51,642
1.5" Commercial Metered	3,340,558	6.70	22,382	12	144	112.37	16,181	38,563
2" Commercial Metered	17,551,812	6.70	117,597	52	624	179.80	112,195	229,792
3" Commercial Metered	8,549,540	6.70	57,282	4	48	337.12	16,182	73,464
4" Commercial Metered	412,700	6.70	2,765	1	12	561.87	6,742	9,508
6" Commercial Metered	4,364,400	6.70	29,241	2	24	1,123.74	26,970	56,211
<b>Total Commercial Metered</b>	<b>46,831,622</b>		<b>313,772</b>	<b>253</b>	<b>3,036</b>		<b>242,317</b>	<b>556,088</b>

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Public Staff's Proposed Revenue at Company's Proposed Rates

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
<b>Linville Ridge</b>								
Flat Residential	-		-	337	4,044	42.51	171,910	171,910
5/8" Commercial Metered	3,550	6.70	24	1	12	22.47	270	293
1" Commercial Metered	695,400	6.70	4,659	1	12	56.19	674	5,333
2" Commercial Metered	1,689,500	6.70	11,320	4	48	179.80	8,630	19,950
3" Commercial Metered	215,800	6.70	1,446	1	12	337.12	4,045	5,491
<b>Total Linville Ridge</b>	<b>2,604,250</b>		<b>17,448</b>	<b>344</b>	<b>4,128</b>		<b>185,530</b>	<b>202,979</b>
<b>Purchased Water</b>								
<b>Carolina Forest</b>								
5/8" Residential Metered	6,286,140	3.19	20,053	205	2,460	22.47	55,276	75,329
1" Residential Metered	29,460	3.19	94	1	12	56.19	674	768
5/8" Commercial Metered	93,610	3.19	299	4	48	22.47	1,079	1,377
1" Commercial Metered	125,640	3.19	401	1	12	56.19	674	1,075
1.5" Commercial Metered	72,100	3.19	230	1	12	112.37	1,348	1,578
<b>Total</b>	<b>6,606,950</b>		<b>21,076</b>	<b>212</b>	<b>2,544</b>		<b>59,052</b>	<b>80,128</b>
<b>High Vista Estates</b>								
5/8" Residential Metered	10,265,370	3.15	32,336	232	2,784	22.47	62,556	94,892
1" Residential Metered	68,430	3.15	216	1	12	56.19	674	890
5/8" Commercial Metered	117,930	3.15	371	1	12	22.47	270	641
2" Commercial Metered	1,038,300	3.15	3,271	2	24	179.80	4,315	7,586
<b>Total</b>	<b>11,490,030</b>		<b>36,194</b>	<b>236</b>	<b>2,832</b>		<b>67,816</b>	<b>104,009</b>

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Public Staff's Proposed Revenue at Company's Proposed Rates

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
<b>Riverpointe</b>								
5/8" Residential Metered	12,707,980	6.30	80,060	187	2,244	22.47	50,423	130,483
5/8" Commercial Metered	596,830	6.30	3,760	5	60	22.47	1,348	5,108
<b>Total</b>	<b>13,304,810</b>		<b>83,820</b>	<b>192</b>	<b>2,304</b>		<b>51,771</b>	<b>135,591</b>
<b>Whispering Pines</b>								
5/8" Residential Metered	80,840,136	2.23	180,274	1,490	17,880	22.47	401,764	582,037
1" Residential Metered	890,887	2.23	1,987	14	168	56.19	9,440	11,427
5/8" Commercial Metered	1,065,472	2.23	2,376	27	324	22.47	7,280	9,656
1" Commercial Metered	1,248,571	2.23	2,784	7	84	56.19	4,720	7,504
1.5" Commercial Metered	751,430	2.23	1,676	5	60	112.37	6,742	8,418
2" Commercial Metered	410,400	2.23	915	1	12	179.80	2,158	3,073
4" Commercial Metered	700	2.23	2	1	12	561.87	6,742	6,744
<b>Total</b>	<b>85,207,596</b>		<b>190,013</b>	<b>1,545</b>	<b>18,540</b>		<b>438,846</b>	<b>628,859</b>
<b>White Oak Planation/Lee Forest/Winston Planation/Winston Point</b>								
5/8" Residential Metered	22,108,370	3.25	71,852	444	5,328	22.47	119,720	191,572
1.5" Commercial Metered	159,300	3.25	518	1	12	112.37	1,348	1,866
<b>Total</b>	<b>22,267,670</b>		<b>72,370</b>	<b>445</b>	<b>5,340</b>		<b>121,069</b>	<b>193,439</b>
<b>Woodrun</b>								
5/8" Residential Metered	17,004,336	3.19	54,243.83	449	5,388	22.47	121,068	175,312

Carolina Water Service, Inc. of North Carolina  
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CWSNC Water

Casselberry  
Exhibit No. 13  
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Public Staff's Proposed Revenue at Company's Proposed Rates

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
5/8" Commercial Metered	130,040	3.19	415	4	48	22.47	1,079	1,493
1" Commercial Metered	393,690	3.19	1,256	2	24	56.19	1,349	2,604
<b>Total</b>	<b>17,528,066</b>		<b>55,915</b>	<b>455</b>	<b>5,460</b>		<b>123,495</b>	<b>179,410</b>
<b>Yorktown</b>								
5/8" Residential Metered	3834650	5.01	19,212	107	1,284	22.47	28,851	48,063
<b>Zemosa Acres</b>								
5/8" Residential Metered	12,260,179	5.27	64,611	238	2,856	22.47	64,174	128,785
3/4" Residential Metered	85,055	5.27	448	1	12	22.47	270	718
1" Residential Metered	86,403	5.27	455	2	24	56.19	1,349	1,804
1" Commercial Metered	196,799	5.27	1,037	1	12	56.19	674	1,711
<b>Total</b>	<b>12,628,436</b>		<b>66,552</b>	<b>242</b>	<b>2,904</b>		<b>66,467</b>	<b>133,019</b>
Availability	-		-	1,446	2,892	26.60	76,927	76,927
Availability Linville Ridge	-		-	63	756	10.80	8,165	8,165
<b>Total Availability</b>	<b>-</b>			<b>1,509</b>	<b>3,648</b>		<b>85,092</b>	<b>85,092</b>
<b>Total</b>	<b>930,578,985</b>		<b>5,621,813</b>	<b>19,784</b>	<b>222,948</b>		<b>5,329,671</b>	<b>10,951,484</b>

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CWSNC Sewer

Casselberry  
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Public Staff's Present Revenue at Company's Present Rates								
Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
5/8" Res Flat, Sewer only		-	-	1,480	17,760	44.70	793,872	793,872
Total Flat Rate				1,480	17,760		793,872	793,872
5/8" Res Metered	312,582,475	2.46	768,953	7,452	89,424	33.02	2,952,780	3,721,733
1" Res Metered	966,050	2.46	2,376	16	192	33.02	6,340	8,716
2" Res Metered	32,601	2.46	80	1	12	33.02	396	476
Total Residential	313,581,126		771,410	7,469	89,628		2,959,517	3,730,926
5/8" Commercial	22,551,166	2.46	55,476	377	4,524	33.02	149,382	204,858
1" Commercial	316,120	2.46	778	3	36	82.55	2,972	3,749
1.5" Commercial	1,839,208	2.46	4,524	5	60	165.10	9,906	14,430
2" Commercial	14,041,145	2.46	34,541	37	444	264.16	117,287	151,828
3" Commercial	7,862,440	2.46	19,342	3	36	495.30	17,831	37,172
4" Commercial	412,700	2.46	1,015	1	12	825.50	9,906	10,921
Total Commercial	47,022,779		115,676	426	5,112		307,284	422,960
Mount Carmel	16,504,637	5.45	89,950	378	4,536	22.09	100,200	190,151
Regalwood	-		-	362	4,344	44.70	194,177	194,177
White Oaks	-		-	673	8,076	44.70	360,997	360,997
White Oaks School	-		-	1	12	1,386.90	16,643	16,643

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CWSNC Sewer

Casselberry  
Exhibit 14  
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Public Staff's Present Revenue at Company's Present Rates								
Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
Child Castle Daycare	-		-	1	12	172.40	2,069	2,069
Other Total	16,504,637		89,950.27	1,415	16,980.00		674,085.84	764,036
Total	377,108,542		977,036	10,790	129,480		4,734,759	5,711,794

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Casselberry  
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Public Staff's Proposed Revenue at Company's Proposed Rates

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
Residential Flat, Sewer only		-	-	1,479	17,748	53.56	950,583	950,583
Total Flat Rate				1,479	17,748		950,583	950,583
5/8" Residential Metered	284,906,628	2.95	840,475	6,872	82,464	39.57	3,263,100	4,103,575
1" Res Metered	784,830	2.95	2,315	15	180	39.57	7,123	9,438
2" Res Metered	32,601	2.95	96	1	12	39.57	475	571
Total Residential	285,724,059		842,886	6,888	82,656		3,270,698	4,113,584
5/8" Commercial Metered	22,551,166	2.95	66,526	377	4,524	39.57	179,015	245,541
1" Commercial Metered	316,120	2.95	933	3	36	98.92	3,561	4,494
1.5" Commercial Metered	1,839,208	2.95	5,426	5	60	197.84	11,870	17,296
2" Commercial Metered	14,041,145	2.95	41,421	37	444	316.55	140,548	181,970
3" Commercial Metered	7,862,440	2.95	23,194	3	36	593.53	21,367	44,561
4" Commercial Metered	412,700	2.95	1,217	1	12	989.21	11,871	13,088
Total Commercial Metered	47,022,779		138,717	426	5,112		368,232	506,949
Mount Carmel	16,504,637	5.60	92,426	378	4,536	30.86	139,981	232,407
Regalwood	-		-	362	4,344	53.56	232,665	232,665
White Oaks	-		-	673	8,076	53.56	432,551	432,551
White Oaks School	-		-	1	12	1,661.95	19,943	19,943
Child Castle Daycare	-		-	1	12	206.59	2,479	2,479



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Casselberry  
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Public Staff's Proposed Revenue at Company's Proposed Rates

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
Pantry	-		-	-	-	110.07	-	-
<b>Total Other</b>	16,504,637		92,426	1,415	16,980		827,619	920,045
<b>College Park</b>								
Residential Flat, Sewer only	-	-	-	1	12	53.56	643	643
5/8" Residential Metered	2,428,760	5.70	13,844	49	588	30.86	18,146	31,990
<b>Total</b>	2,428,760		13,844	50	600		18,788	32,632
<b>Kings Grant</b>								
5/8" Residential Metered	8,000,358	3.80	30,401	177	2,124	30.86	65,547	95,948
1" Res Metered	181,220	3.80	689	1	12	30.86	370	1,059
<b>Total</b>	8,181,578		31,090	178	2,136		65,917	97,007
<b>White Oak Plantation/Lee Forest/Winston Pointe</b>								
5/8" Residential Metered	17,246,729	4.55	78,473	354	4,248	30.86	131,093	209,566
<b>Total</b>	377,108,542		1,197,436	10,790	129,480		5,632,930	6,830,366

Carolina Water Service, Inc. of North Carolina  
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Casselberry  
Exhibit No. 16

Corolla Light and Monteray Shores

Public Staff's Present Revenue at Company's Present Rates

SEWER

Type of User	Consumption	Usage Charge per 1,000 gal	Usage Revenue	EOP Customers	EOP x 12 Months	Base Charge	Base Revenue	Total Revenue
5/8" Residential Sewer	37,935,767	6.65	252,273	741	8,892	52.26	464,696	716,969
1" Residential Sewer	9,574,291	6.65	63,669	94	1,128	130.65	147,373	211,042
<b>Total Residential</b>	<b>47,510,058</b>		<b>315,942</b>	<b>835</b>	<b>10,020</b>		<b>612,069</b>	<b>928,011</b>
5/8" Commercial Sewer	6,838,496	6.65	45,476	69	828	52.26	43,271	88,747
1" Commercial Sewer	2,646,550	6.65	17,600	17	204	130.65	26,653	44,252
1.5" Commercial Sewer	1,144,600	6.65	7,612	3	36	261.30	9,407	17,018
2" Commercial Sewer	2,071,400	6.65	13,775	3	36	418.08	15,051	28,826
3" Commercial Sewer	147,000	6.65	978	1	12	783.90	9,407	10,384
<b>Total Commercial</b>	<b>12,848,046</b>		<b>85,440</b>	<b>93</b>	<b>1,116</b>		<b>103,788</b>	<b>189,228</b>
<b>TOTAL</b>	<b>60,358,104</b>		<b>401,381</b>	<b>928</b>	<b>11,136</b>		<b>715,857</b>	<b>1,117,239</b>

Carolina Water Service, Inc. of North Carolina  
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For the 12 Months Ending June 30, 2015

Casselberry  
Exhibit No. 17

Corolla Light and Monteray Shores

Public Staff's Proposed Revenue at Company's Proposed Rates

SEWER

Type of User	Consumption	Usage Charge per 1,000 gal	Usage Revenue	EOP Customers	EOP x 12 Months	Base Charge	Base Revenue	Total Revenue
5/8" Residential Sewer	37,935,767	8.49	322,075	741	8,892	66.72	593,274	915,349
1" Residential Sewer	9,574,291	8.49	81,286	94	1,128	166.81	188,162	269,447
<b>Total Residential</b>	<b>47,510,058</b>		<b>403,360</b>	<b>835</b>	<b>10,020</b>		<b>781,436</b>	<b>1,184,796</b>
5/8" Commercial Sewer	6,838,496	8.49	58,059	69	828	66.72	55,244	113,303
1" Commercial Sewer	2,646,550	8.49	22,469	17	204	166.81	34,029	56,498
1.5" Commercial Sewer	1,144,600	8.49	9,718	3	36	333.62	12,010	21,728
2" Commercial Sewer	2,071,400	8.49	17,586	3	36	533.80	19,217	36,803
3" Commercial Sewer	147,000	8.49	1,248	1	12	1,000.87	12,010	13,258
<b>Total Commercial</b>	<b>12,848,046</b>		<b>109,080</b>	<b>93</b>	<b>1,116</b>		<b>132,511</b>	<b>241,591</b>
<b>TOTAL</b>	<b>60,358,104</b>		<b>512,440</b>	<b>928</b>	<b>11,136</b>		<b>913,947</b>	<b>1,426,387</b>

Carolina Water Service, Inc. of North Carolina  
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Casselberry  
Exhibit No. 18

The Village of Nags Head

Public Staff's Present Revenue at Company's Present Rates

SEWER

Type of User	Usage	Minimum Usage	Total Usage	Usage Charge per 1,000 gal	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Revenue	Total Revenue
Flat Rate	-		-		-	655	7,860	62.81	493,687	493,687
5/8" Commercial Sewer	680,110	276,067	956,177	9.33	8,921	10	120	18.48	2,218	11,139
1" Commercial Sewer	2,735,640	16,307	2,751,947	9.33	25,676	6	72	46.22	3,328	29,004
1.5" Commercial Sewer	1,411,580		1,411,580	9.33	13,170	4	48	92.42	4,436	17,606
2" Commercial Sewer	6,615,700		6,615,700	9.33	61,724	7	84	147.88	12,422	74,146
6" Commercial Sewer	4,910,110		4,910,110	9.33	45,811	2	24	924.24	22,182	67,993
Total Commercial	16,353,140	292,374	16,645,514		155,303	29	348		44,585	199,888
Total	16,353,140	292,374	16,645,514		155,303	684	8,208		538,272	693,575

Carolina Water Service, Inc. of North Carolina  
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Casselberry  
Exhibit No. 19

The Village of Nags Head

Public Staff's Proposed Revenue at Company's Proposed Rates

SEWER

Type of User	Usage	Minimum Usage	Total Usage	Usage Charge per 1,000 gal	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Revenue	Total Revenue
Flat Rate	-		-		-	655	7,860	76.11	598,225	598,225
5/8" Commercial Sewer	680,110	276,067	956,177	11.31	10,814	10	120	22.39	2,687	13,501
1" Commercial Sewer	2,735,640	16,307	2,751,947	11.31	31,125	6	72	56.01	4,033	35,157
1.5" Commercial Sewer	1,411,580		1,411,580	11.31	15,965	4	48	111.99	5,376	21,340
2" Commercial Sewer	6,615,700		6,615,700	11.31	74,824	7	84	179.20	15,053	89,876
6" Commercial Sewer	4,910,110		4,910,110	11.31	55,533	2	24	1,924.24	46,182	101,715
Total Commercial	16,353,140	292,374	16,645,514		188,261	29	348		73,330	261,590
Total	16,353,140	292,374	16,645,514		188,261	684	8,208		671,554	859,815

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Public Staff's Recommended Rates

CWSNC Water

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
Flat Residential	-		-	23	276	41.70	11,509	11,509
New Metered Residential (prior flat rate mountain customers average usage 3,000/customer								
	39,708,000	6.42	254,925	1,103	13,236	22.46	297,281	552,206
5/8" Residential Metered	666,355,714	6.42	4,278,004	13,071	156,852	22.46	3,522,896	7,800,900
3/4" Residential Metered	827,250	6.42	5,311	20	240	22.46	5,390	10,701
1" Residential Metered	1,344,690	6.42	8,633	25	300	56.15	16,845	25,478
1.5" Residential Metered	6,650	6.42	43	1	12	112.30	1,348	1,390
2" Residential Metered	32,601	6.42	209	1	12	179.68	2,156	2,365
Total Residential Metered	668,566,905		4,292,200	13,118	157,416		3,548,635	7,840,835
5/8" Commercial Metered								
	8,628,471	6.42	55,395	145	1,740	22.46	39,080	94,475
1" Commercial Metered	3,984,141	6.42	25,578	37	444	56.15	24,931	50,509
1.5" Commercial Metered	3,340,558	6.42	21,446	12	144	112.30	16,171	37,618
2" Commercial Metered	17,551,812	6.42	112,683	52	624	179.68	112,120	224,803
3" Commercial Metered	8,549,540	6.42	54,888	4	48	336.90	16,171	71,059
4" Commercial Metered	412,700	6.42	2,650	1	12	561.50	6,738	9,388
6" Commercial Metered	4,364,400	6.42	28,019	2	24	1,123.00	26,952	54,971
Total Commercial Metered	46,831,622		300,659	253	3,036		242,164	542,823

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Public Staff's Recommended Rates

CWSNC Water

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
<b>Linville Ridge</b>								
Flat Residential	-		-	337	4,044	41.70	168,635	168,635
5/8" Commercial Metered	3,550	6.42	23	1	12	22.46	270	292
1" Commercial Metered	695,400	6.42	4,464	1	12	56.15	674	5,138
2" Commercial Metered	1,689,500	6.42	10,847	4	48	179.68	8,625	19,471
3" Commercial Metered	215,800	6.42	1,385	1	12	336.90	4,043	5,428
<b>Total Linville Ridge</b>	<b>2,604,250</b>		<b>16,719</b>	<b>344</b>	<b>4,128</b>		<b>182,246</b>	<b>198,965</b>

Purchased Water

Carolina Forest

5/8" Residential Metered	6,286,140	3.19	20,053	205	2,460	22.46	55,252	75,304
1" Residential Metered	29,460	3.19	94	1	12	56.15	674	768
5/8" Commercial Metered	93,610	3.19	299	4	48	22.46	1,078	1,377
1" Commercial Metered	125,640	3.19	401	1	12	56.15	674	1,075
1.5" Commercial Metered	72,100	3.19	230	1	12	112.30	1,348	1,578
<b>Total</b>	<b>6,606,950</b>		<b>21,076</b>	<b>212</b>	<b>2,544</b>		<b>59,025</b>	<b>80,101</b>

High Vista Estates

5/8" Residential Metered	10,265,370	3.15	32,336	232	2,784	22.46	62,529	94,865
1" Residential Metered	68,430	3.15	216	1	12	56.15	674	889
5/8" Commercial Metered	117,930	3.15	371	1	12	22.46	270	641
2" Commercial Metered	1,038,300	3.15	3,271	2	24	179.68	4,312	7,583
<b>Total</b>	<b>11,490,030</b>		<b>36,194</b>	<b>236</b>	<b>2,832</b>		<b>67,784</b>	<b>103,978</b>

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Public Staff's Recommended Rates

CWSNC Water

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
<b>Riverpointe</b>								
5/8" Residential Metered	12,707,980	6.30	80,060	187	2,244	22.46	50,400	130,461
5/8" Commercial Metered	596,830	6.30	3,760	5	60	22.46	1,348	5,108
<b>Total</b>	<b>13,304,810</b>		<b>83,820</b>	<b>192</b>	<b>2,304</b>		<b>51,748</b>	<b>135,568</b>
<b>Whispering Pines</b>								
5/8" Residential Metered	80,840,136	2.23	180,274	1,490	17,880	22.46	401,585	581,858
1" Residential Metered	890,887	2.23	1,987	14	168	56.15	9,433	11,420
5/8" Commercial Metered	1,065,472	2.23	2,376	27	324	22.46	7,277	9,653
1" Commercial Metered	1,248,571	2.23	2,784	7	84	56.15	4,717	7,501
1.5" Commercial Metered	751,430	2.23	1,676	5	60	112.30	6,738	8,414
2" Commercial Metered	410,400	2.23	915	1	12	179.68	2,156	3,071
4" Commercial Metered	700	2.23	2	1	12	561.50	6,738	6,740
<b>Total</b>	<b>85,207,596</b>		<b>190,013</b>	<b>1,545</b>	<b>18,540</b>		<b>438,644</b>	<b>628,657</b>
<b>White Oak Planation/Lee Forest/Winston Planation/Winston Point</b>								
5/8" Residential Metered	22,108,370	3.25	71,852	444	5,328	22.46	119,667	191,519
1.5" Commercial Metered	159,300	3.25	518	1	12	112.30	1,348	1,865
<b>Total</b>	<b>22,267,670</b>		<b>72,370</b>	<b>445</b>	<b>5,340</b>		<b>121,014</b>	<b>193,384</b>
<b>Woodrun</b>								
5/8" Residential Metered	17,004,336	3.19	54,244	449	5,388	22.46	121,014	175,258



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Public Staff's Recommended Rates

CWSNC Water

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
5/8" Commercial Metered	130,040	3.19	415	4	48	22.46	1,078	1,493
1" Commercial Metered	393,690	3.19	1,256	2	24	56.15	1,348	2,603
<b>Total</b>	<b>17,528,066</b>		<b>55,915</b>	<b>455</b>	<b>5,460</b>		<b>123,440</b>	<b>179,355</b>

Yorktown

5/8" Residential Metered	3834650	5.01	19,212	107	1,284	22.46	28,839	48,050
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Zemosa Acres

5/8" Residential Metered	12,260,179	5.27	64,611	238	2,856	22.46	64,146	128,757
3/4" Residential Metered	85,055	5.27	448	1	12	22.46	270	718
1" Residential Metered	86,403	5.27	455	2	24	56.15	1,348	1,803
1" Commercial Metered	196,799	5.27	1,037	1	12	56.15	674	1,711
<b>Total</b>	<b>12,628,436</b>		<b>66,552</b>	<b>242</b>	<b>2,904</b>		<b>66,437</b>	<b>132,989</b>

Availability	-		-	1,446	2,892	24.70	71,432	71,432
Availability Linville Ridge	-		-	63	756	12.35	9,337	9,337
<b>Total Availability</b>	<b>-</b>			<b>1,509</b>	<b>3,648</b>		<b>80,769</b>	<b>80,769</b>

<b>Total</b>	<b>930,578,985</b>		<b>5,409,654</b>	<b>19,784</b>	<b>222,948</b>		<b>5,319,534</b>	<b>10,729,188</b>
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Revenue Requirement 10,727,674

Carolina Water Service, Inc. of North Carolina  
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For the 12 Months Ending June 30, 2015

Casselberry  
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Public Staff's Recommended Combined Sewer Rates

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
Residential Flat, Sewer only (based on 3,500 gallons)		-	-	1,479	17,748	52.68	934,965	934,965
5/8" Residential Metered	284,906,628	2.91	829,078	6,872	82,464	42.50	3,504,720	4,333,798
1" Res Metered	784,830	2.91	2,284	15	180	42.50	7,650	9,934
2" Res Metered	32,601	2.91	95	1	12	42.50	510	605
5/8" Commercial Metered	22,551,166	2.91	65,624	377	4,524	42.50	192,270	257,894
1" Commercial Metered	316,120	2.91	920	3	36	106.25	3,825	4,745
1.5" Commercial Metered	1,839,208	2.91	5,352	5	60	212.50	12,750	18,102
2" Commercial Metered	14,041,145	2.91	40,860	37	444	340.00	150,960	191,820
3" Commercial Metered	7,862,440	2.91	22,880	3	36	637.50	22,950	45,830
4" Commercial Metered	412,700	2.91	1,201	1	12	1,062.50	12,750	13,951
<b>CL/MS</b>								
5/8" Residential Sewer	37,935,767	6.65	252,273	741	8,892	52.26	464,696	716,969
1" Residential Sewer	9,574,291	6.65	63,669	94	1,128	130.65	147,373	211,042
5/8" Commercial Sewer	6,838,496	6.65	45,476	69	828	52.26	43,271	88,747
1" Commercial Sewer	2,646,550	6.65	17,600	17	204	130.65	26,653	44,252
1.5" Commercial Sewer	1,144,600	6.65	7,612	3	36	261.30	9,407	17,018
2" Commercial Sewer	2,071,400	6.65	13,775	3	36	418.08	15,051	28,826
3" Commercial Sewer	147,000	6.65	978	1	12	783.90	9,407	10,384

Carolina Water Service, Inc. of North Carolina  
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Casselberry  
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Public Staff's Recommended Combined Sewer Rates

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
<b>Nags Head</b>								
Flat Rate	-		-	655	7,860	62.81	493,687	493,687
5/8" Commercial Sewer	956,177	9.33	8,921	10	120	18.48	2,218	11,139
1" Commercial Sewer	2,751,947	9.33	25,676	6	72	46.22	3,328	29,004
1.5" Commercial Sewer	1,411,580	9.33	13,170	4	48	92.42	4,436	17,606
2" Commercial Sewer	6,615,700	9.33	61,724	7	84	147.88	12,422	74,146
6" Commercial Sewer	4,910,110	9.33	45,811	2	24	924.24	22,182	67,993
Mount Carmel	16,504,637	5.73	94,572	378	4,536	34.00	154,224	248,796
Regalwood	-		-	362	4,344	52.68	228,842	228,842
White Oaks	-		-	673	8,076	52.68	425,444	425,444
White Oaks School	-		-	1	12	1,634.66	19,616	19,616
Child Castle Daycare	-		-	1	12	203.34	2,440	2,440
<b>College Park</b>								
Residential Flat, Sewer only	-	-	-	1	12	52.68	632	632
5/8" Residential Metered	2,428,760	5.70	13,844	49	588	34.00	19,992	33,836
<b>Kings Grant</b>								
5/8" Residential Metered	8,000,358	3.80	30,401	177	2,124	34.00	72,216	102,617
1" Res Metered	181,220	3.80	689	1	12	34.00	408	1,097

Carolina Water Service, Inc. of North Carolina  
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Public Staff's Recommended Combined Sewer Rates

Billing Type	Usage	Usage Rate	Usage Revenue	EOP Customers	EOP x 12 months	Base Charge	Base Charge Revenue	Total Revenue
<b>White Oak Plantation/Lee Forest/Winston Pointe</b>								
5/8" Residential Metered	17,246,729	4.55	78,473	354	4,248	34.00	144,432	222,905
Total	454,112,160		1,742,955	12,402	148,824		7,165,724.8	8,908,680
						Revenue Requirement		8,908,468

**COMPANY'S PRESENT AND PROPOSED RATES AND THE PUBLIC STAFF'S  
RECOMMENDED WATER RATES AND COMBINED SEWER RATES FOR UNIFORM  
CUSTOMERS, CLMS AND NAGS HEAD**

**WATER RATES AND CHARGES**

**MONTHLY METERED SERVICE:** (Residential and Commercial)

	<u>Existing</u>	<u>Proposed</u>	<u>Public Staff's Recommend</u>
Base Facilities Charges (zero usage)			
< 1" meter	\$ 18.25	\$ 22.47	\$ 22.46
1" meter	\$ 45.63	\$ 56.19	\$ 56.15
1-1/2" meter	\$ 91.25	\$ 112.37	\$ 112.30
2" meter	\$146.00	\$ 179.80	\$ 179.68
3" meter	\$273.75	\$ 337.12	\$ 336.90
4" meter	\$456.25	\$ 561.87	\$ 561.50
6" meter	\$912.50	\$1,123.74	\$1,123.00

**AVERAGE RESIDENTIAL BILL** (based on 4,200 gallons)    \$ 41.10                      \$ 50.61                      \$ 49.42

**USAGE CHARGE:**

A.	Treated Water/1,000 gallons	\$ 5.44	\$ 6.70	\$ 6.42
B.	Untreated Water/1,000 gallons (Brandywine Bay Irrigation Water)	\$ 3.60	\$ 3.60	\$ 4.12
C.	Purchased Water for Resale			
<u>Service Area</u>	<u>Bulk Provider</u>	<u>Usage Charge/ 1,000 gallons</u>	<u>Usage charge /1,000gallons</u>	
Carolina Forest	Montgomery County	\$ 3.19	\$ 3.19	
High Vista Est.	City of Hendersonville	\$ 3.15	\$ 3.15	
Riverpointe	Charlotte Water	\$ 6.30	\$ 6.30	
Whispering Pines	Town of Southern Pines	\$ 2.23	\$ 2.23	
White Oak Plt./				
Lee Forest	Johnston County	\$ 3.25	\$ 3.25	
Winston Plt.	Johnston County	\$ 3.25	\$ 3.25	
Winston Point	Johnston County	\$ 3.25	\$ 3.25	
Woodrun	Montgomery County	\$ 3.19	\$ 3.19	
Yorktown	City of Winston-Salem	\$ 5.01	\$ 5.01	
Zemosa Acres	City of Concord	\$ 5.27	\$ 5.27	

**MONTHLY FLAT RATE SERVICE:**                      \$ 34.52                      \$ 42.51                      \$ 41.70

**AVAILABILITY RATES (semi-annual):**

Applicable only to property owners in Carolina Forest  
and Woodrun Subdivision in Montgomery County    \$ 21.60                      \$ 26.60                      \$ 24.70

**LINVILLE RIDGE SUBDIVISION:**

**MONTHLY METERED SERVICE:** (Common Facility Only)

	<u>Existing</u>	<u>Proposed</u>	<u>Public Staff's Recommend</u>
Base Facilities Charges (zero usage) Common facility only	\$ 72.00	N/A	N/A
Base Facilities Charges (Residential and Commercial)			
< 1" meter	N/A	\$ 22.47	\$ 22.46
1" meter		\$ 56.19	\$ 56.15
1-1/2" meter		\$ 112.37	\$ 112.30
2" meter		\$ 179.80	\$ 179.68

	3" meter	\$ 337.12	\$ 336.90
	4" meter	\$ 561.87	\$ 561.50
	6" meter	\$1,123.74	\$1,123.00
			PublicStaff's
			Recommend
Usage Charge, per 1,000 gallons (Treated Water)	<u>Existing</u> \$ 3.08	<u>Proposed</u> \$ 6.70	\$ 6.42
Flat Residential Rate (Actual Taps)	\$ 31.68	\$ 42.51	\$ 41.70
Flat Availability Rate (Non-user only)	\$ 10.80	\$ 10.80	\$ 12.35

## SEWER RATES AND CHARGES

### MONTHLY METERED SERVICE:

#### Base Facility Charge:

	<u>Existing</u>	<u>Proposed</u>	PublicStaff's
			Recommend
Residential (zero usage)	\$ 33.02	\$ 39.57	\$ 42.50
Commercial (based on meter size with zero usage)			
< 1" meter	\$ 33.02	\$ 39.57	\$ 42.50
1" meter	\$ 82.55	\$ 98.92	\$ 106.25
1-1/2" meter	\$ 165.10	\$ 197.84	\$ 212.50
2" meter	\$ 264.16	\$ 316.55	\$ 340.00
3" meter	\$ 495.30	\$ 593.53	\$ 637.50
4" meter	\$ 825.50	\$ 989.21	\$1,062.50
6" meter	\$1,651.00	\$1,978.42	\$2,125.00
Usage Charge per 1,000 gallons	\$ 2.46	\$ 2.95	\$ 2.91
<b><u>AVERAGE RESIDENTIAL BILL</u></b> (based on 4,200 gallons)	\$ 43.35	\$ 51.96	\$ 54.72

### MONTHLY METERED PURCHASED SEWER SERVICE:

Collection charge (Residential and Commercial/SFE)	N/A	\$ 30.86	\$ 34.00
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Usage charge, per 1,000 gallons based on purchased water

<u>Service Area</u>	<u>Bulk Provider</u>	<u>Usage Charge/ 1,000 gallons</u>	<u>Usage charge /1,000 gallons</u>
White Oak Pkt./Lee			
Forest/Winston Pt.	Johnston County	\$ 4.55	\$ 4.55
Kings Grant	Two Rivers Utilities	\$ 3.80	\$ 3.80
College Park	Town of Dallas	\$ 5.70	\$ 5.70

<b><u>MONTHLY FLAT RATE SERVICE:</u></b>	\$ 44.70	\$ 53.56	\$ 52.68
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### MONTHLY COLLECTION SERVICE ONLY <sup>4/</sup>:

(When sewage is collected by utility and transferred to another entity for treatment)

A. Single Family Residence	\$ 16.09	N/A
B. Commercial/SFE	\$ 16.09	N/A

### MT. CARMEL SUBDIVISION SERVICE AREA:

Monthly Base Facility Charge	\$ 6.00	\$ 6.44	\$ 6.60
Usage Charge/1,000 gallons (Based on metered water usage)	\$ 5.45	\$ 5.60	\$ 5.73
Monthly Collection Charge (Residential and Commercial/SFE)	\$ 16.09	\$ 24.42	\$ 27.40

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REGALWOOD AND WHITE OAK ESTATES SUBDIVISION SERVICE AREAS:

A. Monthly Flat Rate Sewer Service:

	<u>Existing</u>	<u>Proposed</u>	<u>Public Staff's Recommend</u>
Residential Service	\$ 44.70	\$ 53.56	\$ 52.68
White Oak High School	\$1,386.90	\$1,661.95	\$ 1,634.66
Child Castle Daycare	\$ 172.40	\$ 206.59	\$ 203.34
Pantry	\$ 91.85	\$ 110.07	\$ 108.00

**COROLLA LIGHT AND MONTERAY SHORES**

**SEWER RATES AND CHARGES**

MONTHLY METERED SERVICE: (Residential and Commercial)

Base Facility Charge (based on meter size and zero usage)			<u>Public Staff Recommend</u>
	<u>Existing</u>	<u>Proposed</u>	
< 1" meter	\$ 52.26	\$ 66.72	\$ 52.26
1" meter	\$ 130.65	\$ 166.81	\$ 130.65
1-1/2" meter	\$ 261.30	\$ 333.62	\$ 261.30
2" meter	\$ 418.08	\$ 533.80	\$ 418.08
3" meter	\$ 783.90	\$1,000.87	\$ 783.90
4" meter	\$1,306.50	\$1,668.11	\$1,306.50
6" meter	\$2,613.00	\$3,336.23	\$2,613.00
Usage Charge per 1,000 gallons	\$ 6.65	\$ 8.49	\$ 6.65

**THE VILLAGE OF NAGS HEAD**

**SEWER RATES AND CHARGES**

MONTHLY METERED SERVICE: (Commercial)

Base Facility Charge (based on meter size and zero usage)			<u>Public Staff Recommend</u>
	<u>Existing</u>	<u>Proposed</u>	
< 1" meter	\$ 18.48	\$ 22.39	\$ 18.48
1" meter	\$ 46.22	\$ 56.01	\$ 46.22
1-1/2" meter	\$ 92.42	\$ 111.99	\$ 92.42
2" meter	\$ 147.88	\$ 179.20	\$ 147.88
3" meter	\$ 277.27	\$ 335.99	\$ 277.27
4" meter	\$ 462.12	\$ 560.00	\$ 462.12
6" meter	\$ 924.24	\$1,924.24	\$ 924.24
Usage Charge per 1,000 gallons	\$ 9.33	\$ 11.31	\$ 9.33
Minimum Monthly Charge (Commercial customers who use less than 4,700 gallons)	\$ 62.81	\$ 76.11	\$ 62.81
<u>MONTHLY FLAT RATE:</u>	\$ 62.81	\$ 76.11	\$ 62.81

**AVERAGE MONTHLY BILLS AT COMPANY'S PRESENT AND PROPOSED RATES  
AND PUBLIC STAFF'S RECOMMENDED RATES**

**WATER OPERATIONS**

<u>Service Area</u>	<u>CWSNC Present</u>	<u>CWSNC Proposed</u>	<u>Percent Increase</u>	<u>Public Staff Recommended</u>	<u>Percent Increase</u>
Uniform Rate	\$41.10	\$50.61	23.1%	\$49.42	20.2%
Carolina Forest	\$41.10	\$35.87	(12.7%)	\$35.86	(12.7%)
High Vista Estates	\$41.10	\$35.70	(13.1%)	\$35.69	(13.2%)
Riverpointe	\$41.10	\$48.93	19.1%	\$48.92	19.0%
Whispering Pines	\$41.10	\$31.84	(22.5%)	\$31.83	(22.5%)
White Oak/Lee F.	\$41.10	\$36.12	(12.1%)	\$36.11	(12.1%)
Winston Plantation	\$41.10	\$36.12	(12.1%)	\$36.11	(12.1%)
Winston Pointe	\$41.10	\$36.12	(12.1%)	\$36.11	(12.1%)
Woodrun	\$41.10	\$35.87	(12.7%)	\$35.86	(12.7%)
Yorktown	\$41.10	\$43.51	5.9%	\$43.50	5.8%
Zemosa Acres	\$41.10	\$44.60	8.5%	\$44.59	8.5%
Linville Ridge	\$31.68	\$42.51	34.2%	\$41.70	31.6%

Average 5/8 inch Residential Water Bill, Based on 4,200 Gallons  
Linville Ridge flat rate

**SEWER OPERATIONS**

<u>Service Area</u>	<u>CWSNC Present</u>	<u>CWSNC Proposed</u>	<u>Percent Increase</u>	<u>Public Staff Recommended</u>	<u>Percent Increase</u>
Uniform Rate	\$43.35	\$ 51.96	19.9%	\$54.72	26.2%
White Oak Plt./ Lee Forest/					
Winston Pt.	\$43.35	\$ 49.97	15.3%	\$53.11	22.5%
Kings Grant	\$43.35	\$ 46.82	8.0%	\$49.96	15.2%
College Park	\$43.35	\$ 54.80	26.4%	\$57.94	33.7%
Mt. Carmel	\$44.98	\$ 54.38	20.9%	\$58.07	29.1%
CLMS	\$80.19	\$102.38	27.7%	\$80.19	0%
Nags Head	\$62.81	\$ 76.11	21.2%	\$62.81	0%

Average 5/8 inch Residential Water Bill, Based on 4,200 Gallons  
Nags Head flat rate