

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

2018-2019 Wastewater Plant – Average Daily Flow

Month	2018 Average Daily (.800 MGD capacity)	2019 Average Daily (.800 MGD capacity)
January	.489	.377
February	.397	.303
March	.371	.237
April	.428	.303
May	.482	.309
June	.472	.506
July	.418	.291
August	.462	.296
September	.442	.225
October	.453	.289
November	.402	.303
December	.443	.267
Total Year	158.410 MG	112.64 MG
Daily Avg	.434	.303

2018-2019 Water Plant - Total Water Treated

Month	2018 Average Daily Water Treated (Million Gallons)	2019 Average Daily Water Treated (Million Gallons)
January	.200	.470
February	.312	.358
March	.200	.303
April	.357	.349
May	.509	.458
June	.424	.485
July	.284	.494
August	.342	.539
September	.434	.524
October	.475	.473
November	.308	.408
December	.513	.420
Monthly Avg	11.19	11.28
Daily Avg	.368	.440

WATER AND SEWER FUND					
DESCRIPTION: WATER AND SEWER EXPENDITURES					
CODE: 30-91-7120					
ACCOUNT NUMBER	DESCRIPTION	2017-18 Actual	2018-19 Actual	2019-20 Adopted	2020-21 Adopted
Plant Operations 7120					
002	Salaries	229,473	233,700	242,369	244,317
003	Overtime	19,863	15,000	13,000	13,000
005	FICA Expense	16,863	19,026	19,536	19,685
006	Group Insurance	29,329	33,500	37,470	35,000
007	401K	11,822	12,435	12,768	12,866
008	Retirement	33,082	34,420	38,995	42,869
	Personnel Subtotal	340,432	348,081	364,138	367,737
011	Telephone	2,707	700	3,500	6,000
013	Utilities	127,311	145,000	127,527	115,000
014	Employee Development	647	3,500	2,500	2,500
016	Maintenance/Repair-Equip	32,354	30,000	24,000	24,000
017	Maintenance/Repair-Equip- Service Contracts	-	-	6,000	21,000
031	Gasoline	4,155	3,500	5,000	6,000
033	Materials and Supplies	40,651	25,000	22,500	22,500
034	Sludge Processing	70,913	49,000	44,143	44,145
036	Uniforms	2,100	3,000	2,500	3,500
053	Permits & Dues	1,650	4,250	3,500	3,500
057	Miscellaneous	1,099	500	5,500	5,500
104	Lab Contract	23,459	24,000	23,000	23,000
333	Chemicals	27,655	40,000	33,000	33,000
	Operating & Maint. Subtotal	334,700	328,450	302,670	309,645
500	Capital Outlay	33,964	255,000	70,000	-
505	Transfer to Capital Projects	-	-	-	-
	Capital Subtotal	33,964	255,000	70,000	-
900	Debt Service	3,529	11,765	77,694	87,279
	SUBTOTAL - PLANT OPERATIONS	712,625	943,296	814,502	764,660
Field Operations 7120					
202	Salaries	129,811	137,900	151,886	131,705
203	Overtime	5,129	8,000	4,000	6,000
	On Call/Standby Pay	-	20,800	10,000	10,000
205	FICA Expense	10,436	12,753	12,690	11,299
206	Group Insurance	23,477	27,500	30,525	29,000
207	401K	7,014	8,335	8,294	7,385
208	Retirement	19,065	23,071	25,331	24,608
	Personnel Subtotal	194,932	238,359	242,727	219,997
211	Telephone	-	-	-	-
213	Utilities	-	-	-	-
214	Employee Development	2,628	3,000	3,000	2,000
216	Maintenance/Repair-Equip	3,607	10,000	7,000	10,000
217	Maintenance/Repair-Lift Station	-	15,000	13,000	13,000
231	Diesel/Gasoline	8,248	7,500	9,000	8,000
233	Materials and Supplies	85,335	80,000	70,000	75,000
235	Safety Supplies	506	3,000	1,800	1,800
236	Uniforms	7,664	3,500	2,500	2,500
257	Miscellaneous	6,810	3,000	2,000	2,000
	Operating & Maint. Subtotal	114,797	125,000	108,300	114,300
502	Capital Outlay	-	-	56,000	-
503	Water Line Replacements/Repairs- Reserve	-	-	20,000	10,000
504	Sewer Line I&I Replacements/Repairs- Reserv	-	-	20,000	10,000
505	Transfer to Capital Projects	-	-	-	-
	Capital Subtotal	-	-	96,000	20,000
950	Debt Service	57,246	29,815	30,569	14,136
	SUBTOTAL - FIELD OPERATIONS	366,975	393,174	477,596	368,434
<p>§ Funds remaining at the end of the year in these areas to be transferred to capital reserves.</p>					
	TOTAL EXPENDITURES	1,079,600	1,336,470	1,292,098	1,133,094