



**NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION**

November 5, 2021

Ms. A. Shonta Dunston, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

Re: Docket No. W-354, Sub 384 – Application by Carolina Water Service, Inc. of North Carolina, 4944 Parkway Plaza Boulevard, Suite 375, Charlotte North Carolina 28217 for Authority to Adjust and Increase Rates for Water and Sewer Utility Service in All of Its Service Areas in North Carolina

Dear Ms. Dunston:

Attached for filing on behalf of the Public Staff in the above-referenced docket are the testimony and exhibits of Gina Casselberry, Advanced Utilities Engineer, Public Staff Water, Sewer, and Telephone Division.

By copy of this letter, I am forwarding a copy to all parties of record by electronic delivery.

Sincerely,

Electronically submitted
s/John D. Little
Staff Attorney
john.little@psncuc.nc.gov

Attachments

Executive Director
(919) 733-2435

Accounting
(919) 733-4279

Consumer Services
(919) 733-9277

Economic Research
(919) 733-2267

Energy
(919) 733-2267

Legal
(919) 733-6110

Transportation
(919) 733-7766

Water/Telephone
(919) 733-5610

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-354, SUB 384

In the Matter of
Application by Carolina Water Service,)
Inc. of North Carolina, 4944 Parkway)
Plaza Boulevard, Suite 375, Charlotte,)
North Carolina 28217, for Authority to)
Adjust and Increase Rates for Water)
and Sewer Utility Service in All of Its)
Service Areas in North Carolina.)

TESTIMONY OF
GINA Y. CASSELBERRY
PUBLIC STAFF – NORTH
CAROLINA UTILITIES
COMMISSION

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-354, SUB 384

TESTIMONY OF GINA Y. CASSELBERRY

**ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION**

NOVEMBER 5, 2021

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

3 A. My name is Gina Y. Casselberry. My business address is 430 North
4 Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am an
5 Advanced Utilities Engineer with the Water, Sewer, and Telephone
6 Division of the Public Staff – North Carolina Utilities Commission
7 (Public Staff).

8 **Q. BRIEFLY STATE YOUR QUALIFICATIONS AND DUTIES.**

9 A. I graduated from Michigan Technological University receiving a
10 Bachelor of Science Degree in Civil Engineering. I have been with the
11 Public Staff's Water Division since February 1992. I have presented
12 recommendations in rate increase proceedings, new franchise and
13 transfer proceedings, and other matters before the North Carolina
14 Utilities Commission (Commission) for the past twenty-nine years,
15 including Carolina Water Service, Inc. of North Carolina's last seven
16 general rate cases. My duties with the Public Staff are to monitor the

1 operations of regulated water and wastewater utilities with regard to
2 rates and service. These duties include conducting field investigations,
3 reviewing, evaluating, and recommending changes in the design,
4 construction, and operations of regulated water and wastewater
5 utilities, presenting expert testimony in formal hearings, and presenting
6 information, data, and recommendations to the Commission.

7 **Q. WHAT IS THE SCOPE OF YOUR INVESTIGATION AND THE**
8 **PURPOSE OF YOUR TESTIMONY?**

9 A. On July 2, 2021, Carolina Water Service, Inc. of North Carolina
10 (CWSNC or Company) filed an application with the Commission
11 seeking authority to increase its rates for providing water and
12 wastewater utility service in all of its service areas in North Carolina.
13 My area of investigation in this proceeding was to review Company
14 expenses, including testing, chemicals, meter reading, maintenance
15 and repairs, sludge removal, purchased water, and purchased sewer
16 treatment.

17 **Q. HAVE YOU RECOMMENDED ANY ADJUSTMENTS TO**
18 **EXPENSES RELATED TO WATER AND WASTEWATER**
19 **OPERATIONS?**

1 A. Yes, I have provided Public Staff Accountant Lynn Feasel with
2 recommendations for adjustments to purchased water, sludge
3 removal, and testing expenses.

4 **PURCHASED WATER EXPENSES**

5 CWSNC's pro forma adjustment to purchased water expenses, which
6 is contained in its update filed on October 8, 2021, reflect changes in
7 supplier's rates from the City of Charlotte, City of Concord, City of
8 Gastonia, Town of Hendersonville, Johnston County, Town of
9 Lancaster, Town of Franklin, Town of Mooresville, and Town of
10 Southern Pines. For the purpose of matching the cost to the revenue
11 and facilitating future filings pursuant to N.C. Gen. Stat. § 62-133.11,
12 it is the Public Staff's position that purchased water expenses and pass
13 through rates charged by the utility should reflect the current rates for
14 all suppliers. Therefore, in addition to the updated rates included in
15 CWSNC's pro forma adjustment, I updated the rates for the City of
16 Asheville and the City of Fayetteville - Public Works Commission
17 (PWC). Regarding the Town of Mooresville, I disagree with the
18 Company's rate of \$3.99 per 1,000 gallons. Based on the Town of
19 Mooresville's current schedule of rates, the consumption rate for water
20 service is \$3.72 per 1,000 gallons, effective July 1, 2021.

1 In response to Public Staff Data Request No. 3, CWSNC provided all
2 of the test year invoices for each partial purchased water system and
3 each 100 percent (full) purchased water system. The Public Staff
4 calculates purchased water expenses based on the actual number of
5 gallons purchased during the test year period, adjusted for excess
6 amounts of non-revenue purchased water if applicable, multiplied by
7 the supplier's current rate.

8 Non-revenue water (NRW) adjustments were made to the Zemosa
9 Acres, Carolina Forest, Woodrun, High Vista Estates, and Tanglewood
10 South/Eastgate systems. The Public Staff recommends a 15%
11 maximum allowance for NRW for most water systems and 20% for
12 systems located in the mountain regions of North Carolina, which is
13 consistent with the Public Staff's position in the last general rate case,
14 Docket No. W-354, Sub 364. Due to challenges with terrain and rocky
15 subsurface conditions, the mountainous areas are expected to have
16 more issues with managing water loss than water systems in other
17 regions of North Carolina. Casselberry Table No. 1 below lists the
18 purchased water systems that were adjusted for NRW, the actual NRW
19 percentage, and the Public Staff's recommended allowable NRW
20 percentage.

1 Casselberry Table No. 1

Purchased Water System	Supplier	Actual NRW (%)	PS Adjusted NRW (%)
Zemosa Acres	City of Concord	23.91%	15%
Carolina Forest	Montgomery County	24.19%	15%
Woodrun	Montgomery County	31.89%	15%
High Vista Estates	City of Hendersonville	38.45%	20%
Tanglewood South/Eastgate	Fayetteville Public Works Commission	27.29%	15%

2 The Public Staff recommends purchased water expenses of
 3 \$1,541,632 for the Uniform Water Rate Division. My calculations are
 4 shown in **Casselberry Exhibit No.1**. There are no purchased water
 5 systems within the Bradfield Farms/Fairfield Harbor/Treasure Cove,
 6 (BF/FH/TC) Water Rate Division.

7 **Sludge Removal**

8 **Uniform Water Rate Division**

9 The Company booked \$38,340 as sludge removal expense associated
 10 with uniform water operations. Based on the Company's response to
 11 Public Staff Data Request No. 22 (DR 22), the Company booked
 12 \$11,520 to uniform water operations that should have been booked to
 13 uniform sewer operations for the Belvedere service area and \$15,145

1 to uniform sewer operations for the Transylvania service area. I
2 reclassified the \$11,520 from uniform water to uniform sewer for
3 Belevedere and \$15,145 from uniform water to uniform sewer for
4 Transylvania. I recommend \$11,675 for sludge removal for the Uniform
5 Water Rate Division.

6 Uniform Sewer

7 Sludge removal can vary from year to year, depending on operational
8 changes or system maintenance requirements, in addition to routine
9 sludge removal. For example, system maintenance requirements
10 could include cleaning a digester, clarifier, or equalization tank, or
11 pumping out a retention pond. To determine a representative level
12 for sludge removal, I reviewed the historical sludge removal
13 expenses from the last two rate cases and the expenses provided by
14 CWSNC in this case to determine the average expense, adjusted for
15 operational changes.

16 In response to DR 22, CWSNC confirmed that there were operational
17 changes to the Corolla Light/Monteray Shores (CL/MS), Danby, and
18 Regalwood wastewater treatment plants (WWTP). The Corolla Light
19 WWTP has been taken out of service and wastewater is being
20 diverted to the Monteray Shores WWTP. Going forward, CWSNC
21 estimates sludge removal expenses in the amount of \$80,000 for the

1 Monterey Shores WWTP. In reviewing past sludge removal
2 expenses for Corolla Light and Monterey Shores, combined sludge
3 removal expenses of \$80,000 appears reasonable. CWSNC
4 confirmed that it is no longer using the sludge drying beds associated
5 with the Danby WWTP, which increased sludge removal expenses
6 by approximately 67.7 percent from the average expense level of the
7 prior two rate cases. CWSNC also modified the process for the
8 Regalwood WWTP and estimates an additional \$6,855 in sludge
9 removal expenses. I have incorporated these changes in my
10 calculations and recommend \$519,098 for sludge removal for the
11 Uniform Sewer Rate Division. My calculations are shown in
12 **Casselberry Exhibit No. 2.**

13 Bradfield Farms/Fairfield Harbour/Treasure Cove (BF/FH/TC) Sewer

14 There were no process changes to the Bradfield Farms or Fairfield
15 Harbour WWTPs. I recommend \$67,150 for sludge removal for the
16 BF/FH/TC Sewer Rate Division. My calculations for sludge removal
17 are shown in **Casselberry Exhibit No. 2.**

18 **Testing Expenses**

19 The Company calculated its pro forma adjusted testing expense,
20 contained in its October 8, 2021 update, for water and wastewater.

21 Similar to how the Public Staff has traditionally calculated these testing

1 expenses, the Company used current testing schedules going forward,
2 amortized the expense over the number of years corresponding to the
3 testing frequencies for the various tests, and used the current unit costs
4 for the tests. I have reviewed the Company's testing expenses and find
5 the total for the Company's combined pro forma testing expenses
6 reasonable with the exception of one minor adjustment. I recommend
7 reallocating testing expenses in the cost center account. Based on my
8 review of invoices provided in response to Public Staff Data Request
9 No. 38, all of the expenses in the cost center account are associated
10 with water testing and should be allocated to the Uniform Water Rate
11 Division and the BF/BH/TC Water Rate Division based on equivalent
12 residential customers. The Public Staff recommends testing
13 expenses of \$251,466 for the Uniform Water Rate Division, \$291,697
14 for Uniform Sewer Rate Division, \$21,125 for BF/FH/TC Water Rate
15 Division, and \$23,550 BF/FH/TC Sewer Rate Division, for a total of
16 \$587,838.

17 **DOES THIS CONCLUDE YOUR TESTIMONY?**

18 A. Yes, it does.

Purchased Water

Service Area	Bulk Provider	Type of Purchase System	Effect Date of the Rates	Total Gallons Purchased	Total Gallons Sold	Loss (gallons)	Actual Loss (%)	P.S. ¹ Allowable Loss (%)	Loss at 15% or 20% (gallons)	Sold Plus 15% or 20% loss (gallons)	Usage Rate (per k-gal)	Avg Annual Usage Rate Expense	Current Base Rate	Annual Base Rate Expense	Total Expense
The Pointe	Town of Mooresville	Partial	7/1/2019	43,832,400	196,208,944	-	-	-	-	-	\$3.72	\$163,057	\$1,137.60	\$13,651	\$176,708
Zemosa Acres	City of Concord	Full	7/1/2021	15,977,250	12,156,732	3,820,518	23.91	15	2,145,306	14,302,038	\$5.52	\$78,947	\$76.11	\$913	\$79,861
Willow Brook	Johnston County	Full (2)	9/1/2021	5,218,890	5,810,976	-	-	-	-	-	\$3.02	\$15,761	\$100.00	\$1,200	\$16,961
Tanglewood/Eastgate	PWC City of Fayetteville	Full (2)	8/1/2021	10,694,900	6,630,150	4,064,750	38.01	15	1,170,026	7,800,176	\$5.55	\$43,291	\$1,029.10	\$12,349	\$55,640
White Oak	Johnston County	Full	9/1/2021	33,551,229	33,149,095	402,134	1.20	-	-	-	\$3.02	\$101,325	\$300.00	\$3,600	\$104,925
Bent Creek	City of Asheville	Partial	7/1/2021	8,192,096	11,449,415	-	-	-	-	-	\$3.78	\$30,966	\$69.49	\$417	\$31,383
Whispering Pines	Town of Southern Pines	Full	7/1/2021	102,085,763	96,229,211	5,856,552	5.74	-	-	-	\$3.52	\$359,342	\$0.00	\$0	\$359,342
Carolina Forest	Montgomery County	Full	7/1/2016	10,193,310	7,727,296	2,466,014	24.19	15	1,363,640	9,090,936	\$3.19	\$29,000	\$0.00	\$0	\$29,000
Woodrun	Montgomery County	Full	7/1/2016	28,932,200	19,704,636	9,227,564	31.89	15	3,477,289	23,181,925	\$3.19	\$73,950	\$0.00	\$0	\$73,950
Kings Grant	City of Gastonia	Partial	7/1/2021	3,526,700	7,891,550	-	-	-	-	-	\$6.67	\$23,523	\$164.35	\$1,972	\$25,495
Yorktown	City of Winston-Salem	Full	7/1/2021	3,906,916	3,596,470	310,446	7.95	-	-	-	\$5.79	\$22,621	\$226.62	\$2,719	\$25,340
Danby	LCWSD Lancaster County	Partial	7/1/2021	31,294,670	66,738,186	-	-	-	-	-	\$4.24	\$132,689	\$333.91	\$4,007	\$136,696
High Vista Estates	City of Hendersonville	Full	7/1/2021	19,695,200	12,122,946	7,572,254	38.45	20	3,030,737	15,153,683	\$4.72	\$71,525	\$53.25	\$639	\$72,164
Riverpointe	City of Charlotte	Full	7/1/2021	16,281,342	15,133,098	1,148,244	7.05	-	-	-	\$7.07	\$115,109	\$39.25	\$471	\$115,580
Carolina Trace	City of Sanford	Full	9/1/2020	78,672,962	69,594,676	9,078,286	11.54	-	-	-	\$2.21	\$173,867	\$0.00	\$0	\$173,867
River Bend	Town of Franklin	Full	7/1/2021	7,140,000	6,081,974	1,058,026	14.82	-	-	-	\$8.10	\$57,834	\$573.70	\$6,884	\$64,718
															\$1,541,632

Notes:

1. The Public Staff determines an appropriate amount of water loss based on system specific criteria, such as geographical location, unusual circumstances, etc. For the systems shown above, the standard allowable water loss is 20% for systems located in the mountain region and 15% for all others.

2. Service area has been converted from partial purchase water system to full purchased water system.

Sludge Removal

CWSNC - Uniform Sewer

Bus.	Unit	Service Area	Sub 360	Sub 364	Sub 384	Average	Notes
			Test Year	Test Year	Test Year		
			Ending Dec-17	Ending Mar-19	Ending Mar-21	Unless Noted	
			Amount	Amount	Amount		
	182101	Kynwood Abington	22,333	24,325	85,523	23,329	1
	102	Brandybay Wine/Spooners Cr.	28,380	9,180	10,280	15,947	
	107	Sugar Mountain	18,410	18,470	17,075	17,985	
	110	Saddlewood	5,262	1,290	3,321	3,291	
	115	Ashley Hills	52,643	21,393	19,515	20,454	2
	117	Corolla Light	13,350	13,950	-	-	3
	120	Hestron Park	4,320	5,400	3,780	4,500	
	123	Hound Ears	500	1,435	-	645	
	126	Willowbrook	9,846	8,767	6,059	8,224	
	130	Wolf Laurel	1,080	9,475	1,550	4,035	
	136	Kings Grant - Raleigh	2,562	2,916	3,930	3,136	
	138	Bent Creek	14,000	13,325	21,320	16,215	
	149	Bear Paw Resort	4,500	-	-	1,500	
	155	Kings Grant Charlotte	-	-	-	-	
	160	College Park	-	-	-	-	
	173	Monteray Shores	51,850	50,730	139,649	80,000	4
	176	Olde Point	1,575	2,205	1,713	1,831	
	178	Independent/Hemby	28,162	26,198	28,673	27,678	
	190	Danby	40,422	33,438	61,932	61,932	5
	197	Queens harbor	3,100	1,375	3,320	2,598	
	209	Nags Head	15,845	32,170	42,053	37,112	6
	217	Regalwood	9,270	7,020	21,073	15,000	7
	218	White Oak Estates	25,380	16,200	27,872	23,151	
	233	Belvedere Plantation	24,570	18,750	33,660	25,660	8
	236	Riverpointe	5,373	7,102	3,105	5,193	
	241	Carolina Pines	11,430	4,170	5,130	6,910	
	243	Nero	4,372	6,557	5,618	5,516	
	2247	Ridges at Mountain Harbor	-	-	-	-	
	181101	Elk River	5,160	4,755	2,407	4,107	
	183102	Sapphire Valley	17,377	20,876	14,860	17,704	
	183109	Fairfield Mountain	-	-	-	-	
	183115	Ashley Hills North	-	41,614	44,672	43,143	
	187101	Carolina Trace	41,732	34,962	22,294	22,294	9
	188101	Transylvania	17,325	16,750	24,350	19,475	10
	140	Mt Carmel	-	-	1,600	533	
Total CWSNC - Uniform Sewer			\$ 480,129	\$ 454,798	\$ 656,334	\$ 519,098	

Sludge Removal

Bradfield Farms/Fairfield Harbor/Treasure Cove

Bus. Unit	Service Area	Sub 360	Sub 364	Sub 384	Average Unless Noted	Notes
		Ending Dec-17 Amount	Ending Mar-19 Amount	Ending Mar-21 Amount		
191101	Bradfield Farms	57,935	38,299	31,707	42,647	
183106	Fairfield Harbor	22,498	31,410	19,602	24,503	
Total BF/FH/TC		\$ 80,433	\$ 69,709	\$ 51,309	\$ 67,150	

Notes

- 1 CWSNC went back to using the sludge box due to hauling costs. Used average of two prior test years.
 - 2 New process starting in Sub 364. Used a two test year average.
 - 3 The WWTP at Corolla Light has been taken off line and the flows is being diverted to Monterey Shore's WWTP.
 - 4 CWSNC estimates that sludge removal will be \$80,000 with the combined flow for CL/MS.
 - 5 New process. CWSNC is no longer using the sludge drying box.
 - 6 New process beginning in Sub 364. Used a two test year average.
 - 7 New process. CWSNC estimated that sludge removal will be 15,000 going forward
 - 8 Reclassified \$11,520 from sludge removal for water operations, then used a three test year average
 - 9 One train is operating until the new plant is replaced.
 - 10 Reclassified \$15,145 from sludge removal form water operations, then used a three test year average
- Unrepresentative expense levels excluded from calculations.

