

FUND: Water and Sewer Fund**DEPARTMENT: Water and Sewer Plant and Field Operations****Description and Responsibilities**

The Public Works and Utilities Department is responsible for the operation of a Water Treatment Plant, the operation and maintenance of the water distribution system, the operation of a Wastewater Treatment Plant, and the operation and maintenance of both the distribution and collection systems.

Water Plant

The 1.000 million gallons per day (MGD) Water Treatment Plant (expandable to 2.000 MGD) was constructed in 1978 and receives water from the Town's 45-47 million-gallon pond on Brickhouse Creek, with Chetola Lake having the capability to serve as a backup water source during times of drought. In addition, in 2008, the Town executed a water agreement with the Town of Boone for water system interconnection that can be used in emergency situations. The interconnection project was completed in 2011 and allows water to be transferred between Blowing Rock, Boone and Appalachian State University water systems.

The Blowing Rock Water Plant is located along U.S. Highway 321 just south of the Blue Ridge Parkway. The facility is a traditional treatment process including alum addition, flocculation, disinfection, settling and filtration. Corrosion control is also utilized prior to distribution to the residents using orthophosphate.

The Town's service area is predominantly south of the Water Treatment Plant. Finished water is pumped to a high elevation, and then allowed to gravity feed into the service area. The Green Hill tank, capacity 3.000 MGD, is the means of control at the highest point of the system. A number of pressure reducing valves have been placed in the system to control pressures for the residents.

Wastewater Treatment Plant

The Town of Blowing Rock operates a Wastewater Treatment Plant very near the Water Treatment Plant and utilizes a discharge to the Middle Fork of the New River. The plant is rated for capacity of 0.800 MGD, but could be expanded to a service capacity of 1.200 MGD. The original plant was constructed in 1960, expanded in 1989, and refurbished in 2013. The facility is fed by four (4) sewer system lift stations that handle the wastewater generated by the community. The facility is of concrete construction and is set up for extended aeration treatment. The plant operators sample the water discharge everyday and also send samples out three times per week to an independent testing lab to ensure environmental compliance.

Water & Sewer Field Operations Division

The Field Operations division is responsible for all water and sewer taps, leak repair and water line installation. This department is also responsible for all water meter reading in the town on a bi-monthly basis. In addition, this department maintains the water distribution system and the wastewater collection system.

There are approximately 2,186 water meters and 1,745 sewer taps in the system. The water distribution system consists of approximately 22.02 miles of lines. The wastewater collection system consists of approximately 16.07 miles of gravity sewer lines and 3.59 miles of pressure sewer. There are five (5) wastewater lift-stations: Mayview, Chetola, Grandfather (in Chestnut Village), Chestnut Ridge and Quail Hollow.

Staffing and Schedules

A Utility Plant Supervisor and four Utility Plant Operators are assigned to the Water Plant and Wastewater Plant Divisions. The personnel work a varied schedule to meet the service demands of the utility.

A Heavy Equipment Operator, a Light Equipment Operator and two (2) Equipment Operator II's are assigned to the Water & Sewer - Field Operations Division. The division uses other employees, as needed, for the reading of water meters. The personnel work a standard 40-hour week schedule and are on call for emergency repairs.

Measures of Activity

2021 Wastewater Plant – Totals

Month	2021 Average Daily (.800 MGD capacity)	2021 Total Treated Per Month (.800 MGD capacity)
January	.236	7.33
February	.254	7.12
March	.275	8.52
April	.255	7.67
May	.236	7.32
June	.238	7.16
July	.238	7.14
August	.176	5.47
September	.138	4.14
October	.155	4.83
November	.111	3.33
December	.101	3.13
Total Year	-	73.21
Daily Avg	.201	-

2021 Water Plant - Totals

Month	2021 Average Daily Water Treated (Million Gallons)	2021 Total Treated Per Month (Million Gallons)
January	.374	11.60
February	.457	12.63
March	.386	11.98
April	.333	9.99
May	.347	10.78
June	.400	12.02
July	.538	16.15
August	.515	15.98
September	.508	14.22
October	.549	15.39
November	.426	12.49
December	.433	13.01
Total Year	-	156.29
Daily Avg	.438	-

WATER AND SEWER FUND					
DESCRIPTION: WATER AND SEWER EXPENDITURES					
CODE: 30-91-7120					
ACCOUNT NUMBER	DESCRIPTION	2019-20 Actual	2020-21 Adopted	2021-22 Adopted	2022-23 Adopted
Plant Operations 7120					
002	Salaries	252,158	244,317	276,526	303,802
003	Overtime	10,963	13,000	20,500	15,375
005	FICA Expense	29,071	19,685	22,722	24,417
006	Group Insurance	34,001	35,000	38,844	38,844
007	401K	19,586	12,866	14,851	15,959
008	Retirement	87,263	42,869	53,673	57,675
	Personnel Subtotal	433,042	367,737	427,116	456,072
011	Telephone	6,318	6,000	6,000	18,000
013	Utilities	117,762	115,000	127,000	127,500
014	Employee Development	2,704	2,500	2,800	2,800
016	Maintenance/Repair-Equip	21,069	24,000	24,000	30,000
017	Maintenance/Repair-Equip- Service Contracts	3,844	21,000	20,000	20,000
031	Gasoline	4,443	6,000	5,000	5,000
033	Materials and Supplies	21,898	22,500	22,500	30,000
034	Sludge Processing	34,965	44,145	30,000	30,000
036	Uniforms	2,593	3,500	3,500	3,500
053	Permits & Dues	3,125	3,500	3,500	3,500
057	Miscellaneous	858	5,500	5,500	5,500
104	Lab Contract	22,589	23,000	25,000	30,000
333	Chemicals	34,082	33,000	35,000	50,000
	Operating & Maint. Subtotal	276,249	309,645	309,800	355,800
500	Capital Outlay	0	-	-	-
505	Transfer to Capital Projects				
	Capital Subtotal	0	-	-	-
900	Debt Service	45,487	87,279	87,279	76,570
	SUBTOTAL - PLANT OPERATIONS	754,777	764,660	824,194	888,442
Field Operations 7120					
202	Salaries	126,805	92,800	167,259	167,259
203	Overtime	5,690	4,797	10,250	10,250
209	On Call/Standby Pay	10,515	6,736	10,000	10,000
205	FICA Expense	11,538	-	13,579	13,579
206	Group Insurance	27,040	17,897	31,680	31,680
207	401K	7,493	-	8,875	8,875
208	Retirement	21,825	-	32,076	32,076
	Personnel Subtotal	210,907	122,231	273,720	273,720
211	Telephone	-	-	-	-
213	Utilities	-	-	-	-
214	Employee Development	464	464	2,000	2,000
216	Maintenance/Repair-Equip	3,915	3,915	10,000	10,000
217	Maintenance/Repair-Lift Station	1,046	217	13,000	13,000
231	Diesel/Gasoline	9,169	6,201	6,000	8,500
233	Materials and Supplies	45,209	39,857	85,000	85,000
235	Safety Supplies	772	772	1,800	1,800
236	Uniforms	2,713	2,483	2,500	2,500
240	Contracted Svs.	-	-	-	-
257	Miscellaneous	3,975	442	2,000	2,000
	Operating & Maint. Subtotal	67,264	54,351	122,300	124,800
502	Capital Outlay	-	-	60,000	187,179 *
503	Water Line Replacements/Repairs- Reserve	-	-	22,500	10,000 \$
504	Sewer Line I&I Replacements/Repairs- Reser	-	-	22,500	10,000 \$
505	Transfer to Capital Projects	-	-	-	-
506	Transfer to PRV Reserve	-	-	-	-
	Capital Subtotal	-	-	105,000	207,179
950	Debt Service	94,118	29,736	14,136	32,505
	SUBTOTAL - FIELD OPERATIONS	372,289	206,318	515,156	638,203
				* Capital for FY 2023:	
				NEW Front End Loader	\$ 187,179 IP
					\$ 187,179
\$ Funds remaining at the end of the year in these areas to be transferred to capital reserves.					
	TOTAL EXPENDITURES	1,127,066	970,978	1,339,350	1,526,645