

# 2021

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# Budget Document

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**METROPOLITAN SEWERAGE DISTRICT  
2028 RIVERSIDE DRIVE W.H. MULL BUILDING  
ASHEVILLE, NC 28804**





# 2020-2021 Budget Document

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Town of Biltmore Forest  
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Town of Weaverville  
Town of Black Mountain  
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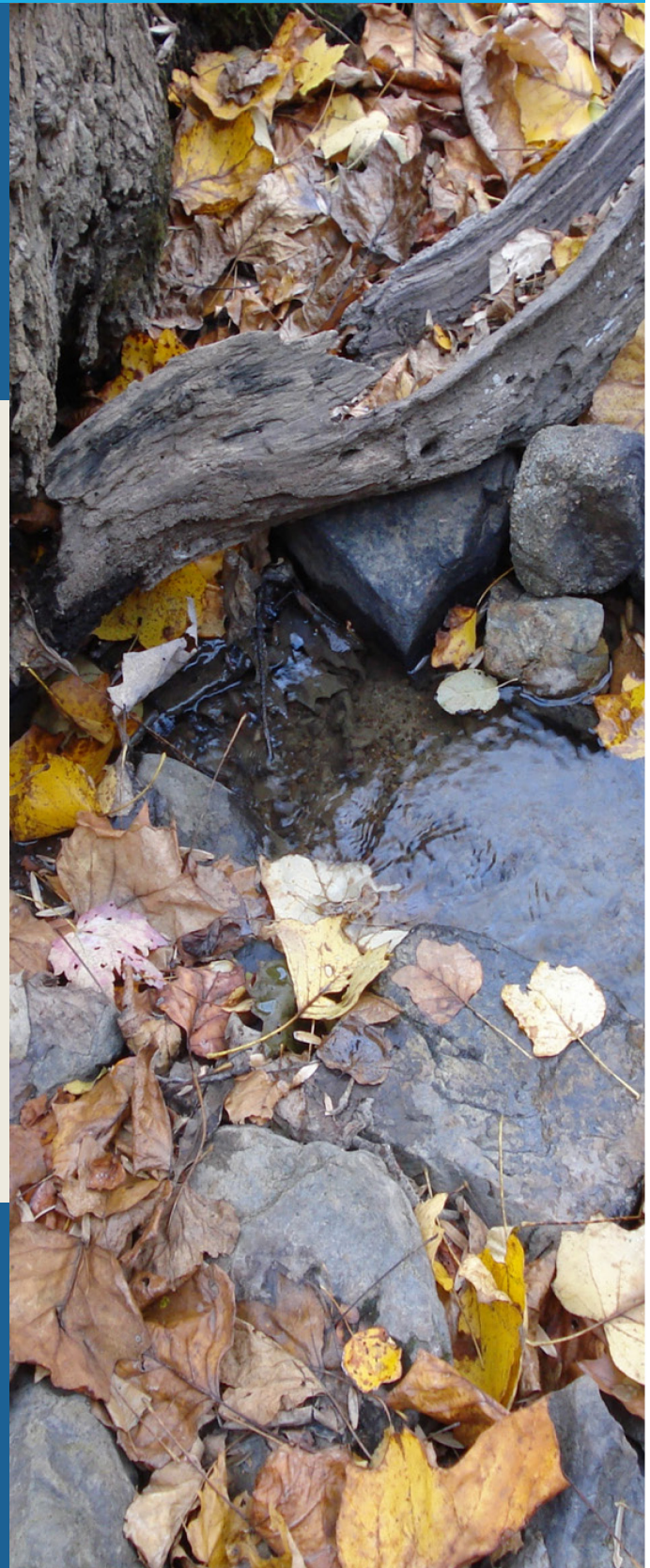
Auditing Firm  
Engineer of Record

### General Manager

Director of Finance



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## Certificate of Achievement

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to the Metropolitan Sewerage District of Buncombe County, North Carolina (MSD) for its annual budget for the fiscal year beginning July 1, 2019. This is the twentieth-third consecutive year that the MSD has received this award.

In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communication device.

This award is valid for a period on one year only. We believe our FY2021 budget continues to conform to the program requirements, and we are submitting it to the GFOA to determine its eligibility for another award.



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished  
Budget Presentation  
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PRESENTED TO

**Metropolitan Sewerage District of Buncombe County  
North Carolina**

For the Fiscal Year Beginning

**July 1, 2019**

*Christopher P. Morrell*

Executive Director

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# Introduction



June 10, 2020

Members of the Board

Metropolitan Sewerage District of Buncombe County, North Carolina

W. H. Mull Building

2028 Riverside Drive

Asheville, North Carolina 28804

Subject: FY2021 Budget and Proposed Sewer Rates

Dear Members of the Board,

We respectfully present the FY2021 Budget for the Metropolitan Sewerage District of Buncombe County, North Carolina. The budget incorporates staff recommendations presented to and accepted by the Capital Improvement Program Committee, which met on April 23, 2020, the Personnel Committee, which met on April 28, 2020, and the Finance Committee, which met on May 1, 2020.

We have developed the FY2021 Budget to advance the organization's mission *"to provide wastewater collection and treatment to its users which promotes the health and safety of affected citizens in the most effective and efficient manner possible today and in the future"*. The following Operational and Capital budget is designed to provide services meeting or exceeding all state regulations and Bond Order covenants with which the District must comply, with any rate changes to be at the lowest responsible level.

## Current Year Highlights

In FY2020, the District's domestic and industrial revenue are expected not to meet budgeted projections. The economic impacts pertaining to the COVID-19 pandemic will have significant effects on revenue and cash flows for the remaining fiscal year and continue well into FY2021.



The District has proposed 0% rate increase for the upcoming year. Additionally, the District's long-range business plan incorporates this change and projects that future rate increases will be approximately 3.0% for the remaining nine (9) years.


This budget continues several recent initiatives to maintain the District's overall strategy of keeping collection lines and the plant functioning effectively while rehabilitating significant portions of aging infrastructure. The most important goal remains meeting all regulatory permit requirements.

The SS Construction Department continues to expand its participation in sewerline rehabilitation and replacement efforts to minimize SSOs. Goals for FY2020 include utilizing Infrastructure Rehabilitation System (IRS) lining, pipe bursting, and dig-and-replacement construction to rehabilitate and replace at least 20,000 linear feet, while providing preventative maintenance for approximately 500,000 linear feet of the system by employing in-house jet wash cleaning and both chemical and mechanical root control. In addition, the SS Maintenance Department will manage the District's Right-of-Way maintenance program whereby easements will be periodically cleared or mowed.

The Wastewater Treatment Plant is continuing systematic improvements as part of the District's detailed Facilities Plan. In FY2020, the District completed the construction phase of the \$9.6 million Headworks project. This project included installing new bar screens and grit removal systems along with fine screens and a surge system for peak flows. This project is now operational.

## Operating Budget

The proposed \$18.0 million Operating Budget represents routine expenditures and capital equipment acquisitions needed for the day-to-day operations of the District. Highlights of significant components and changes include:

-  **Compensation and Benefits**—The staff and employees considered salary and health insurance increases together as part of a comprehensive compensation package.
  - A 0% salary adjustment—CPI increased 2.2% for the last twelve-month period; Division Directors in conjunction with Employee Advisory Committee have not requested an increase due to the recent events of COVID-19 pandemic and its impact on the economy.



The Personnel Committee has concurred with staff's recommendation.

- A 13.4% increase in funding for North Carolina retirement cost—In 2016, the Local Governmental Employees' Retirement Systems (LGERS) adopted a rate stabilization policy to allow for predictability and stability in the contribution rates, while continuing keeping the local retirement system one of the best-funded systems in the country. Subsequently, LGERS raised the District's contribution rate from 7.75% to 8.95% of total salary and wages. Over the next five years, contribution rates are projected to increase to an amount slightly over 11.35%. This has an approximate \$119,000 impact on current year expenditures.
  - A 6.5% increase in funding for Self-Insured Medical Plan—During FY2016, staff worked with its consultant and initiated a top to bottom review of our medical insurance plan. The effort was to ensure the District had a medical plan in line with our sister agencies as well as to limit certain benefits and increase cost sharing by employees in the amount of \$175,000. The Employee Advisory Committee endorsed these changes. The two groups continue to work on a long-term strategic plan to address controllable medical issues. The 6.5% increase in the employer contribution is in line with medical and prescription trend and has an approximate \$151,000 impact on current year expenditures.
  - Funding for Post-Employment Health Benefit—Starting in FY2009, GASB 45/75 required recognition of cost for Post-Employment Health Benefits. An actuarial study was done in the current year, staff is recommending FY2021 funding should remain at approximately \$283,000. Current funding has been implemented into the proposed FY2021 budget, in addition to the current business plan, and represents 1.6% of total operations.
- 🚩 **Materials, Supplies, and Service expenditures increased 5.6% over prior year**—The District has made a concerted effort to hold materials, supplies, and services cost close to the prior year's level, taking into account inflationary cost increases and continued expansion of the District. The District has increased specific line items to address regulatory and operational needs. Discretionary expenditures have been limited where practicable. This has an approximate \$378,000 impact on year expenditures.

## Capital Improvement Program

The District prepares a ten-year Capital Improvement Program as required by its State Collection System Permit and the Consolidation Agreements. The estimated construction expenditure for FY2021 is \$28.1 million, which is comprised of an estimated \$27.7 million in construction, \$437,000 of reimbursement, and \$1 million in contingency. The total 10-year CIP budget is \$330.5 million.

A detailed list of individual projects and planned expenditures by year was presented at the April 23, 2020 CIP meeting. This signifies a large increase in the 10-year CIP due largely to major improvements at the Plant along with upgrades to the interceptor network. MSD will be positioned to meet future regulations and to provide capacity to serve the estimated growth for the next 50 years.

The Board has consistently financed its Capital Improvement Program through revenue bonds and pay-as-you-go moneys. As of June 30, 2020, the District will have \$100.4 million in outstanding revenue bond debt, with total debt service of \$9.8 million due before the end of the fiscal year. Unlike counties and cities, the District does not have a legally mandated debt limit. However, the District does have a rate covenant. The covenant requires the District to set rates and charges so that income available for debt service will not be less than 120% of fiscal year debt service requirement.

### Collection System Capital Improvements:

MSD initiated and maintains an aggressive program to rehabilitate its Wastewater Collection System. This program will conform to the North Carolina Department of Environmental and Natural Resources (NCDENR) Collection System Permit requirements, will improve the operational performance, and extend the life of the collection system. The estimated cost over a 10-year period is approximately \$225.0 million.

MSD's focus to rehabilitate over 400,000 feet of sewer lines for the next 10 years and other projects identified in the Master Plan. This rehabilitation has been made more cost-effective by the development of the Pipe Rating Program. Pipe Rating is a proactive planning tool, which utilizes Closed Circuit Television (CCTV) information, a GIS database, actual maintenance history to view, rate, and computer-score pipe segments based on a number of factors.

These factors, for any given manhole-to-manhole segment, include maintenance work order history, number, severity of defects, record of overflows on that segment, and are combined to yield a rating useful for prioritizing rehabilitation efforts.

Pipe Rating minimizes costs by helping the District focus rehabilitation dollars where they are needed most, rather than the previous replacement of collector lines throughout an entire basin. In recognition of this innovative program, the Association of Metropolitan Sewerage Agencies (AMSA) awarded the District one of only two 2003 National Environmental Achievement Awards.

Major projects for FY2021 include the Christian Creek Interceptor with 8,200 linear feet \$3,792,000, Chestnut Lodge Road with 4,560 linear feet \$1,782,000, Jarnaul Avenue with 4,684 linear feet \$1,671,000, Walnut Street at Rankin Avenue with 500 linear feet \$403,000. In FY2021, Carrier Bridge Pump Station Replacement is scheduled to cost \$1.7 million and Plant High Rate Primary Treatment is scheduled to cost \$6.9 million. These are in addition to numerous smaller projects completed throughout the collection system. Further details are available in the CIP section of the budget document.

The District's Collection System Master Plan addresses the orderly extension of the District's collection system into future service areas. The plan has been prepared in close cooperation with the District's member agencies and regional stakeholders. The land use policies and zoning regulations of each agency were used for land usage, growth projections/densities, and line locations. For areas outside of corporate or jurisdictional limits, Buncombe County's Zoning Ordinance has played an integral role in defining future service areas.

The Plan will serve as a basis to ensure that the sewer system will be extended in an orderly fashion and is done so in accordance with the planning policies of the various local governments within the District's service area.

#### **Wastewater Treatment Plant Capital Improvements:**

During FY2015, the Treatment Facilities Plan was updated for the Water Reclamation Facility. This Plan provides short, medium, and long-term recommendations for each specific process and facility. This update primarily expanded on several of the original plan's longer-term recommendations. It focused specifically on improvements to the WRF Headwork's (i.e. bar screens, influent pumping

station, and the problematic grit & grease removal system), including surge control for short-term peak flows. It also investigated in detail the installation of a primary clarification process and has evaluated alternatives for the biological treatment process.

Another key aspect of the Facility Plan Update was to gain a solid understanding of regulatory issues that may influence (impact) future treatment requirements and identify long-term biological treatment alternatives to comply with anticipated future regulation changes.

Near-term and mid-term project recommendations from the Plan include:

- **Plant Headworks Project**—This \$9.6 million project spans 2 years and consists of a new grit removal system to replace the existing problematic system, a fine screening facility which will supplement the WRF's existing bar screens, and storage at the plant using existing decommissioned tanks to provide more effective treatment during peak flow events. In addition, by removing more grit than the current process, it will help to better protect downstream processes within the plant. Construction of the Plant Headworks Project began in early April 2017 and is currently operational.
- **High Rate Primary Treatment Project**—This \$15.1 million project will provide primary clarification by removing solids before the biological treatment stage. This will provide a more effective treatment and will help the Rotating Biological Contactors (RBC's) to better perform. During high flow (storm) events, this treatment can be ramped-up in order to match the higher flows. Construction began in FY2019 and will be completed in the spring 2021.
- **Biological System Upgrades**—This \$50 million project is being driven by the water quality regulations as set forth in MSD's NPDES permit (effluent discharge permit). Compliance with effluent ammonia levels must be achieved by October 2030 and will require significant upgrades to the existing biological treatment system. Design will begin in FY2025 with construction starting in FY2027.



## Impact of CIP on Operations

For most municipal and county governments, capital improvements often result in higher operating costs. New buildings typically result in higher utility cost as well as cost for additional personnel.

The CIP for the District is largely made up of upgrades to existing facilities such as pump stations, sewer mains, and treatment plant facilities. Although some new chemicals may be added to treatment methods on occasion, the overall net effect of the CIP is actually one of reduced cost. The marginal increase in the size of replacement facilities (seen as up-front capital cost) is offset by increases in efficiencies of the new mechanical and electrical equipment replacements. In addition, as the level of service of the sewer mains increase with the new replacements, the operational cost will decrease for general maintenance and for emergency spill response.

## Sewer Rate Increase

Staff recommends a 0% increase in domestic and industrial sewer rates and meter fees for FY2021 due impacts pertaining to the COVID-19 pandemics.

We believe this rate increase is prudent under the current economic situation and is necessary to provide for the following District responsibilities and objectives:

- ✓ Meet current and future regulations at the Water Reclamation Facility and for the Collection System
- ✓ Replace and rehabilitate approximately 41,000 linear feet of sewer mains a year
- ✓ Debt coverage ratio attractive to investors and rating agencies
- ✓ Support of the pay-as-you-go element of the CIP in addition to bonds
- ✓ Continue with goal of periodic smaller rate increases in lieu of large increases in future years
- ✓ Adequate current funding and maintenance of prudent reserves for Self-Insured Medical/Dental Plan
- ✓ Continue with necessary Treatment Plant upgrades

In the past, the MSD Board has endeavored to keep rate increases to a minimum. The District's Bond Order requires sewer rates be set to ensure that the excess of revenues over current expenditures is at least 120% of debt service.

Additionally, the Board balances the bond order requirements while maintaining all regulatory and fiduciary responsibilities.

Domestic sewer rates for the past five years as well as FY2021 are shown below:

	FY16	FY17	FY18	FY19	FY20	FY21
Rate Increase %	2.5%	2.5%	2.5%	2.5%	2.5%	0%
Meter, Maintenance & Billing Fees	\$8.90	\$9.08	\$9.30	\$9.51	\$9.74	\$9.74
Flow Rate (per ccf)	\$4.28	\$4.39	\$4.50	\$4.61	\$4.73	\$4.73
Avg. Monthly Bill (5ccf)	\$29.15	\$29.88	\$30.62	\$31.36	\$32.17	\$32.17

## Distinguished Budget Award

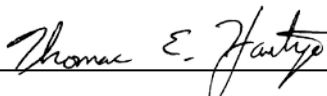
The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to the Metropolitan Sewerage District of Buncombe County, North Carolina for its annual budget for the fiscal year beginning July 1, 2019. This is the twenty-third (23) consecutive year that the MSD has received this award. In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communication device.

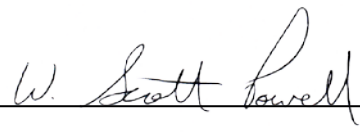
This award is valid for a period of one year only. We believe our FY2021 budget continues to conform to program requirements and we are submitting it to GFOA to determine its eligibility for another award.

## In Closing

The Budget represents the combined efforts and guidance of the Board, its Committees, and staff. A special thanks to Teresa Gilbert for assembling the budget documents, HR Director, Ed Bradford/CIP Director, and Cheryl Rice for assembling the CIP Section of the Budget. We look forward to working with you, staff, and our ratepayers as we implement this financial plan and policy document.

Respectfully submitted,

  
 Thomas E. Hartye, PE  
 General Manager

  
 W. Scott Powell, CLGFO  
 Director of Finance



## About MSD, City of Asheville & Buncombe County

### About MSD

The MSD is a public body and body politic and corporate of the State of North Carolina, exercising public and essential governmental functions and organized under the provisions of the North Carolina Metropolitan Sewerage Districts Act, being Article 5, Chapter 162A of the General Statutes of North Carolina, as amended. The District was established in 1962 by the North Carolina State Stream Sanitation Committee to construct and operate facilities for sewage treatment for municipalities and sanitary districts within Buncombe County.

In 1967, the District completed the construction of a 25 million gallon per day (MGD) wastewater treatment plant adjacent to the French Broad River. Nineteen miles of interceptor sewer were initially built, connecting the collector sewer systems located within the municipalities and other political subdivisions, which comprised the District. Then, in the late 1980's, the District expanded the capacity of the Water Reclamation Facility to its current capacity of 40 MGD, rehabilitated the hydroelectric dam and powerhouse to mitigate energy costs, and built a thermal converter for sludge disposal.

In July 1990, the political subdivisions comprising the District transferred their respective sewerage systems to the District. These systems had been previously owned, operated, and maintained separately by each political subdivision. The purpose of this sewer consolidation was to create a consolidated sewerage system in the urbanized portion of Buncombe County with ownership of all components of the system and responsibility for their operation, maintenance, and capital improvement centralized with the District. Before the sewer consolidation, the District had little control over the condition, operation, and maintenance of individual collector systems, which significantly affect the operational efficiency of the wastewater plant.

## About MSD, City of Asheville & Buncombe County

### About MSD

Buncombe County is located in the Blue Ridge Mountains of Western North Carolina. The District is comprised of the following political subdivisions located within Buncombe County:

City of Asheville	Busbee Sanitary Sewer District
County of Buncombe	Caney Valley Sanitary Sewer District
Town of Biltmore Forest	Crescent Hill Sanitary Sewer District
Town of Black Mountain	Enka-Candler Water & Sewer District
Town of Montreat	Fairview Sanitary Sewer District
Town of Weaverville	Skyland Sanitary Sewer District
Town of Woodfin	Swannanoa Water & Sewer District
Woodfin Sanitary Water & Sewer District	Venable Sanitary District
Beaverdam Water & Sewer District	

The District Board consists of twelve appointed members. Three (3) from the County of Buncombe, three (3) from the City of Asheville, and one (1) each from the Woodfin Sanitary Water & Sewer District, and the Towns of Biltmore Forest, Black Mountain, Montreat, Woodfin, and Weaverville.

Under the North Carolina Metropolitan Sewerage Districts Act, the District is authorized, among other things, to: (a) acquire, lease, construct, reconstruct, improve, extend, enlarge, equip, repair, maintain, and operate any sewerage system or part thereof (including facilities for the generation and transmission of electric power and energy) within or without the District; (b) to issue revenue bonds to pay the costs of any of the foregoing; and (c) to fix and revise from time to time and collect rents, rates, fees and other charges for the use of or the services and facilities furnished by any sewerage system.

### District Boundary Map





## About MSD, City of Asheville & Buncombe County

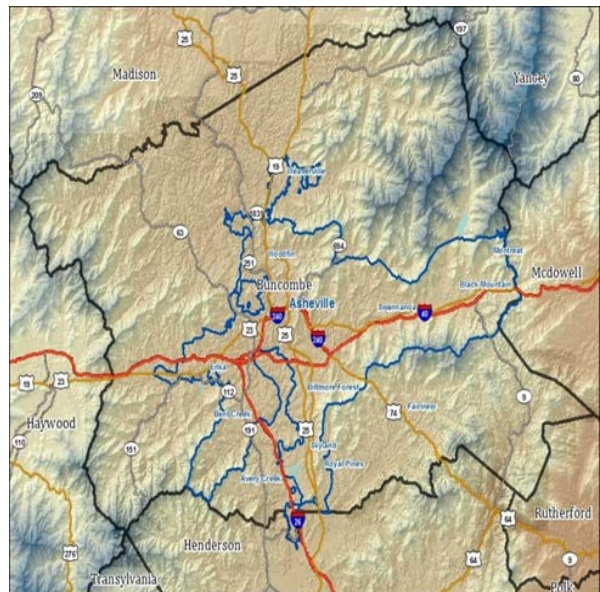
### Population and Growth Statistics

Population growth in Buncombe County has occurred largely in a linear fashion along major transportation routes, which is reflected in the configuration of the District's service area. The District is approximately a 180-square mile service area, comprising nearly 25% of the total land area of Buncombe County. The District's service area corresponds generally with the urbanized core of Buncombe County and includes small portions of northern Henderson County.

The population of the area has steadily increased, as illustrated in the following chart:

Year	Buncombe County	Henderson County
1970	145,056	42,804
1980	160,897	58,580
1990	174,727	69,378
2000	206,316	89,173
2010	238,318	106,740
2015	252,149	111,975
2016	255,334	113,758
2017	257,607	115,708
2018	259,259	116,500
2019	261,191	117,417

Located in the geographic center of Buncombe County, the City of Asheville is the major population center in the District. About 35% of the County's residents live in Asheville. Five (5) incorporated towns in Buncombe County—Black Mountain, Biltmore Forest, Weaverville, Woodfin, and Montreat—are included in the District's service area. Weaverville and Woodfin are north of Asheville, Black Mountain and Montreat are in eastern Buncombe County, and Biltmore Forest is contiguous to the City of Asheville on its southern boundary. Approximately seven percent (7%) of the county's population lives in these five towns.



## About MSD, City of Asheville & Buncombe County

### Population and Growth Statistics

Buncombe County's topography ranges from fertile valleys to rugged mountains. Mt. Mitchell, the highest point in eastern North America (6,684 feet), is found 35 miles northeast of the City of Asheville in adjacent Yancey County. The topography of Buncombe County's urbanized core is, however, a long flat plain, which has allowed Buncombe County to develop differently from the more mountainous counties of Western North Carolina. The plain, with an elevation of 2,000 feet, averages about 45 miles in width. It is bisected from south to north by the French Broad River and from east to west by the Swannanoa River and Hominy Creek, two major tributaries of the French Broad. Because of extremes in elevation, the climate varies significantly from one section of Buncombe County to another. The mean elevation of the City of Asheville is about 2,300 feet, the summers are cool, and the winters are moderate with small amounts of snow. The higher elevations in Buncombe County receive considerable amounts of snow and the summers are cooler. The average January temperature is 47° for the City of Asheville and the average temperature in July is 84°. The City of Asheville receives an average of 46 inches of rainfall a year.

However, because the City of Asheville is found within a "rain shadow" caused by the shielding effect of the nearby mountain barriers, other areas of Buncombe County, especially to the south and southwest, receive significantly higher amounts of rainfall.

### Employment and Major Industries

Buncombe County serves as a regional economic center for Western North Carolina. Its diverse commercial and industrial base includes manufacturing, distribution, travel and tourism, retail trade, health care and governmental services. According to the N. C. Department of Commerce-Labor & Economic Analysis Division, 139,901 people were employed in Buncombe County as of April 2019. The number of persons in the labor force has increased by 1,235 over the previous year.

Buncombe County's economy has been expanding and becoming more diverse. Recognizing that textile industries no longer dominate the manufacturing base, the public and private sectors in Buncombe County have been working together to encourage the relocation and development of new industries and other economic endeavors. In addition, the Buncombe County Tourism Development Authority works to foster the continued growth of tourism and convention business. Downtown redevelopment efforts by the City of Asheville have also provided additional office, retail shop, and parking space.

## About MSD, City of Asheville & Buncombe County

### Employment and Major Industries

Employment in the service sector is increasing, but manufacturing remains a significant part of the local economy. The diverse products manufactured include food, textiles, apparel, wood products, printing and publishing, rubber and plastic products, fabricated metal products, industrial machinery and equipment, electrical equipment, and transportation equipment. Health care, retail sales, education, and government services are the principal employers in the growing service sector of Buncombe County's labor force. Buncombe County serves as a regional medical center for most of western North Carolina.

There are two major hospital complexes located in Buncombe County: Mission Health System, an acute care medical center licensed for more than 763 beds on (2) two adjoining campuses, Memorial and St. Joseph, and the federally funded Veteran's Administration Medical Center, Charles George VA Medical Center consisting of a 119-bed acute care hospital and 120-bed nursing facility serving veterans from a 19-county area in Western North Carolina, parts of Eastern Tennessee, and upstate South Carolina and Georgia.

Also located in Buncombe County is CarePartners Health Services, a private nonprofit acute care 80-bed rehabilitation facility for the treatment of stroke and ambulation dysfunction victims, traumatic brain/head injuries, and amputation. In addition, CarePartners provides home health, adult care, and hospice care (27-beds).

Tourism and the hospitality industry also constitute major segments of employment in the service sector and are projected to increase significantly. The impact of tourism is multi-dimensional and includes conventioners, commercial visitors, and tourists taking advantage of the mountain scenery, moderate climate, and craft skills of persons living in the area. Closely related to the tourism industry is the growth of discount malls and outlet stores. The seasonal influx of persons from outside the region is strengthening Buncombe County's position as the primary regional retail center for area and tourist commerce. To provide a source of funds for promoting the recreational, cultural, and other attractions of the area, Buncombe County has imposed an occupancy tax on hotel and motel rooms in Buncombe County. The revenues from this tax are used by Buncombe County's Tourism Development Authority to promote the growth of tourism and convention business.

## About MSD, City of Asheville & Buncombe County

### Employment and Major Industries

Western North Carolina is known as a recreational area, which makes tourism and the hospitality industry a major contributing force to the economic vitality of Buncombe County. The Great Smoky Mountains National Park is found 70 miles west of the City of Asheville.

Approximately 160 miles of the Blue Ridge Parkway are in western North Carolina, and the Parkway bisects Buncombe County from east to west. Two national forests, Pisgah and Nantahala, are located within an easy drive of the City of Asheville. These outdoor recreational resources attract thousands of visitors each year to the area for such activities as camping, hiking, canoeing, white-water rafting, fishing, and hunting. Also, south of the City of Asheville is the 255-room “chateau” known as the Biltmore House. Constructed from 1889 to 1895 by George Vanderbilt, the Biltmore House is one of North Carolina’s most visited tourist attractions, which includes self-guided tours of the House & Gardens, Antler Hill Village, featuring the Winery, The Biltmore Legacy, Village Green, and Farm. Another attraction is the The Omni Grove Park Inn with 510 guest rooms, 42 meeting rooms, an 18-hole, 6,720-yard, par 70 Donald Ross designed golf course, a 43,000 square-foot spa with 31 treatment rooms and over 60 treatment selections which has augmented its appeal to the tourism and hospitality industry.

This favorable economic environment has resulted in lower unemployment rates for Buncombe County than across the state and nation. In addition, median household income has increased by 7.2% in Buncombe County and 15.9% in the City of Asheville since 2009. According to the U. S. Department of Commerce, for the year 2015, median household income in the City of Asheville was \$44,946 and in Buncombe County was \$46,902. This compares with \$48,256 for the State of North Carolina and \$57,617 for the nation as a whole.

### Education

Buncombe County has two public school systems: the Asheville City Administrative Unit, which serves about 4,421 students, consisting of (5) elementary schools and (3) secondary (high schools) and the Buncombe County Administrative Unit, which serves 31,966 students, consisting of (23) elementary schools, (17) secondary schools (high schools) and (2) combined schools.

Asheville-Buncombe Technical Community College is a public, two-year college, serving more than 25,000 students in a variety of business, technical, and health care curricula. In addition, community enrichment



## About MSD, City of Asheville & Buncombe County

### Education

classes, such as art, languages, and practical skills are offered year-round at each campus location throughout the College's service area.

Warren Wilson College is a private, four-year liberal arts college with an enrollment of about 920 students offering academics with work for the school (15 hours per week) and service to the community (100 hours over four years).

Montreat College is a private four-year liberal arts college with an enrollment of about 800 students at the (4) campuses which strives to be Christ-centered, student-focused, and service-driven. In addition, Montreat College offers accelerated programs for adult students, including graduate, professional, and online degree programs.

The University of North Carolina at Asheville ("UNCA") is an undergraduate, state-supported liberal arts college with an enrollment of about 3,600 students from 38 states and 24 countries. UNCA is one of the nation's top public liberal arts universities and one of the (17) institutions in the University of North Carolina system offering more than 30 majors.

### Transportation

An integrated network of highway, rail, and air services serves Buncombe County. Interstate Highway 40, Interstate Highway 26, Interstate 240 (Billy Graham Freeway), U.S. Highway 19-23 and U.S. Highway 74 link Buncombe County to the Piedmont area of North Carolina (including the cities of Charlotte, Greensboro, Raleigh, and Winston-Salem), the Piedmont area of South Carolina (including the cities of Greenville and Spartanburg), and the Tennessee-Ohio Valley area.

Rail service to Buncombe County is served by the Norfolk Southern Railroad Corporation providing rail lines through Knoxville, Tennessee to the west and Greenville, South Carolina to the south. To the east, rail lines adjoin North Carolina's 3,600-mile rail network an hour away in Greer, South Carolina.

Major air passenger and cargo services are available through the Asheville Regional Airport and served by Allegiant, American, Delta, Elite, and United. These carriers offer 30 daily non-stop flights to 10 popular destinations and enplaned 86,469(174,770) passengers as of calendar year to date ending February 28, 2019.

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# Policies & Budget Process



## Financial Plan

### Guide to the Budget Document

This Budget presentation has four major objectives:

- **Policy Document**—To show how resources have been allocated in response to the mission statement and supporting goals/objectives set forth by the Board of Directors.
- **Financial Plan**—To present the District's Financial Plan for the fiscal year, showing where the money will come from and how it will be spent.
- **Operations Guide**—To describe services provided along with goals and objectives for each unit within the District, and a method for measuring progress towards the District's mission of providing cost-effective and efficient wastewater collection and treatment. In addition, a Budget is a required management tool for compliance with state wastewater management licensure and local government fiscal control regulations.
- **Communications Device**—To explain the District budgetary procedures and interactions with other District planning processes and within the larger context of local and regional economic and environmental conditions.

This document has been divided into sections as follows to assist the reader's understanding and ability to easily locate information:

- ✱ **Introduction**—The transmittal letter provides current year trends and highlights.
- ✱ **Policies & Budget Process**—Presents the policies forming the basis for all management decisions, a narrative of the overall budget process, the underlying fund structure, and a discussion of revenue.

## Financial Plan (continued)

### Guide to the Budget Document (continued)

- ✿ **Operation & Maintenance Fund**—Provides detail of departmental expenditure budgets including underlying goals and objectives, as well as accomplishments and performance measures.
- ✿ **Insurance Funds**—Describes internal service-type funds used to allocate premiums and associated expenses among various departments.
- ✿ **Replacement Funds**—Provides funding status of various replacement and reserve funds.
- ✿ **CIP Program**—Details the Capital Improvement Program, including budgetary process, current year highlights, and summarizes planned projects for the upcoming 10 years.
- ✿ **Debt Financing**—Provides further detail on debt philosophy and management, including current and future debt service.
- ✿ **Statistical Information**—Includes historical summaries of District financial information, plant operational data, and local demographic and economic statistics.
- ✿ **Appendix**—Provides a description of the line item accounts that are currently used and staffing information for the previous (4) years plus the upcoming budget year.
- ✿ **Glossary**—Definitions of technical terms and acronyms.

### Background of Entity

The Metropolitan Sewerage District of Buncombe County, North Carolina (the District), established under an act of the state legislature, is a local governmental agency providing wastewater collection and treatment services to approximately 56,000 residences and businesses located in several municipalities and certain unincorporated areas in Buncombe County. The governing board is comprised of twelve members appointed by eight local governments who serve three-year overlapping terms.

The District owns a 40 million gallon per day (MGD) wastewater treatment plant and the associated collection network of approximately 1,043 miles of collector sewers, 31,000 manholes, and 30 pump



## Financial Plan (continued)

### Background of Entity (continued)

stations. The District is responsible for current operation and maintenance of this infrastructure, as well as for planning for future operations and capacity.

The budgetary process starts with the mission statement promulgated by the District Board. To achieve the purpose articulated in the mission statement, staff is charged with developing long-term goals and the short-term objectives designed to achieve these goals. Using this framework, annual operating and construction budgets are proposed to fulfill these short-term objectives and thus meet or reach toward long-term goals.

Therefore, an understanding of the mission statement and the underlying goals and objectives provide a context for the decisions made in developing the annual budget. Each departmental goal and objective is tied to one or more of the non-financial or financial policies to coordinate and prioritize the District's focus, initiatives, and efforts.

**Mission Statement**—To provide wastewater collection and treatment to its users which promotes the health and safety of affected citizens in the most effective and efficient manner possible today and in the future.

**Long-Term Goals**—Staff has developed four goals to be pursued in support of the Mission Statement adopted by the Board:

1. Protection of health, safety, and the environment
2. Excellence in customer service
3. Cost-effectiveness
4. Continuous improvement

Managers and employees use these goals to determine appropriateness of and to enhance coordination and consistency of decisions, activities, and initiatives throughout the District.

## Financial Plan (continued)

**Short-Term Objectives**—Objectives are specific achievements or strategies, which support or lead to long-term goals and are used to determine how resources are allocated in this budget.

1. Maintain Collection System Permit. (Goal #1)
2. Maintain Discharge Permit to French Broad River for Water Reclamation Facility. (Goal #1)
3. Maintain a qualified and motivated workforce. (Goals #1-4)
4. Coordinate, to the extent practicable, with other governmental and private entities for cooperative provision of sewer service to gain optimum economies of scale, reduced capital cost, and improved efficiency. (Goals # 1-4)
5. Participate in two-way communications with customers, elected officials, and other stakeholders in matters of mutual concern such as regulations, policies, and fees. (Goals # 1-4)
6. Provision of information and education concerning stewardship of water resources. (Goals # 1-4)

Authority for the District's first goal of protection of health, safety, and the environment is received from the Collection System and Discharge Permits issued by the North Carolina Department of Environment and Natural Resources, Division of Water Quality. Therefore, the major emphasis of the District's activities is to fulfill or comply with the terms of these permits. In addition to specifying certain measures of water quality and minimum standards for maintenance of lines, the permits expect steady progress towards rehabilitation of aged lines and planned replacement of plant assets.

The remaining four objectives are strategies designed to complement the efforts to fulfill the requirements of the permits in achieving the District's goals. Obviously, a competent, well-trained, and committed workforce will not only be technically accomplished, but will also provide excellent customer service, and will explore ways to do the job better and at less cost. Similarly, leveraging resources with others can improve service delivery and reduce costs.

Finally, communication with and education of stakeholders is designed result in wide-ranging improvements to service delivery, customer relations, and cost containment.

## Financial Plan (continued)

### Short-Term Objectives (continued)

Using key objectives identified as critical to the District's mission, Departments develop their individual initiatives and objectives, and the performance measures by which to assess progress. As the budgets for each division or department are presented in the next section, each departmental goal will reference the number of the overall District's goal, objective, or the fiscal policy supported. In this way, each department establishes its accountability and demonstrates the linkage between activities and the achievement of the District's objectives.

The Systems Services Division bears responsibility for maintaining the Collection System Permit (Objective #1) and the Water Reclamation Facility for maintaining the Discharge Permit (Objective #2). Details of the requirements of these permits and related performance measurements may be found in these respective departmental budgets behind the "Operation & Maintenance Fund" tab. The other objectives have no legal or regulatory basis but are underlying principles of how the Board intends the District to carry out the primary mission and are referenced as appropriate in the departmental goals and objectives.



## Rate Projections & Budgetary Forecast

The District is required by its Bond Order to set rates at such a level that the excess of revenues over current expenditures equals at least 120% of debt service. The Board established a revenue policy that the goal for debt coverage ratio be 150% or 1.5, and sufficient to meet all operating and capital needs with modest level increases.

The Board has also established a budget policy that calls for a ten-year projected operating budget and capital improvement program for long-term planning purposes. Revenue and expenditure projections are integrated with anticipated capital expenditures to anticipate rate increases and timing of debt issuance based on cash flow levels and debt coverage ratios.

Consumer revenue projections are based on consumption rates, growth in number of taps during the previous year, and projected rate increase. Industrial revenue is developed from anticipated fees of actual individual companies, since there are relatively few industrial customers and the charges are determined by effluent strength, as well as volume, which may vary greatly depending on the particular entity. As there are a limited number of large customers, any major change to a particular facility such as announced layoffs or closings, may be immediately factored into the industrial revenue computation.

Operating expenditures are anticipated to increase at the regional cost of living rate, and capital expenditures at the general inflation rate. Future debt service is projected to be issued at slightly above prevailing rates. As this forecast is updated at least semiannually, management is able to adjust timing of capital projects and discuss in advance with Board members proposed timing and levels of rate increases.

Using consumption data projected from the recent historical population growth statistics within the Asheville-Buncombe County area, the District anticipates annual rate increases 0% to 3.0% for the next ten years. Construction costs are fairly level reflecting the District's Master Plan to consistently rehabilitate approximately 40,000 linear feet of pipe per year. The CIP expenditure forecast for FY21 reflects a continuation of a major rehabilitation project at the Wastewater Treatment Plant.

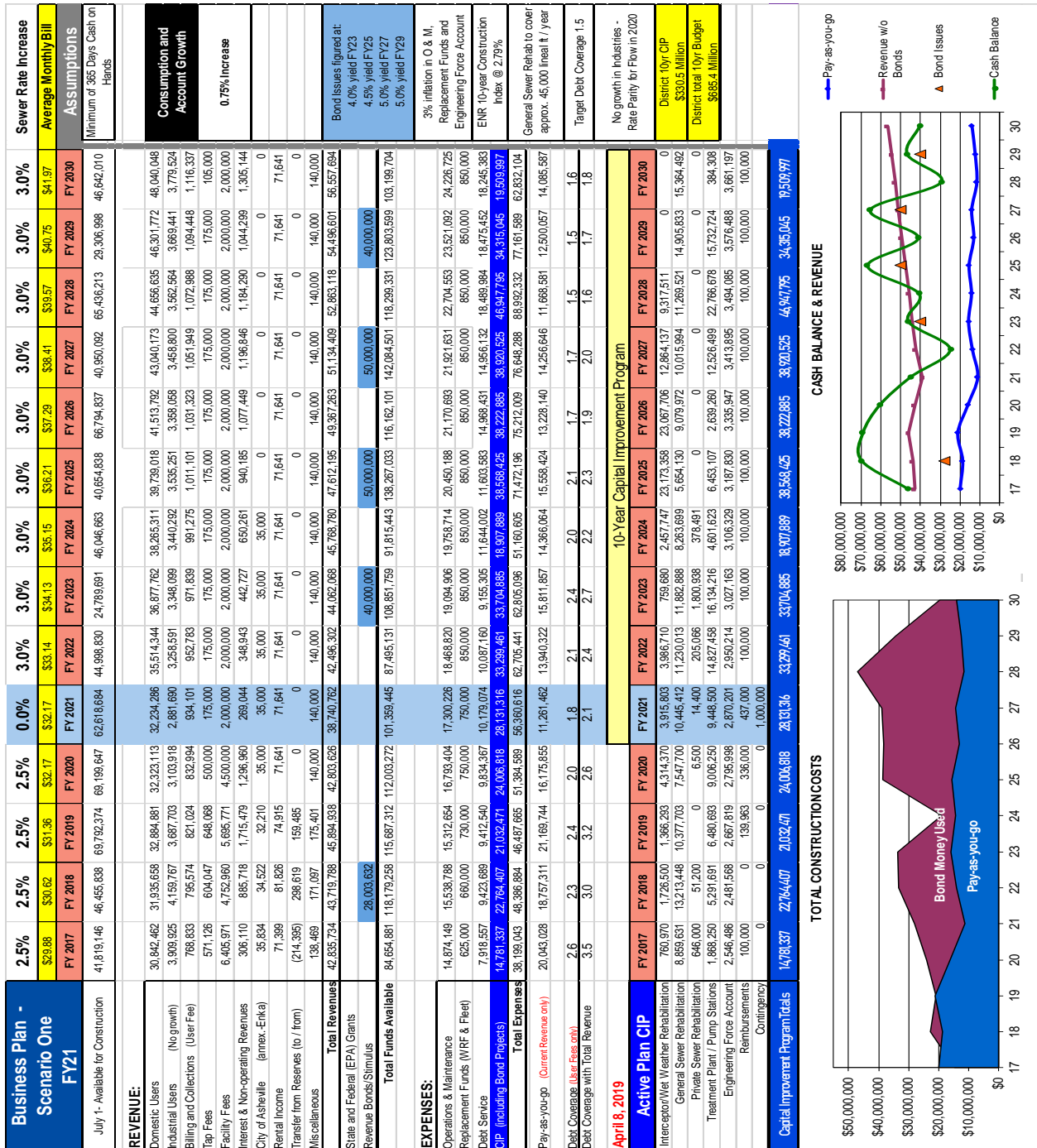
## Rate Projections & Budgetary Forecast (continued)

This long-range budgetary projection also shows how the District plans to finance these projects with a combination of bond proceeds and pay-as-you-go funding from sewer revenues. Overall, the ten-year projection indicates the District's continuing ability to provide wastewater collection and treatment for customers, infrastructure maintenance in accordance with state regulations, and debt service in compliance with Bond Order, all with minimal, uniform rate increases.





# Budgetary Forecast Based on Current Business Plan





## Fiscal Policies

### Overview

The Metropolitan Sewerage District of Buncombe County, North Carolina (the District) fiscal policies compiled below comprises the basic framework for the overall financial management of the District. These policies assist Board and Management decision-making and provide guidelines for evaluating both current and long-range activities and programs. They are reviewed annually in conjunction with the budgetary process to verify continued applicability and benefit to the District.

The primary objectives of these policies are ❶ to ensure that moderate rate increases will be adequate to provide current and future funds to support the District's mission and goals; and ❷ to provide accountability for cost-effective stewardship of ratepayer's funds to stakeholders through fairly presented financial information supported by full disclosures.

### Revenue Policy

1. **Revenue Recognition**—Revenues shall be recorded on the full accrual basis in accordance with Generally Accepted Accounting Principles (GAAP) for proprietary governmental entities.
2. **Setting User Charges**—Charges for domestic and industrial sewer users shall be set at such a level to provide sufficient revenues to cover all annual operating and debt service expenditures, to accumulate funds for timely acquisition and replacement of capital equipment and facilities, and to finance the pay-as-you-go portion of the long-term Capital Improvement Plan as approved by the Board.
3. **Revenue Projections**—To assist in setting annual user rate charges, District staff will prepare projections of revenues and expenditures for a minimum of five years.
4. **Daily Deposits**—In accordance with NC General Statutes Section 159-32, the Board shall require daily deposits of receipts only when the moneys on hand amount to at least two hundred fifty dollars (\$250.00). Any funds not immediately deposited shall be appropriately safeguarded.

## Fiscal Policies (continued)

### Revenue Policy (continued)

5. **Monitoring Revenue**—District staff shall monitor revenues as billed and collected by participating entities for reasonableness and completeness and shall report to the Board no less than quarterly.
6. **Direct Billing**—For those users who are billed directly by District staff, such bills shall be computed accurately, recorded properly, and distributed in a timely manner.
7. **Billing Adjustments**—The Billing Coordinator shall be authorized to create and post credit memoranda for adequately documented adjustments incurred by customers billed directly by the District. The Billing Coordinator may also make adjustments of up to \$10 to correct errors or remove disputed charges.
8. **Bad Debt**—The District shall consider as bad debt any domestic revenue for customers when written off by the member agencies who provide collection services. All delinquent customer accounts billed directly by the District shall be subject to reasonable collection efforts.

After such efforts have been exhausted, writing off uncollectible accounts shall be authorized as follows: The Billing Coordinator may write off amounts up to \$10, the Director of Finance amounts up to \$1,000, and the General Manager amounts over \$1,000. The Director of Finance shall prepare an annual reporting of bad debts to be submitted to the Finance Committee.

9. **Authority for Revenue Procedures**—The Director of Finance shall be responsible for designing, implementing, monitoring, and amending as necessary, accounting procedures, including internal controls, for the billing, recording, and reporting of all revenues of the District in compliance with GAAP and State law. Any changes to revenue procedures will be reported to the Finance Committee at their next meeting.

### Operating Budget Policy

1. **Funding**—Debt or bond financing will not be used to finance current expenditures.
2. **Service Efforts and Accomplishments**—The District will integrate performance measures and productivity indicators into its budgetary process.

## Fiscal Policies (continued)

### Operating Budget Policy (continued)

3. **Planning**—The District will prepare a ten-year operating budget projection, which will include projections of annual growth plus allowances for operating costs of new capital facilities.
4. **Risk Management**—The District will utilize a risk management program to protect against loss and reduce exposure to liability. A comprehensive safety program shall be an integral component and will investigate property damage and workers' compensation incidents to minimize liability and take proactive measures to reduce the number and severity of future claims.
5. **Authority for Budget Procedures**—The District will prepare the budget in accordance with GAAP and the Local Government Budget and Fiscal Control Act (LGBFCA) established by the state legislature.
6. **Periodic Reporting**—The Finance Department shall submit quarterly budget to actual financial reports to the Board of Directors and monthly to Division Heads.
7. **Balanced Budget**—The District shall submit a balanced budget wherein budgeted expenditures shall equal budgeted revenues. Budgeted revenues may include transfers from another fund, reserves, or fund equity (available funds) defined as the excess of revenues over expenditures accumulated from prior years that are present in the form of cash at the beginning of the fiscal year.

### Asset Management Policy

1. **Planning for Operational and Maintenance Assets**—The District shall utilize an Equipment Replacement Review Committee to plan major operational and maintenance asset acquisitions on a systematic, comprehensive, and entity-wide basis.
2. **Asset Condition**—The District will maintain all assets at a level adequate to comply with all regulatory requirements and to minimize future replacement and maintenance costs. This process will be coordinated with the planning in the Capital Improvement Program.

## Fiscal Policies (continued)

### Capital Improvement Policy

1. **Planning**—The District will annually update and re-adopt a ten-year Capital Improvement Program, identifying and describing each capital project along with the estimated cost and funding source, in accordance with requirements of the State of North Carolina Collection System Permit.
2. **Capitalization**—The District will charge engineering division salaries and related costs used to plan for and oversee construction of major infrastructure to the Capital Improvement Program.
3. **Reporting**—The District will provide annual reports of expenditures by project to the Capital Improvement Program Committee.
4. **Funding**—The District will fund the construction program from revenue bonds and current revenues including grants as available.

### Accounting Policy

1. **Authority for Accounting Procedures**—The District will establish and maintain the accounting system according to the North Carolina Local Government Budget and Fiscal Control Act (LGBFCA), generally accepted accounting principles (GAAP) for governments, and in compliance with applicable provisions in the Bond Order.
2. **Annual Audit**—An annual audit will be performed by an independent public accounting firm, which will issue an official opinion on the annual financial statements, and a management letter indicating any suggestions for improvement or areas of concern.
3. **Transparency**—Full disclosure will be provided in the financial statements and bond representations.
4. **Due Diligence**—The District will monitor the audited financial statements of member agencies and compare with reports of revenues remitted to the District and accounts receivable billed by member governments.
5. **Financial Reporting**—The District shall prepare a comprehensive annual financial report (CAFR) upon completion of the financial audit, which will be submitted to the Government Finance Officers' Association (GFOA) for the Certificate of Achievement for Excellence in Financial Reporting award.



## Fiscal Policies (continued)

### Accounting Policy (continued)

6. **Written Accounting Procedures**—The District will maintain currently updated written accounting procedures

### Debt Policy

1. **Duration**—Capital projects financed through the issuance of bonds shall be financed for a period not to exceed the lesser of the expected useful life of the project or thirty years.
2. **Capitalization**—Interest, operating, and/or maintenance expenses will be capitalized only for facilities of enterprise activities and will be strictly limited to those expenses incurred prior to actual operation of the facilities.
3. **Ratings**—The District will endeavor to maintain its financial condition at no lower than Moody's "A1" and Standard & Poor's "AA-" bond rating.
4. **Unfunded Liabilities**—The District's debt policy extends beyond capital financing and includes not knowingly entering into any contracts creating significant unfunded liabilities.
5. **Coverage Ratio**—The District shall prepare an annual budget to maintain a debt ratio (coverage) of at least 1.5 net revenues to bonded debt. This exceeds the minimum 1.2 ratio as set forth in the Bond Order.
6. **Compliance**—The District shall follow terms and conditions of its Bond Order and any requirements of the Local Government Commission.

### Cash Management and Investment Policy

1. **Written Policy**—The District Board's investment policy, written to be in compliance with NC General Statutes and its Bond Order, shall be reviewed on an annual basis by the Board's Finance Committee.
2. **Objectives**—The primary objectives of investment activities, in priority order, shall be preservation of principal, liquidity, and yield.

## Fiscal Policies (continued)

### Cash Management and Investment Policy (continued)

3. **Periodic Reporting**—The District shall provide monthly investment reports to its Board and submit semi-annual reports to the North Carolina Local Government Commission.
4. **Treasury Services**—The District shall consider the advisability of preparing a Request for Proposal (RFP) for banking services every three (3) years.

### Reserve Policy

1. **Capital Reserves**—The District shall maintain a Capital Reserve Fund in the amount of 6% of current expenses in the adopted annual Operation & Maintenance Fund Budget as set forth in the Bond Order. This fund may be used only for debt service payments in the event of inadequate revenues or for unusual and extraordinary repair and maintenance expenses.
2. **Fleet & Heavy Equipment**—The District shall maintain a Fleet & Heavy Equipment Fund for vehicles and rolling stock with a value greater than \$10,000. Periodic budgeted transfers from the operating fund along with proceeds from sale of equipment shall be deposited in said fund along with interest earnings to provide funding to replace vehicles on a systematic basis as required.
3. **Plant Equipment**—The District shall maintain a Wastewater Treatment Equipment Replacement Fund for capital expenditures of \$10,000 or more with a useful life of at least (3) years. Periodic budgeted transfers from operations are intended to stabilize rate increases by planning funding for major repairs and rehabilitations.

### Purchasing Policy

1. **Authority for Purchasing Procedures**—The District will follow procedures and guidelines as prescribed by North Carolina General Statutes and Board approved resolutions.
2. **Centralized Procurement**—The District shall operate centralized purchase and warehouse functions to obtain materials, supplies, and services in the most cost-efficient manner for the District.



## Budget Process

### Budgetary Adoption

The District budget process must comply with North Carolina General Statutes and the MSD Revenue Bond Order as amended to date. The Bond Order requires that the District adopt its final budget on or before June 15 of each year. North Carolina General Statutes mandate an annual balanced budget ordinance based upon expected revenues, along with a budget message, to be presented to the governing board no later than June 1 and mandates a public hearing be held. The Bond Order calls for a preliminary budget hearing 30 days prior to adoption if requested by a certain percentage of bondholders. The budget calendar is designed to provide for input by all stakeholders into a systematic and deliberate process.

For the Operations and Maintenance Budget, the process begins with the mission statement as approved by the Board. Each Division or section of the District develops a specific mission statement setting forth its role in supporting the overall mission of the District. Next, key responsibilities are defined for each unit, with associated goals and objectives. To evaluate progress, performance measures are identified and tracked for the previous three years. Once the District staff develops the operational activities required to implement the mission-directed strategies, necessary resources can be quantified and presented in a budgetary format.

Because payroll and benefits represent such a large proportion of expenditures, and because an experienced and appropriately compensated, well-trained staff is necessary to accomplish the District's mission, extra effort is made to ensure salaries and benefits are competitive without being excessive. To this end, a human resources consultant prepares a salary survey every three to five years that compares District pay scales with other utilities and governmental entities in the area. During those years a consultant is not retained, the Human Resources Director and other staff take surveys among regional governments and wastewater utilities of intended increases and types/levels of benefits considered. After reviewing comparative data, the Finance and Personnel Committees take an active role in ratifying increases of cost of living and merit pay, as well as contributions to health insurance and other employee benefit programs. Before approval of any new positions, the Board must be convinced of the cost-benefit, efficiency, and programmatic benefit.

## Budget Process (continued)

### Budgetary Adoption

The Capital Budget incorporates short-term improvements mandated by the State-issued Collection System Permit with long-term needs identified and prioritized by the 20-year Wastewater System Master Plan to handle wet-weather flow conditions, to improve the performance at the wastewater treatment plant, and to prepare the system to handle expected future wastewater flows. Engineering staff prepare annual estimates of expenditures over the life of projects in a proposed timetable for construction in a 10-year Capital Improvement Plan (CIP).

Meanwhile, Administrative staff prepares an update of the District's ten-year financial forecast based on estimated revenues, expenditures, and debt issuance, which is integrated with the 10-year CIP, along with projections for fleet and wastewater plant replacement funds.

The effect of current expenditures on cash flows and debt coverage ratios are verified for adequacy, and any indicated adjustments to expenditures are made to sustain services within the desired user rate levels, which are set annually in connection with budget adoption.

The Budget Resolution is adopted at the fund level and allows for the carry forward of encumbered contracts and purchase orders from the previous fiscal year. This budget book illustrates the initial allocations among departments and between line items for authorized expenditures not including carryover amounts. Authority for modifying these allocations varies.

The General Manager has the authority to transfer amounts between departments within a fund without limitation. Division Directors may transfer amounts between line items and sections within their departments without limitation.

The entire allocation is available at the beginning of the year, and the unexpended balance will remain available during the year, unless otherwise limited by the General Manager and Director of Finance due to cash flow considerations.

## Budget Process (continued)

### Budget Administration (continued)

Several strategies are used to monitor expenditures throughout the year. The General Manager and Division Directors receive monthly expenditure reports, which compare actual to budgeted amounts for the period and for the year to date.

In addition, the procurement software is designed to require approval from the General Manager or Director of Finance if the line item has insufficient funds to cover the requisition or if the expenditure is over a certain amount. Purchasing staff make periodic reviews of outstanding inventory levels, requisitions, and purchase orders to update available line item balances.

### Budget Amendment

Budget Amendments require approval by the Board of Directors and as such are submitted through the agenda process for consideration at a regularly scheduled Board meeting.





## Budget Calendar

April						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

May						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

D A T E	T I M E	S U B J E C T
April 23	8:30 a.m.	<b>CIP Committee Meeting</b>
		<ul style="list-style-type: none"> <li>Update of Ten-Year Capital Improvement Program</li> </ul>
		<ul style="list-style-type: none"> <li>Update Construction Program Financing</li> </ul>
		<ul style="list-style-type: none"> <li>2020-2021 Construction Fund Budget</li> </ul>
April 28	9:00 a.m.	<b>Personnel Committee Meeting</b>
		<ul style="list-style-type: none"> <li>Cost of Living &amp; Merit Pay</li> </ul>
		<ul style="list-style-type: none"> <li>Benefit Allocations</li> </ul>
May 1	9:00 a.m.	<b>Finance Committee Meeting</b>
		<ul style="list-style-type: none"> <li>Nine Month Revenue/Expenditure Report</li> </ul>
		<ul style="list-style-type: none"> <li>Self-Funded Medical &amp; Dental Program</li> </ul>
		<ul style="list-style-type: none"> <li>Proposed FY2021 Construction Fund Budget</li> </ul>
		<ul style="list-style-type: none"> <li>Proposed FY2021 Operating Budget &amp; Sewer Rates</li> </ul>
May 20	2:00 p.m.	<b>Board Meeting</b>
		<ul style="list-style-type: none"> <li>Preliminary FY2021 Budgets &amp; Sewer Rates</li> </ul>
June 10	2:00 p.m.	<b>Board Meeting</b>
		<ul style="list-style-type: none"> <li>Public Hearing</li> </ul>
		<ul style="list-style-type: none"> <li>Adoption of FY2021 Budgets &amp; Sewer Rates</li> </ul>
July 1		<b>Start of Fiscal Year 2020-2021</b>



## Budgetary Basis of Accounting

The District accounts for its activities as an Enterprise Fund, which is similar to that of a private business where the costs of providing wastewater collection and treatment on a continuing basis are recovered primarily from user charges. Therefore, the accrual basis of accounting is used for financial reporting purposes, where revenues are recognized as soon as they are earned and expenses at the time the liability is incurred.

However, state law requires local governments to budget on the modified accrual basis, wherein revenues are only recognized to the degree that they are available to finance expenditures of the current period. Similarly, debt service payments and other liabilities are recognized when payment is due because it is only at that time that they normally are liquidated with expendable available financial resources.

There are no significant differences between the full and modified accrual basis of budgeting for District revenues, because the majority of revenues are collected shortly after billing, and as such, are available to pay period liabilities. The major difference resulting from the modified accrual method is noted in budgeting debt service and capital expenditures.

The Bond Order requires the District to have remitted all debt service to the Trustee at least one business day prior to the payment date, so that in the event of default, the Trustee will have time to secure payment for the bondholders from the Debt Service Reserve Fund for payment on the due date. Therefore, the District budgets for the amount of principal due on July 1 of the subsequent fiscal year, but reports the principal reduction paid on July 1 of the current year as reducing loans payable in the audited financial statements.

Capital outlays, which are defined as equipment or construction with an acquisition value over \$1,000 and a useful life of three years or longer, are budgeted as an expense in the year incurred, but depreciation is not budgeted, as it does not involve expenditure of cash. In the audited financial statements, buildings, and equipment over \$15,000 are capitalized and depreciated over future years. The District does not budget for barter transactions such as the exchange of building space for laboratory services, but the fair market value of such transactions is reflected as income and expense in the audited financial statements in accordance with generally accepted accounting principles.

## Budgetary Basis of Accounting (continued)

The ten-year Capital Improvement Plan presented in this budget manual documents the District's long-term asset management strategy to achieve and maintain compliance with state environmental permit conditions but does not authorize expenditures for any years beyond the current budget year.

The Capital Improvement Plan identifies specific projects with anticipated expenditures broken down by each year but based on the best estimates of the District. The General Manager is authorized to accelerate or postpone the start date of any particular project and to authorize the encumbrance of funds for projects continuing into a future fiscal year, provided that the total amount of funds expended and encumbered for any one year does not exceed the total appropriation in the Construction Fund for that fiscal year.

However, any projects included in a Capital Projects Ordinance may have expenditures authorized for the entire project crossing fiscal years, regardless of when contracts are signed, or costs are incurred or paid.

In accordance with the District's Bond Order, separate accounts for debt service and extraordinary maintenance reserves have been established. The District utilizes other reserve accounts to minimize or moderate the effect of unanticipated large expenditures and substantial equipment replacement on rate increases.



## Fund Structure

For financial statement purposes, all the District's transactions are reported in one enterprise fund. However, to be in compliance with the District's Bond Order, which prescribes certain procedures for financial planning and budgetary process, the enterprise fund is divided into several funds. Appropriated major funds whose expenditures exceed 10% of the budget include: ❶ the Revenue Fund from which operational and maintenance expenditures are made, ❷ the General Fund that transfers pay-as-you-go funding authorized for construction, ❸ the Construction Fund that incorporates CIP expenditures, ❹ the Insurance Funds that provides funding for Self-funded Employee Medical, General Liability, Worker's Compensation, and Post-Employment, ❺ the Replacement Funds that provides funding for Fleet/Heavy Equipment, WRF equipment, and Pump Maintenance ❻ the Debt Service Funds.

Financial plans are prepared for other non-appropriated funds whose expenditures are determined by external parties and contractual agreements, namely the insurance funds, debt reserve, and the capital reserve fund.

- ✓ **Revenue Fund**—The Bond Order requires all revenues from user charges to be deposited to a revenue fund. The first order of payments is current expenses, defined as the costs of controlling, operating, managing, and maintaining the sewerage system and wastewater treatment plant, which are paid directly from the revenue fund. Remaining revenues may be transferred as budgeted to other funds for use in debt service, construction, or any other lawful purpose.
- ✓ **General Fund**—The District may use funds from the General Fund for any lawful purpose. Due to the provisions of the 1985 and 1999 Bond Orders, the former which provided that operating expenses were to be paid from the O&M fund, and the latter which calls for current expenditures to be paid from the Revenue Fund, the General Fund has been used primarily to accumulate pay-as-you-go financing for construction.
- ✓ **Construction Fund**—This fund was established in accordance with the bond order to account for construction projects funded by sewer revenue bonds. The fund is currently used to record expenditures of capital construction, regardless of funding source.

## Fund Structure (continued)

- ✓ **Insurance Funds**—Financial plans for the four insurance funds—Self-Funded Employee Medical, General Liability, Worker’s Compensation, and Post Employment are included in the FY18 budget document. Each Department and Section budget is charged a proportionate share of employer insurance costs based upon the number of covered employees. Separate funds are maintained to track the excess or deficit of actual expenses over estimated cost. To ameliorate the effect of large unanticipated losses on the annual rate setting process, any excess of cost assessed over claims paid is retained by the fund as designated for any deficit in future years. There are no trust documents or other legal restrictions on these funds, and they are combined with other funds and accounts into one enterprise fund for financial reporting purposes.

A brief discussion of each follows.

- ▲ **Self-Funded Employee Medical**—Revenues consist of both employee and employer contributions. Expenditures include charges for stop-loss and aggregate premiums, third party administration of claims, as well as medical, dental, and prescription claims. Employer contributions are currently based on actuarially determined expected funding, which is approximately 80% of potential maximum cost if stop-loss and aggregate limits are reached. Prudent management of reserves should provide adequate funding for claims in excess of those anticipated, as well as for claims incurred during the year but paid after the year-end outside of the aggregate coverage.
- ▲ **General Liability**—The District purchases commercial coverage for Automobile, General Liability, Public Officials Liability, and Employee Blanket Bond. Each year, the Engineer of Record reviews the adequacies of the Districts’ insurance coverage to comply with the District’s Bond Order. Reimbursement for each loss is reduced by the amount of the particular coverage deductible, so the budgeted expenditure includes both contractual premiums and an estimate of the potential liability to be incurred from paying the deductible amount on each claim. Any excess of amounts transferred from the Operations and Maintenance Fund over premiums and deductibles expense is retained in the fund to be appropriated in a future year with unanticipated losses.

## Fund Structure (continued)

- ▲ **Worker's Compensation**—The District purchases commercial insurance coverage for Worker's Compensation. This policy also includes provisions for deductible amounts for each claim; so similarly budgeted insurance expense includes both contractual premium and an estimate of deductible amounts. Any excess is retained in the fund to be appropriated in a future year in the event of unanticipated losses.
- ▲ **Post-Employment**—The District has established a post-employment insurance fund to accumulate funds now, which will reduce future operational expenditures when retirees begin taking advantage of this benefit. The District will annually fund the equivalent of the annual required contribution less expenses as determined by an actuarial study as required by GASB45.
- ✓ **Equipment Replacement Funds**—Three (3) equipment replacement funds are included with the budget. Responsible departments are assessed proportional amounts to provide planned funding for the systematic replacement of assets and to moderate the impact in any one year on sewer rates from major capital acquisitions.

Any excess of revenues over expenditures are retained in fund equity to provide for large future capital expenditures, and for replacement or repair of any mission-critical equipment resulting from an accident, natural disaster, or other unforeseeable event.

- ▲ **Fleet & Heavy Equipment**—The District owns a variety of vehicles including pickup trucks, specialized vans, dump trucks, tankers, and excavating equipment, some costing up to \$250,000. The Fleet Supervisor and WRF Director are responsible for maintaining an inventory of all equipment including anticipated replacement dates and cost for all items. Departments are assessed determined amounts in the annual budget, which are estimated to provide funding for new vehicles when those in their use may no longer be efficiently maintained.
- ▲ **Wastewater Treatment Plant**—Various specialized machinery require replacement from time to time, usually at costs well in excess of what may be budgeted as routine maintenance. The WRF Director prepares a schedule by year of anticipated major projects needed to refurbish or replace obsolete equipment. The plant maintenance department is assessed amounts in the annual operations budget estimated to provide adequate funding for these projects when needed in the future.

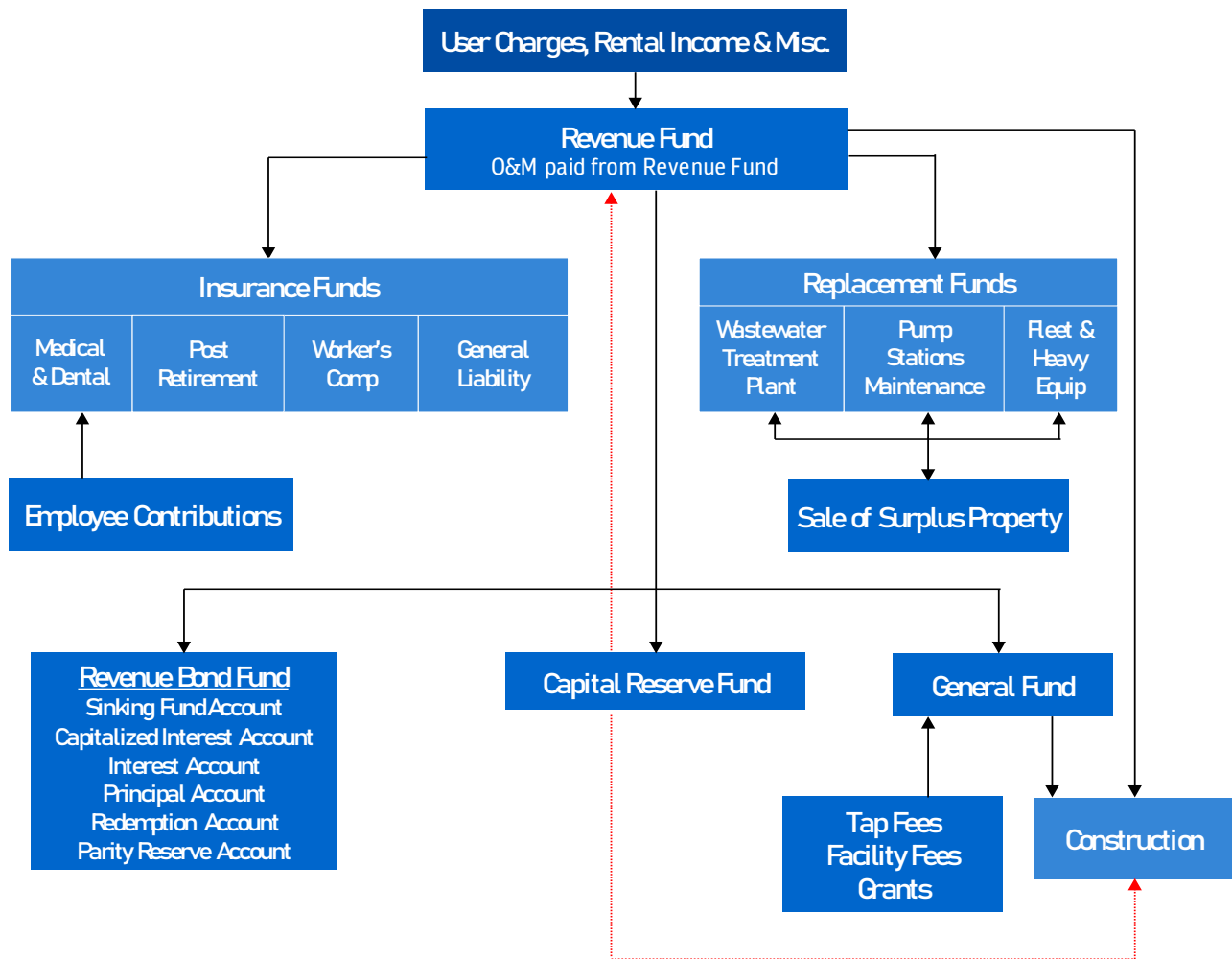
## Fund Structure (continued)

- ▲ **Pump Maintenance**—Various large pumps require replacement from time to time, usually at costs well in excess of what may be budgeted as routine maintenance. The SS Maintenance Director prepares a schedule by year of anticipated major projects needed to refurbish or replace obsolete equipment.
- ✓ **Debt Service Funds**—These funds are required under the District's Bond Order to accumulate and transmit all District debt service payments.
  - ▲ **Revenue Bond Fund**—This fund is used to accumulate periodic deposits from the revenue fund to pay principal and interest as scheduled.
  - ▲ **Capital Reserve Fund**—While technically not a debt service fund, this fund is mandated by the Bond Order to contain six percent (6%) or such greater percentage, as may be determined from time to time by the Board, of the amount shown by the annual budget to be necessary for current expenses for the current fiscal year. As this fund is to be kept for unusual and unforeseen expenditures, none is included in the financial plan as coming from this account.



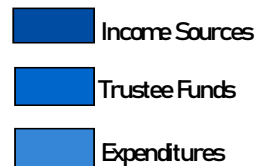


## Flow of Funds – Bond Order



### Priority of expenditures per Bond Order

1. Current Expenditures
2. Debt Service
3. Capital Reserve
4. Any Lawful Purpose



— Flow of Funding

..... Flow of Funding if required for emergency repairs or maintenance



## Budget Summary

The District utilizes a fund structure developed to accommodate mandates of the District's Bond Order with generally accepted accounting principles for proprietary governments. Appropriated funds, which are those funds that must have a board-approved budget, include ❶ the Revenue Fund from which operational and maintenance expenditures are made, ❷ the General Fund that transfers pay-as-you-go funding authorized for construction, ❸ the Construction Fund that incorporates CIP expenditures, ❹ the Replacement Funds providing funding for Fleet, WRF, and Pump Stations equipment, and ❺ Debt Service Funds.

Financial plans are approved for those other funds whose expenditures are determined by external parties or contractual agreements such as the insurance, debt reserve, and capital reserve funds.

The budget summary chart below shows total activity for all funds and consolidates the effect of transfers between funds.

	FY 2019 Actual Total	FY 2020 Budget	FY 2021 Proposed Budget	Increase (Decrease)	% Change
<b>REVENUES &amp; FINANCING SOURCES</b>					
Domestic User Fees	\$ 33,055,524	\$ 33,623,113	\$ 32,234,286	\$ (1,388,827)	-4.13%
Industrial User Fees	3,687,703	3,464,402	2,881,690	(582,712)	-16.82%
Billing and Collection	821,024	832,994	934,101	101,107	12.14%
Facility and Tap Fees	6,343,842	2,175,000	2,175,000	-	0.00%
Interest and Misc. Income	2,076,665	1,596,624	505,517	(1,091,107)	-68.34%
Rental Income	74,915	71,641	71,641	-	0.00%
City of Asheville (Enka Bonds)	33,210	35,000	35,000	-	0.00%
Employee Contributions to Health Fund	375,931	374,907	389,048	14,141	3.77%
Use of (Contributions to) Available Funds	155,460	15,529,165	17,374,543	1,845,378	11.88%
<b>Total Revenues &amp; Financing Sources</b>	<b>\$ 46,624,274</b>	<b>\$ 57,702,846</b>	<b>\$ 56,600,826</b>	<b>\$ (1,102,020)</b>	<b>-1.91%</b>
<b>EXPENDITURES</b>					
Operations and Maintenance	\$ 15,539,821	\$ 16,920,101	\$ 17,225,141	\$ 305,040	1.80%
Construction	21,032,471	29,894,818	28,131,316	(1,763,502)	-5.90%
Capital Equipment	659,641	1,053,560	1,406,987	353,427	33.55%
Bond Principal and Interest	9,392,341	9,834,367	9,837,382	3,015	0.03%
<b>Total Expenditures</b>	<b>\$ 46,624,274</b>	<b>\$ 57,702,846</b>	<b>\$ 56,600,826</b>	<b>\$ (1,102,020)</b>	<b>-1.91%</b>

**NOTE:** Both Operation and Maintenance and Capital Equipment expenditures represent actual amounts to be spent in the respective reserve funds. These amounts do not include current year reserve funds funding request.



## Component Fund Chart

The following chart shows revenues, expenditures, and transfers by individual fund and provides the detail supporting the summary amounts.

	Operating and Construction			Equipment Replacement			Debt Service	Appropriated Funds
	Revenue/O&M	General	Construction	Fleet & Heavy Reserve	WWTP Reserve	Pump Station Reserve	Bond Service	
Projected Net Position at 6/30/20	52,795,366	525,000	500,000	777,146	204,767	176,592	7,889,948	62,868,819
Revenues and Other Financing Sources:								
Domestic User Charges	32,234,286	-	-	-	-	-	-	32,234,286
Industrial User Charges	2,881,690	-	-	-	-	-	-	2,881,690
Billing and Collection Fees	934,101	-	-	-	-	-	-	934,101
Facility and tap fees	-	2,175,000	-	-	-	-	-	2,175,000
Proceeds from Revenue Bonds	-	-	-	-	-	-	-	-
Stimulus Loan/Grant	-	-	-	-	-	-	-	-
Sale of Surplus Property	-	-	-	71,680	-	-	-	71,680
Non-governmental Grants	-	-	-	-	-	-	-	-
Capital Contributions	-	-	-	-	-	-	-	-
Investment interest & misc.	403,919	2,625	2,500	3,886	1,024	883	1,500	416,337
City of Asheville for Enka Bond	35,000	-	-	-	-	-	-	35,000
Rental Income	71,641	-	-	-	-	-	-	71,641
Employee/Retirees Medical Contributions	-	-	-	-	-	-	-	-
Total Revenues and Fin. Sources	36,560,637	2,177,625	2,500	75,566	1,024	883	1,500	38,819,735
Expenditures and Other Financing Uses								
Operating Expenses	(13,591,279)	-	-	-	-	-	-	(13,591,279)
Debt--Principal	-	-	-	-	-	-	(6,120,825)	(6,120,825)
Debt--Interest	-	-	-	-	-	-	(3,716,557)	(3,716,557)
Construction	-	-	(28,131,316)	-	-	-	-	(28,131,316)
Capitalized Equipment Expenditures	(126,760)	-	-	(896,000)	(319,227)	(65,000)	-	(1,406,987)
Total Expenditures and Other Financing Uses	(13,718,039)	-	(28,131,316)	(896,000)	(319,227)	(65,000)	(9,837,382)	(52,966,964)
Interfund/account transfers	(40,066,944)	(2,102,625)	28,000,000	500,000	200,000	33,500	9,837,382	(3,598,687)
Excess (Deficit) of Revenues over Expenditures	(17,224,346)	75,000	(128,816)	(320,434)	(118,203)	(30,617)	1,500	(17,745,916)
Projected Net Position at 06/30/21	35,571,020	600,000	371,184	456,712	86,564	145,975	7,891,448	45,122,903

Funding comes primarily from the Revenue Fund, from which Operations and Maintenance expenditures are paid. Revenues are transferred to other funds, including construction, insurance internal funds, debt service and replacement reserve funds. Infrastructure over \$15,000 is capitalized and budgeted through the Construction Fund. Capitalized equipment such as trucks and rolling stock are budgeted through the Fleet Replacement Fund and capitalized equipment such as pumps and plant machinery are budgeted through the Water Reclamation Facility Replacement Fund. While the O&M budget contains line items entitled "Capital Equipment," while such expenditures are below the capitalization threshold, they are in excess of \$1,000 and budgeted and tracked internally for managerial purposes.

## Component Fund Chart (continued)

The following chart shows revenues, expenditures, and transfers by individual fund and provides the detail supporting the summary amounts.

	Designated for Insurance				Bond Covenant Requirement	Non-Appropriated	Budget Summary
	Insurance Medical	Insurance Post Employment	Insurance Prop & Liab	Insurance Work Comp	Capital Reserve		District Totals
Projected Net Position at 6/30/20	1,558,203	(1,294,000)	392,171	413,107	1,009,302	2,078,783	64,947,602
Revenues and Other Financing Sources:							
Domestic User Charges	-	-	-	-	-	-	32,234,286
Industrial User Charges	-	-	-	-	-	-	2,881,690
Billing and Collection Fees	-	-	-	-	-	-	934,101
Facility and tap fees	-	-	-	-	-	-	2,175,000
Proceeds from Revenue Bonds	-	-	-	-	-	-	-
Stimulus Loan/Grant	-	-	-	-	-	-	-
Sale of Surplus Property	-	-	-	-	-	-	71,680
Non-governmental Grants	-	-	-	-	-	-	-
Capital Contributions	-	-	-	-	-	-	-
Investment interest & misc.	8,000	1,500	1,500	1,500	5,000	17,500	433,837
City of Asheville for Enka Bond	-	-	-	-	-	-	35,000
Rental Income	-	-	-	-	-	-	71,641
Employee/Retirees Medical Contributions	359,048	30,000	-	-	-	389,048	389,048
Total Revenues and Fin. Sources	367,048	31,500	1,500	1,500	5,000	406,548	39,226,283
Expenditures and Other Financing Uses							
Operating Expenses	(2,864,412)	-	(580,950)	(188,500)	-	(3,633,862)	(17,225,141)
Debt--Principal	-	-	-	-	-	-	(6,120,825)
Debt--Interest	-	-	-	-	-	-	(3,716,557)
Construction	-	-	-	-	-	-	(28,131,316)
Capitalized Equipment Expenditures	-	-	-	-	-	-	(1,406,987)
Total Expenditures and Other Financing Uses	(2,864,412)	-	(580,950)	(188,500)	-	(3,633,862)	(56,600,826)
Interfund/account transfers	2,628,441	133,000	647,746	173,000	16,500	3,598,687	-
Excess (Deficit) of Revenues over Expenditures	131,077	164,500	68,296	(14,000)	21,500	371,373	(17,374,543)
Projected Net Position at 06/30/21	1,689,280	(1,129,500)	460,467	399,107	1,030,802	2,450,156	47,573,059

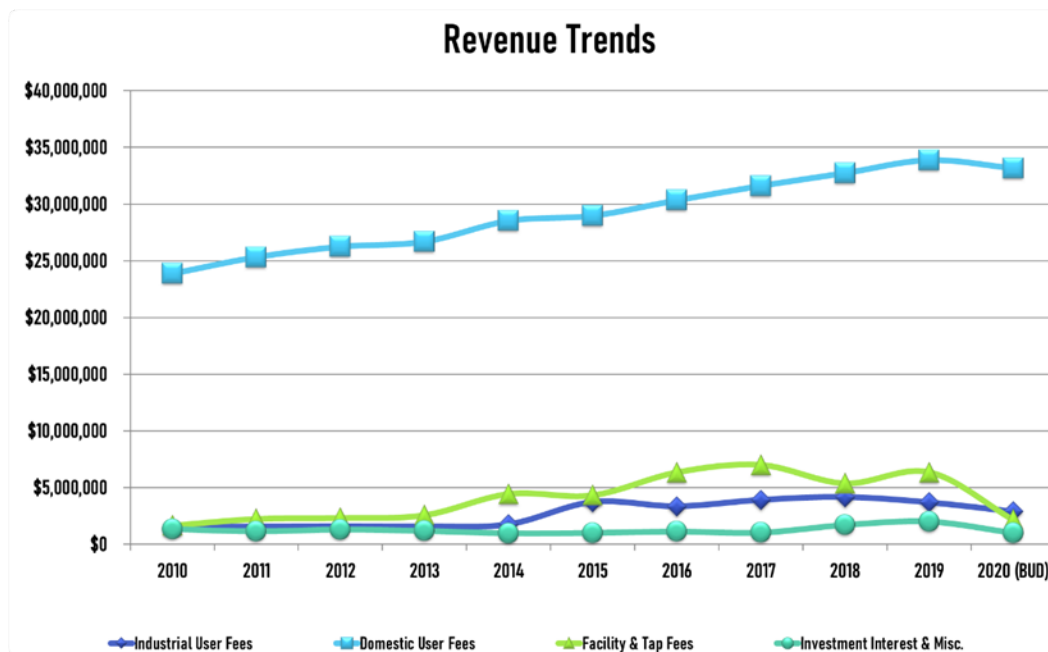
Now that the Districts' financial overview has been presented, we will examine revenues and various expenditures in detail.



## Revenue

### Overview

The District has the authority to establish rates and charges for service to be approved by a budget resolution of the District Board of Directors. The District has established separate rates for domestic and industrial customers, adopted a schedule of facility and sewer connection fees applying to new customers, and receives minor amounts of income from rental of real property and investment of surplus cash. The various types of revenues and other financing sources are described in detail on the following pages.

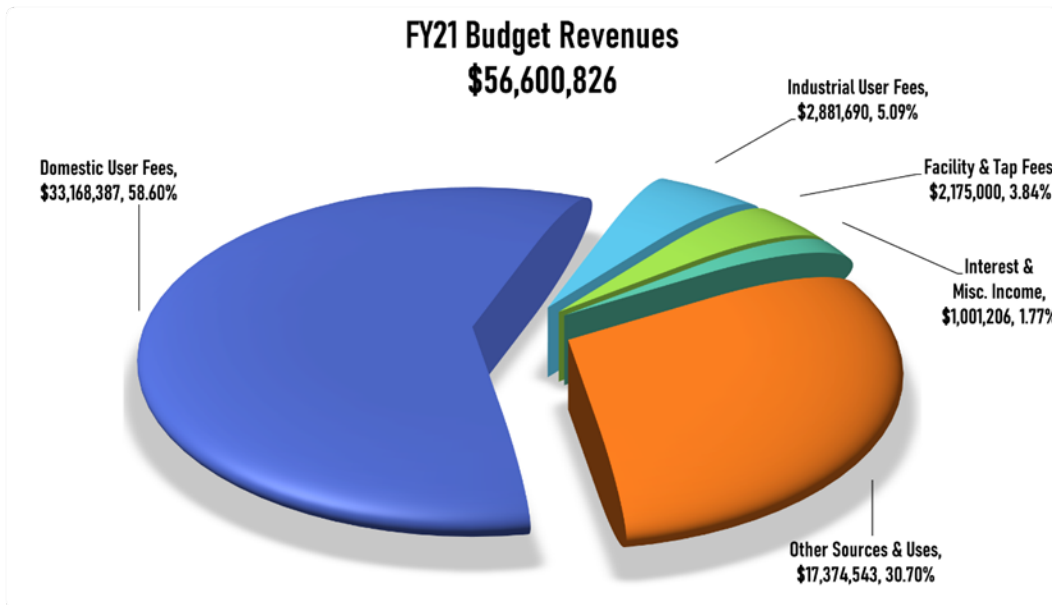


A graph of historical revenues by type reveals the overwhelming percentage of the District's income derives from domestic (residential & commercial) customers and has increased for the past ten consecutive years. Industrial user fees clearly show the effect of the shrinking textile industry in Buncombe County and are diminishing as larger industries wind down and are replaced with smaller new enterprises. Facility and tap fees testify to the growth fueled by population in-migration and expansion of non-industrial type businesses. Overall, income for FY20 is estimated to be slightly lower than in FY19.

## Revenue (continued)

### Revenue Summary

When projecting FY21 revenues, a 0% domestic customer rate increase was considered in conjunction with a projected .75% increase in domestic consumption. In addition, the budget reflects no growth in industrial users. Conservative assumptions based on recent income trends underlie other budgeted income amounts as explained below.



### Domestic User Charges

The primary source of District revenues are domestic charges. The District has approximately 56,000 accounts. The District direct bills approximately 500 of these domestic users all of which are on private well systems but are connected to MSD's sewer collector system. Billing and collection of the remainder of District domestic customers is performed by the member agencies providing water, who charge a fee for this service, which is added to the monthly bill and paid by MSD customers.

Domestic sewer rate increases for the past five years are shown below:

2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	0.0%

## Revenue (continued)

### Industrial User Charges

Prior to FY 2001, industrial users were charged decreasing tiered rates based on total volume so that actual rates charged were considerably below those paid by residential consumers. In FY 2001, the Board approved a plan to achieve rate parity between industrial and residential customers over the upcoming twenty years. The annual increases from this parity plan are incorporated in adopted rates.

Fortunately, the number of new residential customers continues to increase which is anticipated to mitigate the impact from the decline of industrial revenue.

### Investment Interest

This revenue source reflects interest earned on public funds held by the District and the Revenue Bond Trustee. Investment income is determined by interest rates and cash balances available for investment. Interest rates decreased rapidly during the current year due to adverse economic conditions. The projected yield for the current fiscal year will be .5%.

All MSD investments conform to its Bond Order and the North Carolina General Statutes governing investments, and due to the minimum acceptable level of risk, produce fairly conservative rates of return.

### Sewer System Development Fee

This revenue source represents the buying of equity in completed wastewater facilities paid by consumers who are added to the sewer collection system. In June 2006, the actual cost was determined to be significantly greater than the fee charged. To moderate the impact on customers, the board determined to implement 20% of this increase over each of the subsequent five years.

On July 20, 2017 the North Carolina General Assembly passed into law North Carolina General Statute 162A Article 8 ("Article 8"). Article 8 provides for the uniform authority to implement system development fees for public water and sewer systems. Raftelis Financial Consultants, Inc. was engaged to perform a study which conforms to the conditions and limitations of Article 8. Effective in FY18, sewer facility fees ranged from \$670 to \$2,836 for residential users based on size of structure, and from \$2,836 to \$751,540 for nonresidential customers based on meter size.



## Revenue (continued)

### Sewer Connection Fees

This revenue source represents the cost of physically installing new connections to the sewer system. Sewer Connection Fees were last changed in June of 2009. The cost for installing a tap is \$1,300, with additional charges up to \$2,300 if pavement disturbance or boring is involved.

The Sewer Connection Fee will apply to new home construction, as well as existing homes, which have been demolished or remodeled, and sewer service is reinstated under new property ownership. MSD reserves the right to require that a licensed utility contractor install any sewer connection, and such connections will be subject to MSD inspection. Sewer connections in excess of 75 feet will be evaluated on a case-by-case basis. If constructed by MSD, they will be billed at cost. Property owners may choose to utilize a licensed utility contractor, which will be subject to MSD inspection.

### Billings & Collections

The District will pay the municipalities \$2.45 per customer bill for meter reading, billing, and collection services.

### Rental Income

Buncombe County Partnership for Children has entered into a lease to utilize the District's former Administration Building. The District also leases land to a private company for a cell tower.

### City of Asheville (Enka Bonds Annexation)

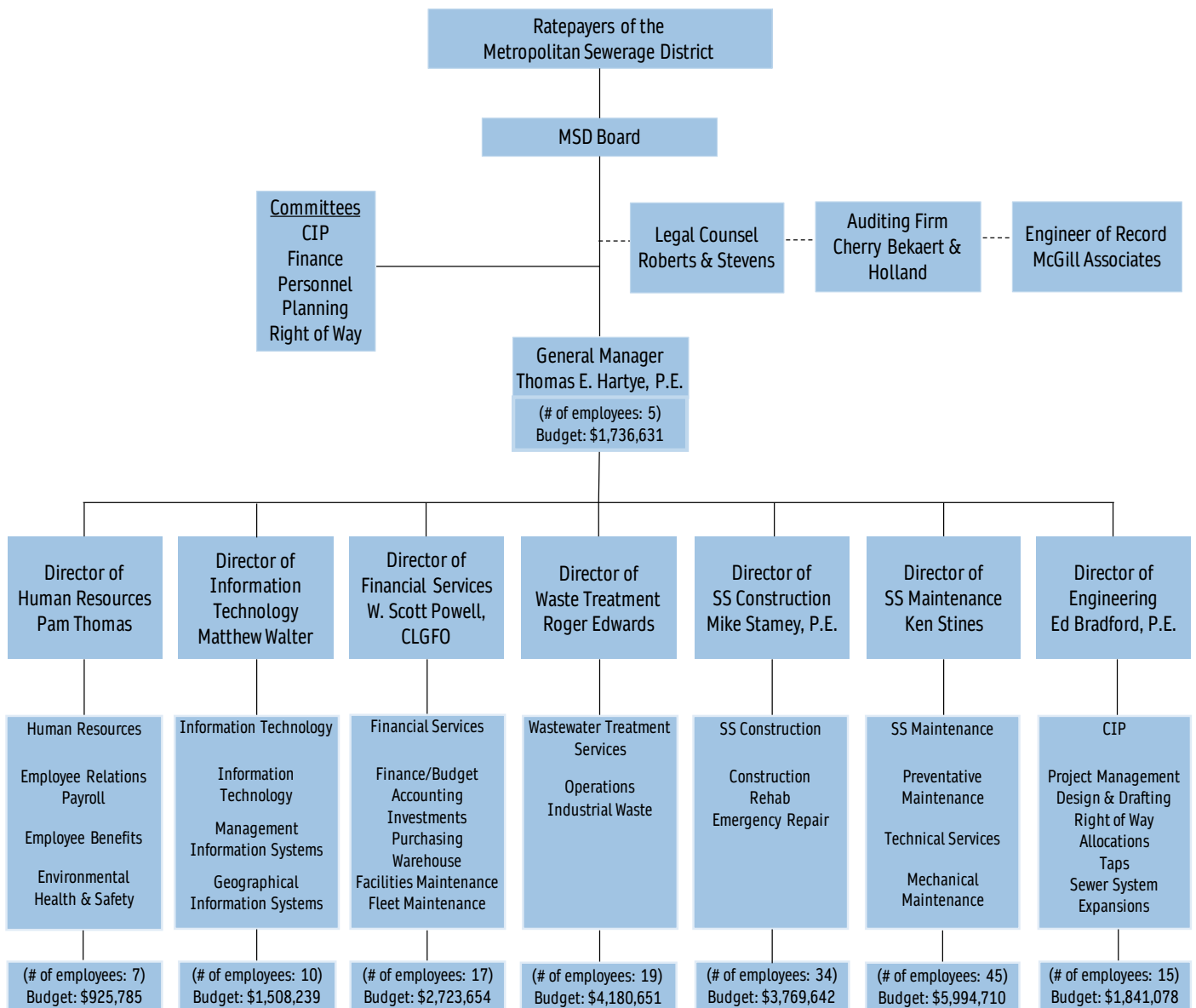
In the Consolidation Agreements, MSD agreed to assume debt service on the \$1,500,000 sanitary sewer bond issued by the Enka-Candler Water and Sewer District. This debt was used to pay a part of constructing the sewer system in Enka-Candler, which at that time was located in an unincorporated area of western Buncombe County. After the consolidation, the City of Asheville annexed a portion of the Enka-Candler Sewer District, so the City of Asheville reimburses the District for its proportionate amount (41%) of the annual principal and interest payment.

# Operation & Maintenance Fund



## Operation & Maintenance Fund

### Organizational Chart



## Operation & Maintenance Fund (continued)

### Overview

The Operation & Maintenance Fund budget finances the program and administrative activities for the wastewater treatment plant, pump stations, and collection system. The FY21 Operation & Maintenance Fund budget totals \$18,050,226. This represents a 2.89% increase over the previous year. The District budgets to the Departmental level and are as follows:

Office of the General Manager	\$ 1,736,631
Human Resources	\$ 925,785
Information Technology	\$ 1,508,239
Financial Services	\$ 2,723,654
Wastewater Treatment Plant	\$ 4,180,651
SS Maintenance	\$ 5,994,710
SS Construction	\$ 3,769,642
Engineering	\$ 1,841,078
Total Expenditures	\$ 22,680,390
Less: Capitalized in Construction Funds	\$ (4,630,164)
Net Operation & Maintenance Fund	\$ 18,050,226

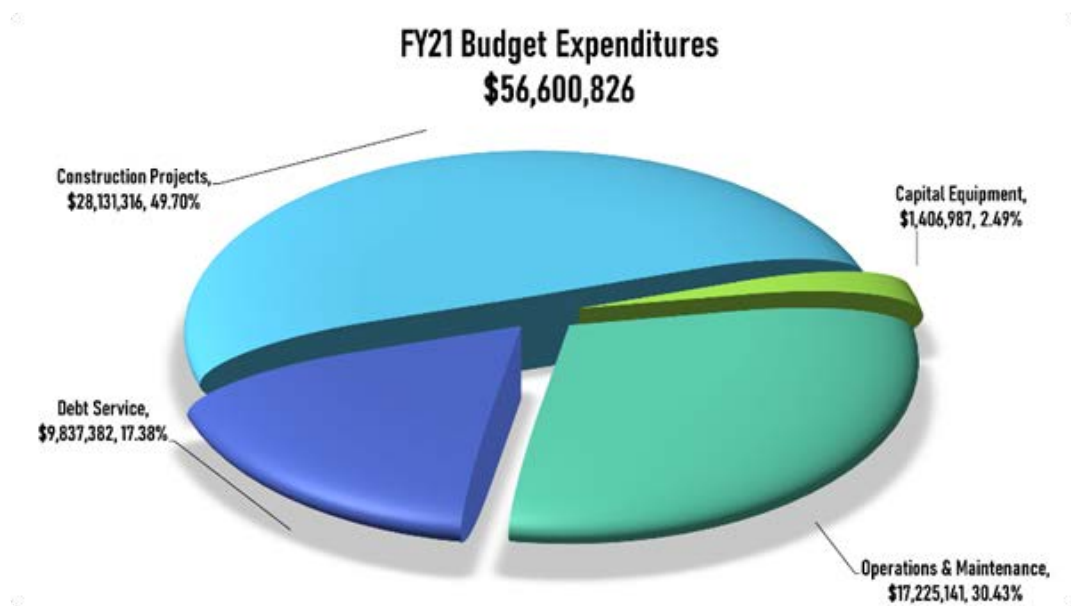
	ACTUAL 2018-2019	APPROVED 2019-2020 BUDGET	ESTIMATED 2019-2020 ACTUAL	PROPOSED 2020-2021 BUDGET	INC(DEC) OVER PRIOR YR BUDGET
SALARIES & WAGES	\$ 9,031,621	\$ 9,364,530	\$ 9,308,233	\$ 9,345,175	-0.21%
BENEFITS	\$ 4,536,862	\$ 4,926,948	\$ 4,914,910	\$ 5,188,166	5.30%
MATERIALS, SUPPLIES & SERVICES	\$ 5,626,646	\$ 6,730,565	\$ 6,602,543	\$ 7,108,106	5.61%
REPLACEMENT FUNDS & TRANSFERS	\$ 855,765	\$ 918,680	\$ 918,680	\$ 912,183	-0.71%
CAPITAL EQUIPMENT	\$ 113,043	\$ 141,360	\$ 141,360	\$ 126,760	-10.33%
SUB-TOTAL O&M FUND	\$ 20,163,938	\$ 22,082,083	\$ 21,885,726	\$ 22,680,390	2.71%
LESS:					
Capitalized Construction Expenses	\$ (4,294,732)	\$ (4,538,679)	\$ (4,531,740)	\$ (4,630,164)	2.02%
NET OPERATION & MAINTENANCE FUND	\$ 15,869,206	\$ 17,543,404	\$ 17,353,986	\$ 18,050,226	2.89%

## Operation & Maintenance Fund (continued)

### Overview (continued)

The major factors that impact our operating and maintenance budget include:

1. Repairs and Maintenance—A majority of the Districts' approximately 1,020 miles of collection lines are between thirty and one hundred years old. While many capital projects are planned and in process, these aging facilities often require frequent repairs and maintenance costs prior to commencement of a major rehabilitation funded in the CIP. The Asset Management Plan calls for



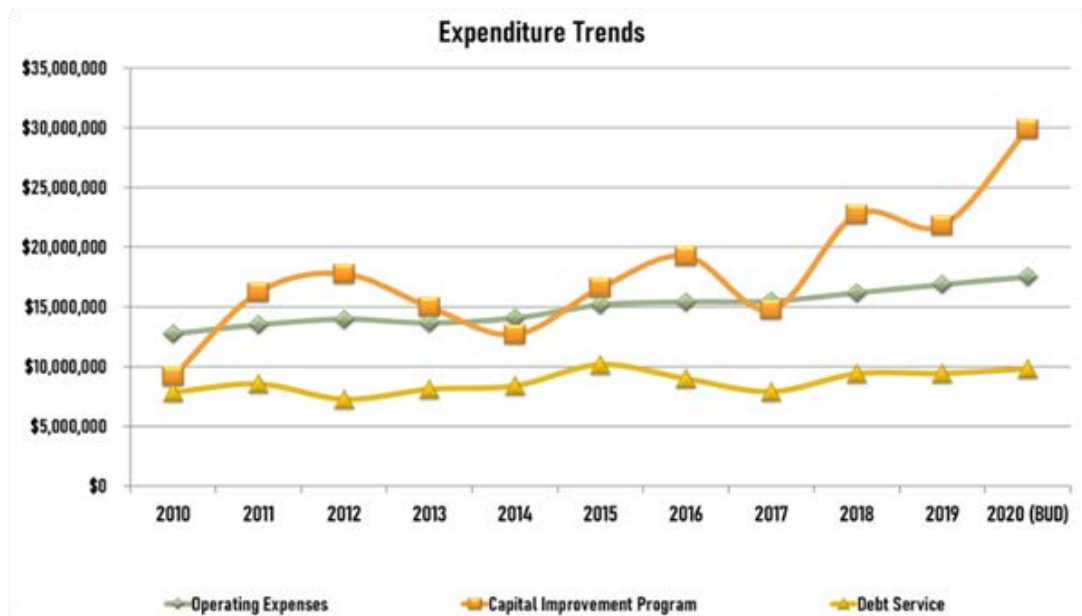
periodic maintenance and repairs. The District has well as for in-house sewer line repair and maintenance budgeted significant amounts for maintenance of equipment, buildings, and grounds as well as for in-house sewer line repair and maintenance.

2. Salaries and Benefits—A 0.0% salary adjustment as well as a 6.5% increase for the Self-Funded Health Insurance Plan. Personnel costs represent over 64% of the Operating and Maintenance budget.

## Operation & Maintenance Fund (continued)

### Overview (continued)

3. Post-Employment Health Benefit—Starting in FY09, GASB45 required the recognition of cost for Post-Employment Health Benefits. Current funding represents 1.6% of total operations.



## FY21 Budget – All Departments Summary

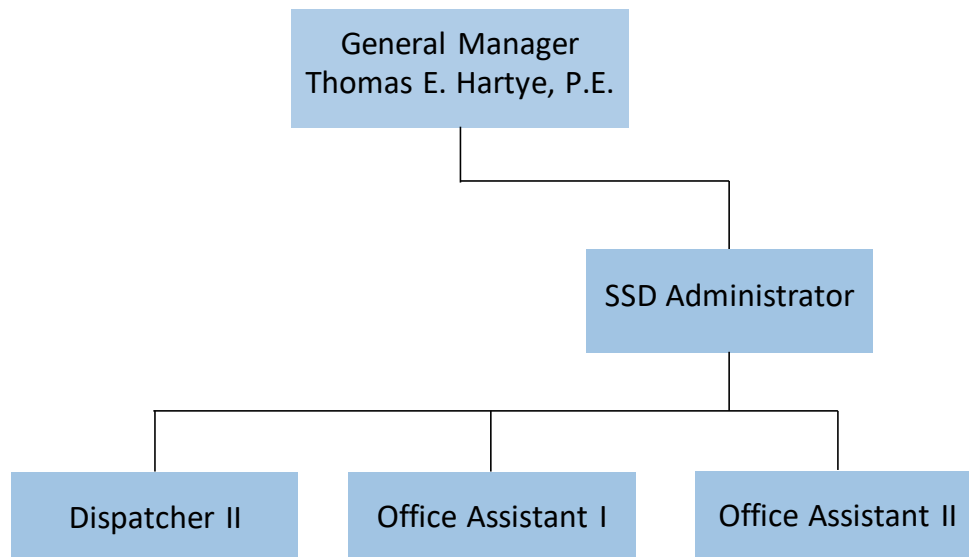
No.	Name	ACTUAL 2016-2017	ACTUAL 2017-2018	ACTUAL 2018-2019	Adopted 2019-2020 Budget	Estimated Actual 6/30/2020	Percent Expended To Total Budget	Proposed 2020-2021 Budget
<b>Salaries &amp; Wages</b>								
51100	Salaries & Wages	\$ 8,256,868	\$ 8,470,591	\$ 8,716,041	\$ 9,039,530	\$ 8,991,233	99.47%	\$ 9,020,175
51150	Overtime	256,323	282,827	315,580	325,000	317,000	97.54%	325,000
<b>Total Salaries &amp; Wages</b>		<b>8,513,191</b>	<b>8,753,418</b>	<b>9,031,621</b>	<b>9,364,530</b>	<b>9,308,233</b>	<b>99.40%</b>	<b>9,345,175</b>
<b>Benefits</b>								
51200	North Carolina Retirement	630,363	665,375	709,834	844,680	836,949	99.08%	954,141
51250	Payroll Taxes	690,654	638,912	662,290	716,387	712,080	99.40%	714,906
51300	Medical, Dental & Life	1,908,628	2,051,775	2,185,141	2,327,175	2,327,175	100.00%	2,478,441
51325	Post Retirement Insurance	270,000	249,500	307,560	283,000	283,000	100.00%	283,000
51350	Worker's Compensation	273,000	273,000	273,000	273,000	273,000	100.00%	273,000
51360	State Unemployment Benefits	1,066	4,170	3,287	32,465	32,465	100.00%	32,560
51450	Automobile Allowance	-	-	-	-	-	-	3,600
51500	401-K/457 Plan	369,244	381,363	395,750	450,241	450,241	100.00%	448,518
<b>Total Benefits</b>		<b>4,142,954</b>	<b>4,264,095</b>	<b>4,536,862</b>	<b>4,926,948</b>	<b>4,914,910</b>	<b>99.76%</b>	<b>5,188,166</b>
<b>Total Salaries, Wages &amp; Benefits</b>		<b>12,656,146</b>	<b>13,017,513</b>	<b>13,568,483</b>	<b>14,291,478</b>	<b>14,223,143</b>	<b>99.52%</b>	<b>14,533,341</b>
<b>Materials, Supplies &amp; Services</b>								
52010	Advertising	29,872	27,074	25,232	38,000	31,500	82.89%	33,500
52050	Dues & Subscriptions	47,249	55,087	52,722	63,710	61,515	96.55%	63,205
52100	Postage	9,608	14,794	11,056	14,000	13,500	96.43%	14,000
52150	Travel, Mtgs & Training	135,709	123,715	123,549	186,670	173,430	92.91%	200,036
52160	Tuition Assistance	1,500	2,153	4,129	7,000	6,000	85.71%	7,000
52170	Directors Fees & Expenses	22,040	19,945	22,167	24,000	24,000	100.00%	24,000
52180	Liability Insurance	547,746	547,746	547,746	547,746	547,746	100.00%	547,746
52200	Telephone/ Telefax	31,559	34,443	32,047	38,000	38,000	100.00%	40,200
52210	Communications	93,540	106,120	121,724	148,186	148,186	100.00%	131,400
52240	Uniforms	75,502	77,393	75,172	88,150	87,050	98.75%	87,550
52250	Office Supplies	17,758	16,942	16,134	27,017	25,350	93.83%	26,750
52260	Special Dept Supplies	405,699	429,723	413,582	471,495	469,445	99.57%	473,124
52270	Safety Equip/Supplies	71,486	83,213	81,303	84,900	84,895	99.99%	87,250
52280	Maint Supp/Small Tools	113,328	134,273	102,451	148,400	148,400	100.00%	149,150
52290	Chemical Supplies	421,563	423,363	371,798	553,500	553,500	100.00%	703,500
52300	Line Cleaning Supplies	64,385	45,655	47,485	53,750	53,750	100.00%	53,750
52330	Legal Fees	39,364	19,166	19,782	41,000	24,975	60.91%	36,500
52350	Prof/Contractual Svcs	583,380	518,404	509,104	571,224	516,250	90.38%	623,877
52410	Maint-Buildings & Grounds	141,341	139,012	135,355	208,500	198,500	95.20%	231,540
52420	Maintenance-Equipment	525,057	444,035	436,326	506,770	506,670	99.98%	522,800
52430	Landscape Restoration	9,190	12,929	12,340	15,000	14,700	98.00%	14,700
52440	Pump Maintenance	80,410	105,799	48,711	102,500	102,500	100.00%	102,500
52450	Equipment Rental	9,648	9,803	9,745	27,000	27,000	100.00%	37,000
52460	Motor Fuel & Lubricants	128,800	156,215	146,309	214,300	214,300	100.00%	214,300
52470	Outside Vehicle Maint	11,375	11,585	28,645	15,000	15,000	100.00%	15,000
52500	Rents/Leases	41,021	42,849	44,051	49,300	49,300	100.00%	50,000
52510	Permits/Fees/ Software Licenses	231,756	233,710	268,884	264,370	264,337	99.99%	266,060
52650	Utilities	1,113,988	1,161,806	1,025,513	1,275,000	1,275,000	100.00%	1,295,000
52690	Freight	4,391	3,746	4,004	5,000	5,000	100.00%	5,000
52715	Safety Incentive Program	842	690	692	1,822	1,822	100.00%	1,822
52725	Wellness Program	6,223	5,829	4,382	8,000	8,000	100.00%	8,000
52730	Employee Asst Program	4,355	4,355	4,355	4,500	4,500	100.00%	4,500
52900	Other Operating Expenses	1,866	1,002	249	4,000	2,000	50.00%	2,000
52910	Non-Capital Equipment	74,656	74,171	58,882	85,761	85,761	100.00%	97,245
52915	Copiers Printers & Faxes	-	-	-	4,000	4,000	100.00%	4,000
52920	Billing & Collections	768,833	795,574	821,024	832,994	816,660	98.04%	934,101
<b>Total Materials, Supplies &amp; Services</b>		<b>5,865,040</b>	<b>5,882,315</b>	<b>5,626,646</b>	<b>6,730,565</b>	<b>6,602,543</b>	<b>98.10%</b>	<b>7,108,106</b>
<b>Interfund Transfers</b>								
52340	Debt Administration Expenses	178,881	170,478	175,765	168,680	168,680	100.00%	162,183
53040	Fleet Replacement Charges	425,000	460,000	500,000	500,000	500,000	100.00%	500,000
53050	VWTP Replacement Charges	200,000	200,000	180,000	200,000	200,000	100.00%	200,000
53070	Pump Replacement Charges	-	-	-	50,000	50,000	100.00%	50,000
<b>Total Interfund Transfers</b>		<b>803,881</b>	<b>830,478</b>	<b>855,765</b>	<b>918,680</b>	<b>918,680</b>	<b>100.00%</b>	<b>912,183</b>
<b>Capital Outlay</b>								
54010	Capital Equipment - New	49,288	91,706	37,444	54,870	54,870	100.00%	46,160
54020	Capital Equip- Software	354	9,830	-	-	-	-	-
54030	Capital Equip - Replacement	84,379	93,614	75,600	86,490	86,490	100.00%	80,600
<b>Total Capital Outlay</b>		<b>134,022</b>	<b>195,150</b>	<b>113,043</b>	<b>141,360</b>	<b>141,360</b>	<b>100.00%</b>	<b>126,760</b>
<b>Sub-Total O&amp;M Fund</b>		<b>\$19,459,088</b>	<b>\$19,925,456</b>	<b>\$20,163,938</b>	<b>\$22,082,083</b>	<b>\$21,885,726</b>	<b>99.11%</b>	<b>\$22,680,390</b>
<b>59200 LESS</b>								
Chargebacks to General Fund for		(2,288,881)	(2,353,595)	(2,565,693)	(2,797,848)	(2,790,909)	99.75%	(2,870,202)
Chargebacks to General Fund for		(1,565,956)	(1,666,400)	(1,729,039)	(1,740,831)	(1,740,831)	100.00%	(1,759,962)
<b>Net Operation &amp; Maintenance Fund</b>		<b>\$15,604,251</b>	<b>\$15,905,461</b>	<b>\$15,869,206</b>	<b>\$17,543,404</b>	<b>\$17,353,986</b>	<b>98.92%</b>	<b>\$18,050,226</b>





## Office of the General Manager

### Organizational Chart



## Office of the General Manager (continued)

### Mission Statement

The mission of Office of the General Manager is to provide overall direction, leadership and coordination of the District and Department activities to ensure that the most efficient and effective services possible are provided within the policies established by the District's Board of Directors and the resources authorized.

### Key Responsibilities

Carry out policies and directives of the Board. Monitor and control resources to ensure that the District is operated in a responsible and cost-efficient manner. Operate and maintain a reliable wastewater, collection, and treatment system. Maintain effective communications and relationships with member agencies and the public. Maintain positive media relations through news releases and prompt, accurate responses to media inquiries. Represent MSD in various meetings, forums, and special events. Oversee intermediate and long-range planning. Review and submit the board and committee agenda items; prepare minutes for board meetings; coordinate travel arrangements for board members and staff; provide public relations assistance.

### Staffing History

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY20-21
Department of Office of the General Manager			
Management:			
General Manager	1	1	1
Total General Manager	1	1	1
Total – Office of the General Manager Department	1	1	1

### Accomplishments for FY 2019-2020

The Plant Headworks Project is complete and operational

Construction for High Rate Primary Treatment (HRPT) Project is at 40 % complete

Incorporated \$100 million of Treatment Plant improvements within 10-year CIP for MSD to meet future regulations and growth for next 50 years

## Office of the General Manager (continued)

### Accomplishments for FY 2019-2020

Replaced or rehabbed between 40,000 - 50,000 feet of sewer line

Incorporated \$100 million Interceptor & Storage improvements for 50-year planning period

Kept response time to all customer calls to less than 34 minutes

ISO Recertification for entire organization

### Budget Highlights/Changes for FY 2020-2021

- 🏆 No Rate or Fee increases for customers (Covid-19)
- 🏆 No annual wage increases for employees (Covid-19)
- 🏆 Keep rate increases low and consistent based on long-term financial model
- 🏆 Includes completing Capital Improvements of approximately \$28.1 Million
- 🏆 Reflects 6.5% increase in medical plan contributions
- 🏆 Includes 13.4% increase in state required contributions for the NC Retirement

### Goals & Objectives

- ⦿ Goal: Oversee compliance with all State & Federal requirements for collection, treatment, and disposal of wastewater. (MSD Objectives 1 & 2)
- ⦿ Goal: Manage District in a financially sound manner. (MSD Goal 3)
- ⦿ Goal: Implement District programs in accordance with Board approved schedules, as modified from time to time as appropriate to provide project flexibility and accommodate ongoing changes in the community. (MSD Goal 4)
- ⦿ Goal: Manage community relations and education efforts. (MSD Objective 5)
- ⦿ Goal: Establish departmental goals & objectives. (MSD Goal 4)

### Performance Measures

1. Oversight of compliance matters—see performance measures for Systems Services and Water Reclamation facility departments
2. Fiscal management—see performance measures for Finance Department

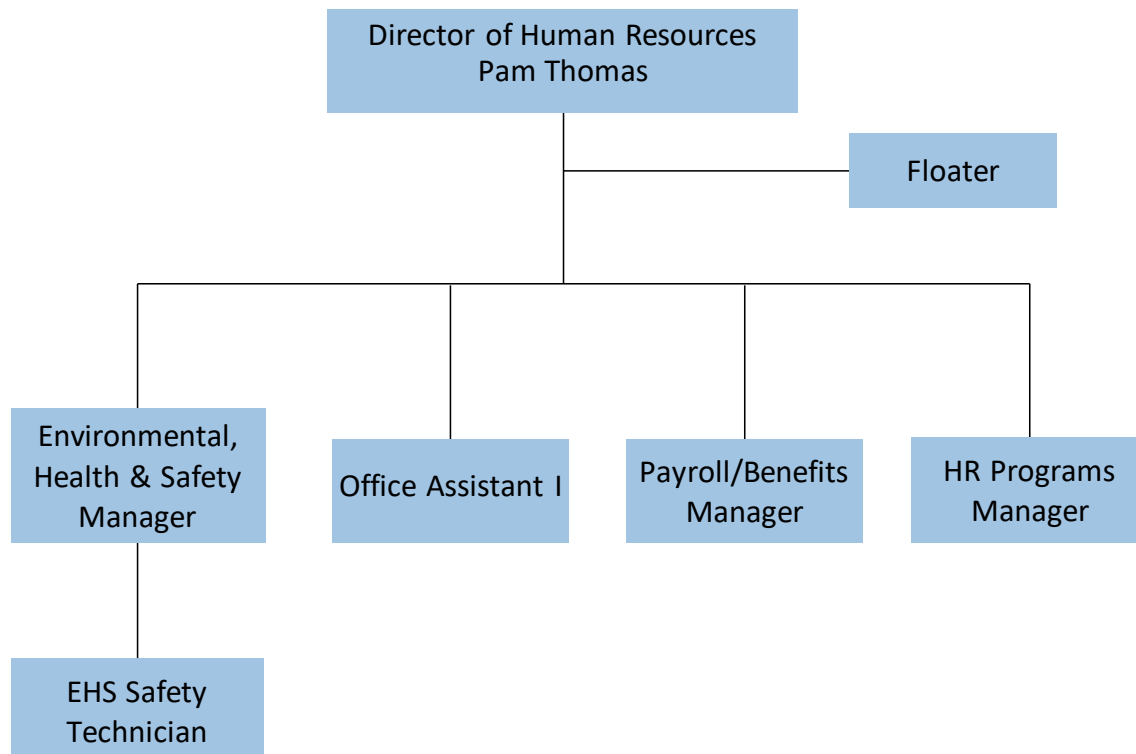
## FY21 Budget-Office of the General Manager

No.	Name	Actual 2016-2017	Actual 2017-2018	Actual 2018-2019	Adopted 2019-2020 Budget	Estimated Actual 6/30/2020	Percent Expended To Total Budget	Proposed 2020-2021 Budget
<b>Salaries &amp; Wages</b>								
51100	Salaries & Wages	\$ 179,356	\$ 200,114	\$ 202,162	\$ 201,609	\$ 201,609	100.00%	\$ 201,609
51150	Overtime	-	-	-	-	-	-	-
<b>Total Salaries &amp; Wages</b>		<u>179,356</u>	<u>200,114</u>	<u>202,162</u>	<u>201,609</u>	<u>201,609</u>	<u>100.00%</u>	<u>201,609</u>
<b>Benefits</b>								
51200	North Carolina Retirement	13,313	15,192	15,862	18,185	18,185	100.00%	20,584
51250	Payroll Taxes	76,972	11,282	11,247	15,423	15,423	100.00%	15,423
51300	Medical, Dental & Life	25,792	27,727	14,665	15,412	15,412	100.00%	16,306
51325	Post Retirement Insurance	3,649	3,372	2,064	1,874	1,874	100.00%	1,862
51350	Worker's Compensation	3,689	3,689	1,833	1,808	1,808	100.00%	1,796
51360	State Unemployment Benefits	-	57	22	215	215	100.00%	215
51500	401-K/457 Plan	9,315	9,548	9,856	10,081	10,081	100.00%	10,081
<b>Total Benefits</b>		<u>132,730</u>	<u>70,866</u>	<u>55,549</u>	<u>62,998</u>	<u>62,998</u>	<u>100.00%</u>	<u>66,267</u>
<b>Total Salaries, Wages &amp; Benefits</b>		<u>312,086</u>	<u>270,979</u>	<u>257,711</u>	<u>264,607</u>	<u>264,607</u>	<u>100.00%</u>	<u>267,876</u>
<b>Materials, Supplies &amp; Services</b>								
52010	Advertising	10,625	7,306	12,577	14,000	10,000	71.43%	12,000
52050	Dues & Subscriptions	12,523	14,475	12,144	12,000	12,000	100.00%	13,000
52100	Postage	9,608	14,794	11,056	14,000	13,500	96.43%	14,000
52150	Travel, Mtgs & Training	6,630	3,105	3,445	8,400	4,500	53.57%	5,000
52170	Directors Fees & Expenses	22,040	19,945	22,167	24,000	24,000	100.00%	24,000
52180	Liability Insurance	105,099	105,099	105,099	105,099	105,099	100.00%	105,099
52210	Communications	1,662	1,928	2,252	3,000	3,000	100.00%	3,300
52250	Office Supplies	300	421	453	600	400	66.67%	400
52260	Special Dept Supplies	501	339	339	700	200	28.57%	600
52330	Legal Fees	34,260	16,142	18,106	35,000	20,000	57.14%	30,000
52350	Prof/Contractual Svcs	55,977	27,139	31,528	28,000	24,000	85.71%	26,000
52410	Maint-Buildings & Grounds	127,735	131,708	130,682	137,000	137,000	100.00%	170,040
52420	Maintenance-Equipment	378	-	-	400	300	75.00%	300
52500	Rents/Leases	3,698	3,688	3,667	4,500	4,500	100.00%	5,000
52510	Permits/ Fees/ Software Licenses	144	78	145	200	200	100.00%	200
52650	Utilities	97,453	96,774	101,588	105,000	105,000	100.00%	110,000
52690	Freight	4,391	3,746	4,004	5,000	5,000	100.00%	5,000
52900	Other Operating Expenses	1,866	1,002	249	4,000	2,000	50.00%	2,000
52920	Billing & Collections	768,833	795,574	821,024	832,994	816,660	98.04%	934,101
<b>Total Materials, Supplies &amp; Services</b>		<u>1,263,724</u>	<u>1,243,263</u>	<u>1,281,096</u>	<u>1,333,893</u>	<u>1,287,359</u>	<u>96.51%</u>	<u>1,460,040</u>
<b>Interfund Transfers</b>								
53040	Fleet Replacement Charges	8,018	8,018	8,715	8,715	8,715	100.00%	8,715
<b>Total Interfund Transfers</b>		<u>8,018</u>	<u>8,018</u>	<u>8,715</u>	<u>8,715</u>	<u>8,715</u>	<u>100.00%</u>	<u>8,715</u>
<b>Capital Outlay</b>								
54010	Capital Equipment - New	-	6,636	-	-	-	-	-
<b>Total Capital Outlay</b>		<u>-</u>	<u>6,636</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<b>Sub-Total O&amp;M Fund</b>		<u>\$ 1,583,828</u>	<u>\$ 1,528,897</u>	<u>\$ 1,547,521</u>	<u>\$ 1,607,215</u>	<u>\$ 1,560,681</u>	<u>97.10%</u>	<u>\$ 1,736,631</u>
<b>Net Operation &amp; Maintenance Fund</b>		<u>\$ 1,583,828</u>	<u>\$ 1,528,897</u>	<u>\$ 1,547,521</u>	<u>\$ 1,607,215</u>	<u>\$ 1,560,681</u>	<u>97.10%</u>	<u>\$ 1,736,631</u>



## Human Resources

### Organizational Chart



## Human Resources (continued)

### Mission Statement

The mission of the Human Resource Management Division is to develop and implement a comprehensive, consistent program of human resource activities and maintain a qualified, diverse, career-oriented work force.

The mission of the Payroll and Employee Benefits Division is to process bi-weekly payroll for the District employees and to provide an attractive employee benefits package at a reasonable cost to the District and employees.

The mission of the Environmental Safety Division is to eliminate avoidable personal injuries and accidents through compliance with applicable federal, state, local and MSD rules and regulations governing environmental health and safety.

### Key Responsibilities

Human Resources—Includes compliance with all Federal/State regulations and MSD Personnel Policies; coordinate recruitment process and new employee orientation; coordinate employee six-month and annual evaluations; maintain employee personnel files; coordinate updates to personnel pay plan & job descriptions; maintain positive employer-employee relations and develop training program for supervisors.

Payroll & Benefits—Includes bi-weekly processing of payroll and related reports; administering the following benefits: group medical, dental and life insurance; social security, North Carolina Retirement Defined Benefit Plan, 401(k) and 457 Defined Contribution Plans, Section 125 Cafeteria Plan, and voluntary employee deductions such as cancer, disability and life insurance.

Environmental Safety—To ensure District compliance with laws of regulatory agencies such as OSHA, the North Carolina Department of Transportation, and EPA; to reduce losses to the District such as high worker's compensation premiums, lost production time, damage to property, etc.; and to promote awareness of and participation in environmental, health and safety among all employees.

## Human Resources (continued)

### Staffing History

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY20-21
Department of Human Resources			
Management:			
Director of Human Resources	1	1	1
Total Management	1	1	1
Human Resources:			
Floater	0	1	1
Office Assistant I	1	1	1
HR Programs Manager	1	1	1
Payroll/Benefits Manager	1	1	1
Total Human Resources	3	4	4
Environmental, Health & Safety:			
EHS Safety Technician	1	1	1
Environmental, Health & Safety Manager	1	1	1
Total Environmental, Health & Safety	2	2	2
Total - Human Resources Department	6	7	7

### Accomplishments for FY 2019-2020

- ★ Continued discount contract with Advent Health Hospital, resulting in zero costs for employees
- ★ Zero (0) OSHA recordable “incidents” first time in MSD history
- ★ Raised entry level and CDL’s pay rate for New System Services step program
- ★ Continued Wellness activities and monthly newsletter
- ★ Maintained employee medical insurance premium amounts at last year’s levels
- ★ Coordinated retirement and replacements activities
- ★ Identified, provided training, and promoted people as part of the Succession Plan
- ★ New Employees trained on essential job functions before the 6-month OSHA deadline
- ★ Fall protection and harness inspections performed as required



## Human Resources (continued)

### Accomplishments for FY 2019-2020 (continued)

- ★ Removed unsafe items out of warehouse that were no longer utilized
- ★ Received Safety Award from the NC Dept of Labor
- ★ MSD has a Silica Program in effect
- ★ Safety has increased efforts with System Services and the Plant to take care of small safety concerns with 2<sup>nd</sup> line supervisors
- ★ EHS has provided System Services with new core drill for manholes
- ★ Standard Operating Procedures have been implemented for Tripod Setups and Gas Lines breaks
- ★ Safety Orientation has been changed to add an entire day with construction employees
- ★ Hard hats have been out in warehouse added new light weight ones

### Budget Highlights for FY 2020-2021

- 🏆 Funds allocated for Gas monitors & AED's
- 🏆 Increased Advertising budget
- 🏆 Perform salary survey

### Goals & Objectives

- 🕒 Goal: Provide supervisory leadership development training (MSD Objective 3)
  - ↪ Objective: Provide appropriate training sessions for employees
- 🕒 Goal: Train supervisors in improving employee relations and managing employee personnel issues (MSD Objective 3)
  - ↪ Objective: Train supervisors to keep personnel informed/involved in all dealings leading up to a disciplinary step
- 🕒 Goal: Improve the pool of applicants to reflect the diversified community (MSD Objective 3)
  - ↪ Objective: Utilize minority communications tools
- 🕒 Goal: Ongoing review of new position classifications or positions with added responsibilities (MSD Objective 3)
  - ↪ Objective: Review Labor Grade of new & existing positions as necessary

## Human Resources (continued)

### Goals & Objectives (continued)

- ⦿ Goal: Keep personnel policies up to date (MSD Objective 3)
  - ↪ Objective: Review 20% of policies per year
- ⦿ Goal: Keep job descriptions up to date (MSD Objective 3)
  - ↪ Objective: Review 20% of job descriptions per year
- ⦿ Goal: Promote Wellness Program (MSD Objective 3)
  - ↪ Objective: Educate and distribute healthy information to lower insurance costs
- ⦿ Goal: Minimize time positions are vacant (MSD Goals 1 & 2)
  - ↪ Objective: Have positions filled within 20 days
- ⦿ Goal: Minimize cost to fill vacancies (MSD Goal 3)
  - ↪ Objective: Limit average cost to \$400
- ⦿ Goal: To guard the occupational health and safety of MSD's workforce (MSD Goal #1)
  - ↪ Objective: Maintain an "Incident Rate" below industry standards of 5.30 per 100 employees.
  - ↪ Objective: To ensure compliance with the following: Federal/State OSHA, NFPA, NCDOT, EPA and FMCA. Promote safety focused training and compliance inspections. Have Zero (0) OSHA violations
  - ↪ Objective: Continuously evaluate current safety practices and improve/change as needed.
  - ↪ Objective: Focus on plant involvement in all areas
  - ↪ Objective: Stay abreast of changes and regulations and how they apply with MSD
  - ↪ Objective: Manage safety related contractual efforts including drug testing, hoist testing and fire protection.
- ⦿ Goal: Process payroll in a timely and accurate manner (MSD Objective 3)
  - ↪ Objective: No errors in paychecks
- ⦿ Goal: Promote efficient utilization of employee benefits (MSD Objective 3)
  - ↪ Objective: Provide quarterly education or updates to employees concerning different types of benefits or other personal financial issues
- ⦿ Goal: Promote efficient utilization of employee benefits (MSD Objective 3)
  - ↪ Objective: Resolve employee payroll and benefit concerns within two business days
- ⦿ Goal: Maintain full compliance with all applicable legal requirements and governmental standards.
  - ↪ Objective: Have zero (0) OSHA violations
  - ↪ Objective: Stay abreast of changes and regulations and how they apply to the District

## Human Resources (continued)

### Performance Measures

Task	FY17-18	FY18-19	FY19-20
1. Monitor and evaluate Skill Based Pay System	Yes	Yes	Yes
2. Assist in the administration of the Employee Wellness Program	Yes	Yes	Yes
3. # of external vacancies	9	14	15
4. Avg. # of days to fill vacancies	45	40	45
5. Avg. advertising cost per vacancy	\$400	\$400	\$400
6. Percentage of paychecks reissued or modified	<.1%	<.1%	<.1%
7. Percentage of payroll tax and benefit withholdings timely remitted	100%	100%	100%
8. Number of employee benefit education sessions	5	8	6
9. Percentage of employee payroll and benefit concerns resolved within two business days	99%	100%	100%
10. Number of Injuries <small>(calendar year)</small>	3	3	0
11. Number of Lost Time Injuries <small>(calendar year)</small>	1	1	0
12. Incident Rate NAICS <small>(calendar year)</small>	2.0	1.97	0
13. Inspections/Audits <small>(calendar year)</small>	47	25/75+	25/75+
14. Random Alcohol and Drug Tests for CDL drivers <small>(calendar year)</small>	22	32	35
15. EHS Training classes conducted <small>(calendar year)</small>	57	97	58

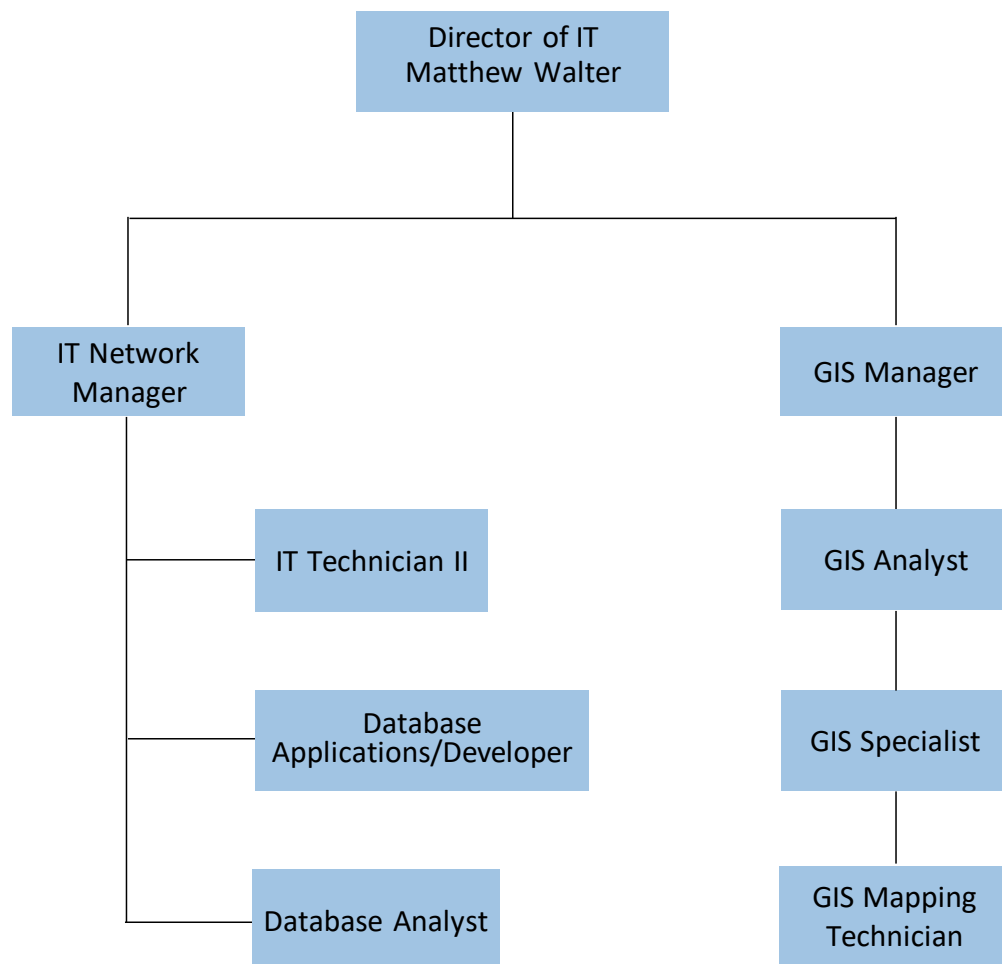
## FY21 Budget-Human Resources

No.	Name	Actual 2016-2017	Actual 2017-2018	Actual 2018-2019	Adopted 2019-2020 Budget	Estimated Actual 6/30/2020	Percent Expended To Total Budget	Proposed 2020-2021 Budget
Salaries & Wages								
51100	Salaries & Wages	\$ 383,903	\$ 398,670	\$ 412,478	\$ 493,727	\$ 493,727	100.00%	\$ 492,434
51150	Overtime	-	-	-	-	-	-	-
	Total Salaries & Wages	383,903	398,670	412,478	493,727	493,727	100.00%	492,434
Benefits								
51200	North Carolina Retirement	28,416	29,708	32,335	44,534	44,534	100.00%	50,277
51250	Payroll Taxes	30,031	31,419	32,650	37,770	37,770	100.00%	37,671
51300	Medical, Dental & Life	77,377	83,180	87,993	107,883	107,883	100.00%	114,139
51325	Post Retirement Insurance	10,946	10,115	12,385	13,119	13,119	100.00%	13,033
51350	Worker's Compensation	11,067	11,067	10,993	12,656	12,656	100.00%	12,573
51360	State Unemployment Benefits	18	170	133	1,505	1,505	100.00%	1,499
51500	401-K/457 Plan	18,616	18,162	18,963	22,937	22,937	100.00%	22,123
	Total Benefits	176,471	183,821	195,452	240,404	240,404	100.00%	251,315
	Total Salaries, Wages & Benefits	560,374	582,491	607,930	734,131	734,131	100.00%	743,749
Materials, Supplies & Services								
52010	Advertising	7,530	5,360	7,535	7,000	7,000	100.00%	7,000
52050	Dues & Subscriptions	3,148	6,081	5,678	6,505	6,505	100.00%	6,505
52150	Travel, Mtgs & Training	31,790	26,871	32,045	26,290	21,000	79.88%	23,050
52160	Tuition Assistance	1,500	2,153	4,129	7,000	6,000	85.71%	7,000
52180	Liability Insurance	1,695	1,695	1,695	1,695	1,695	100.00%	1,695
52210	Communications	5,321	5,356	5,321	5,460	5,460	100.00%	7,060
52240	Uniforms	856	954	682	1,300	1,300	100.00%	1,300
52250	Office Supplies	2,780	2,199	2,076	3,458	3,350	96.87%	3,450
52260	Special Dept Supplies	6,801	1,803	755	4,300	4,000	93.02%	4,300
52270	Safety Equip/ Supplies	15,510	18,500	16,873	18,000	18,000	100.00%	18,000
52280	Maint Supp/ Small Tools	-	8	-	-	-	-	-
52330	Legal Fees	2,515	1,944	954	4,000	3,000	75.00%	4,000
52350	Prof/ Contractual Svcs	55,968	69,012	51,546	64,450	64,450	100.00%	73,000
52410	Maint-Buildings & Grounds	716	-	-	500	500	100.00%	500
52420	Maintenance-Equipment	860	10	-	500	500	100.00%	500
52510	Permits/ Fees/ Software Licenses	1,836	2,154	67	100	67	67.30%	100
52715	Safety Incentive Program	842	690	692	1,822	1,822	100.00%	1,822
52725	Wellness Program	6,223	5,829	4,382	8,000	8,000	100.00%	8,000
52730	Employee Asst Program	4,355	4,355	4,355	4,500	4,500	100.00%	4,500
52910	Non-Capital Equipment	8,269	6,946	6,790	2,749	2,749	100.00%	8,000
	Total Materials, Supplies & Services	158,515	161,919	145,575	167,630	159,899	95.39%	179,782
Interfund Transfers								
53040	Fleet Replacement Charges	2,074	2,074	2,254	2,254	2,254	100.00%	2,254
	Total Interfund Transfers	2,074	2,074	2,254	2,254	2,254	100.00%	2,254
Capital Outlay								
54010	Capital Equipment - New	20,443	17,734	-	-	-	-	-
	Total Capital Outlay	20,443	17,734	-	-	-	-	-
	Sub-Total O&M Fund	\$ 741,406	\$ 764,218	\$ 755,760	\$ 904,015	\$ 896,284	99.14%	\$ 925,785
	Net Operation & Maintenance Fund	\$ 741,406	\$ 764,218	\$ 755,760	\$ 904,015	\$ 896,284	99.14%	\$ 925,785



## Information Technology

### Organizational Chart



## Information Technology (continued)

### Mission Statement

To provide information technology support, training, management, and development that will benefit the District divisions by □facilitating completion of work objectives, □improving communication, and □creating better and easier access to information.

### Key Responsibilities

Information Technology (IT)—Support new systems development based on the plans of the District divisions. Provide ongoing support and enhancements to major on-line operational and administrative systems. Maintain the existing computer equipment and data communications network. Plan and manage the acquisition and installation of new computer equipment, software, and peripherals. Provide computer equipment support, including installations, moving, and troubleshooting. Develop new software applications to meet specific MSD needs. Provide daily operations and product support. Develop long-range goals for computer systems development. Support responsibilities also include the telephone system, radio system, and process control equipment at the Plant. Offer computer software training programs for District staff. All IT work done 100% in-house. No vendor or contractors used for IT support.

Geographical Information Systems (GIS)—Develop, manage, and maintain data sets and digital maps related to the operations of the District. Provide data access and data analysis services for all divisions. Coordinate the acquisition of updated information from the field, external sources (such as other governmental agencies), and the Engineering Division and incorporate it into the GIS data sets. Develop, maintain, and train others in the use of tools for accessing spatial information to support all District activities.

### Staffing History

Division & Position	Approved Positions FY17-18	Approved Positions FY18-19	Budgeted Positions FY19-20
Department of Information Technology			
Management:			
Director of IT	1	1	1
Total Management	1	1	1

## Information Technology (continued)

### Staffing History (continued)

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY20-21
Information Systems (IT):			
IT Technician II	2	2	2
IT Network Manager	1	1	1
Database Analyst	1	1	1
Network Database Administrator	1	1	1
Total IT	5	5	5
Geographic Information Systems (GIS):			
GIS Mapping Technician	1	1	1
GIS Analyst	1	1	1
GIS Specialist	1	1	1
GIS Manager	1	1	1
Total GIS	4	4	4
Total – Information Technology Department			
	9	9	9

### Accomplishments for FY 2019-2020

- ★ Expanded CityWorks report library for multiple divisions, increased SQL automation processes, and numerous software customizations for MSD.
- ★ Upgraded the CityWorks server to new hardware and operating system.
- ★ Upgraded Freeance Mobile to latest major version and setup additional departments for mobile app use with CityWorks.
- ★ CityWorks implementation expanded to include WRF Operators, with Daily Inspections and HVAC Requests for WRF Maintenance.
- ★ Implemented a web-based password/account self-service utility for MSD employees.
- ★ Domain hardware and software upgrade/migration to latest Windows functional/security level.
- ★ Installed an iPad management system to manager/upgrade iPads in the field.



## Information Technology (continued)

### Accomplishments for FY 2019-2020 (continued)

- ★ Installed a new diesel-powered emergency generator and replaced the Server Room Uninterruptable Power Supplies to provide consistent power to MSD's servers and data storage.
- ★ Expanded SCADA monitoring system network loop at the Plant to include Headworks and Thickener building.
- ★ Made modification/improvements to the Verizon VPN wireless redundancy for Pump Stations.
- ★ Upgraded TV Truck 2901 with a new Granite video pc and the latest version of GraniteNet software.
- ★ 20+ laptops and PCs configured and deployed for MSD employees.
- ★ Support for MSD employees to work from home with laptops and connections to their accounts and data.
- ★ Completed conversion of MSDGIS data to current North Carolina coordinate system
- ★ Preparation of MSD system and coordination with CCWSD to accommodate rapid importation and deployment of CCWSD GIS data
- ★ Develop draft CCWSD Basins
- ★ Addition of Lees Creek basin to MSD Basins layer
- ★ Application development and testing for next-generation ArcGIS desktop, web, and mobile applications
- ★ Added Town of Woodfin to billed services layer
- ★ Added Towns of Montreat and Weaverville to MSD's street maintenance layer
- ★ Updated mapping of WRF facility using drone aerial photography
- ★ Completion of adding clickable links to record drawings from all MSD GIS features with a project number.
- ★ Development of a GIS data summary website that displays GIS system health and an assortment of commonly requested summaries.
- ★ Ongoing collection of high-accuracy GPS data for use in mapped infrastructure verification and accuracy improvement.

## Information Technology (continued)

### Accomplishments for FY 2019-2020 (continued)

- ★ Expanded GPS services to include mapping of MSD infrastructure during construction/replacement
- ★ Expanded GPS services to include inspection reports of manhole condition (broken lids, inverts, infiltration, etc.). All inspections are supported by photography
- ★ Ongoing coordinated efforts between System Services and GIS to identify, locate, and inspect specialized system infrastructure that had previously been unmapped
- ★ Addition of 2019 aerial photography to GIS system
- ★ Continued development of backup GIS applications for mobile devices
- ★ Performed security review of GIS website and mobile applications
- ★ Updated MSD infrastructure with NC811
- ★ Performed training on all GIS applications, data products, and services

### Goals & Objectives

- Goal: To provide on-going training, support, and application customization to all divisions
  - ↗ Objective: Continue implementation and support of CityWorks software into all divisions
  - ↗ Objective: Continue user support for MSD Web, Mobile, and Desktop GIS users
  - ↗ Objective: Expand web and mobile solutions to help streamline field navigation and workflows where needed
  - ↗ Objective: Staff training to enable GIS work order submittal through CityWorks (things like field edits and tap map requests; this has been an underutilized possibility since CityWorks was in use)
  - ↗ Objective: Participate in presentations for mapping use in wastewater classes and in-house general instruction classes.
- Goal: Maintain the servers, network, email, websites, public map access, phones, copiers, fax machines, printers, and security systems
  - ↗ Objective: Replace aging servers and desktop hardware as needed
  - ↗ Objective: Continue testing and researching in preparation for upgrades, including Windows, Server, Cloud Computing, and Storage

## Information Technology (continued)

### Goals & Objectives (continued)

- ⦿ Goal: Improve reporting structure for existing CityWorks implementation
  - ↗ Objective: Continue implementing mobile solution for CityWorks to aid in paper reduction as well expanding use of Flex/ESRI Mapping systems.
- ⦿ Goal: Data entry of as-built sewer maps
  - ↗ Objective: Ongoing data entry of existing record drawings into the GIS system.
- ⦿ Goal: Processing of map requests and customer data inquiries
  - ↗ Objective: Map Wastewater Reclamation Facility structures as they are changed and exposed by construction projects
  - ↗ Objective: Assessment of MSD hardcopy maps, survey, and standalone digital data that have not been entered into the GIS system
- ⦿ Goal: Provide all MSD staff with outstanding customer service
- ⦿ Goal: Continue system-wide accuracy verification and improvement project
  - ↗ Objective: Locate unmapped infrastructure
  - ↗ Objective: Verification that mapped data physically exists
  - ↗ Objective: Improve horizontal accuracy of mapped infrastructure using high-accuracy GPS measurements
  - ↗ Objective: Improve vertical accuracy of mapped infrastructure using physical measurement
  - ↗ Objective: Conduct pilot of improved map data to model sewage flow rates and improved flow estimation
  - ↗ Objective: Photograph infrastructure to record existence and condition
  - ↗ Objective: Report infrastructure condition to System Services Division
- ⦿ Goal: Implement tighter quality control measures on existing data as well as research and correct any error found through these tighter controls.
- ⦿ Goal: To Streamline mobile applications
  - *Objective:* to reduce time it takes to use mobile applications for navigation.
- ⦿ Goal: To input geospatial data changes as requested by users
  - *Objective:* Continue application and geospatial data support for CityWorks, Granite XP, Flex, ArcGIS Desktop, and AR for Trucks software and processes
  - *Objective:* All submitted field locates will be measured and entered using high-accuracy GPS.

## Information Technology (continued)

### Goals & Objectives (continued)

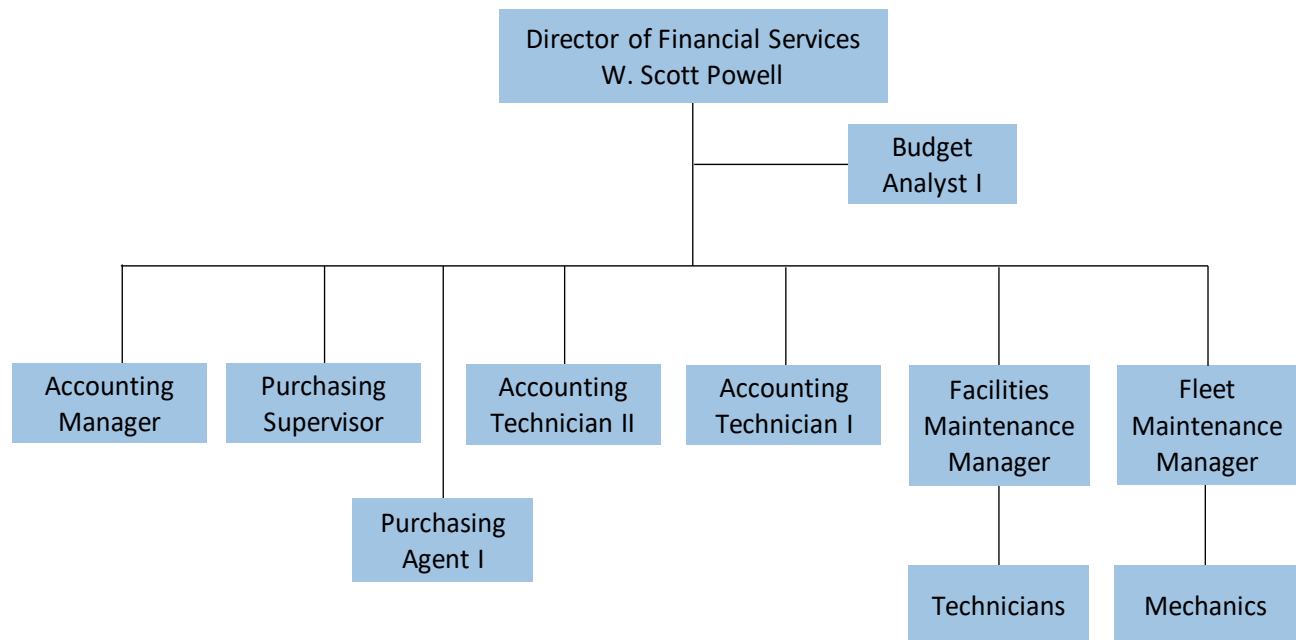
- ⦿ Goal: Merge Cane Creek Water and Sewer District (CCWSD) GIS data into Metropolitan Sewerage District of Buncombe County GIS data
  - ↪ Objective: Import CCWSD GIS data into existing MSD GIS system
  - ↪ Objective: Add CCWSD basins into MSD Basins layer
  - ↪ Objective: Assign MSD asset numbers or format existing CCWSD into MSD asset naming system
  - ↪ Objective: Ensure all CCWSD data is compatible with MSD's existing CityWorks asset management and Granite.NET CCTV inspection applications
- ⦿ Goal: To improve web application interfaces.
  - ↪ *Objective:* Tools for layers with a fiscal year component (Sanitary Sewer Overflow or Washed Lines by Year, for example) will be introduced to allow users to filter by fiscal year, or range of fiscal years.
- ⦿ Goal: To prepare MSD for next generation GIS software and eventual depreciation of existing software packages

## FY21 Budget - Information Technology

No.	Name	ACTUAL 2016-2017	ACTUAL 2017-2018	ACTUAL 2018-2019	Adopted 2019-2020 Budget	Estimated Actual 6/30/2020	Percent Expended To Total Budget	Proposed 2020-2021 Budget
Salaries & Wages								
51100	Salaries & Wages	\$ 665,935	\$ 687,663	\$ 709,575	\$ 726,192	\$ 726,192	100.00%	\$ 729,353
51150	Overtime	-	-	574	-	-	-	-
	Total Salaries & Wages	665,935	687,663	710,149	726,192	726,192	100.00%	729,353
Benefits								
51200	North Carolina Retirement	49,276	52,289	56,062	65,502	65,502	100.00%	74,467
51250	Payroll Taxes	51,925	50,467	52,392	55,553	55,553	100.00%	55,795
51300	Medical, Dental & Life	128,962	138,633	146,654	154,116	154,116	100.00%	163,055
51325	Post Retirement Insurance	18,243	16,858	20,642	18,742	18,742	100.00%	18,618
51350	Worker's Compensation	18,445	18,445	18,322	18,078	18,078	100.00%	17,960
51360	State Unemployment Benefits	72	284	222	2,150	2,150	100.00%	2,142
51500	401-K/457 Plan	31,246	33,826	35,609	36,311	36,311	100.00%	36,469
	Total Benefits	298,169	310,802	329,903	350,452	350,452	100.00%	368,506
	Total Salaries, Wages & Benefits	964,104	998,465	1,040,052	1,076,644	1,076,644	100.00%	1,097,859
Materials, Supplies & Services								
52050	Dues & Subscriptions	497	439	433	870	860	98.85%	850
52150	Travel, Mtgs & Training	1,464	1,897	2,101	4,800	4,750	98.96%	7,613
52180	Liability Insurance	10,557	10,557	10,557	10,557	10,557	100.00%	10,557
52200	Telephone/Telefax	31,559	34,443	32,047	38,000	38,000	100.00%	40,200
52210	Communications	3,091	3,983	5,087	5,500	5,500	100.00%	6,700
52240	Uniforms	190	1,031	610	850	850	100.00%	850
52250	Office Supplies	97	68	165	500	500	100.00%	500
52260	Special Dept Supplies	250	1,337	624	1,995	1,995	100.00%	2,000
52270	Safety Equip/Supplies	17	265	94	1,000	1,000	100.00%	1,000
52280	Maint Supp/Small Tools	-	-	91	1,500	1,500	100.00%	1,650
52350	Prof/Contractual Svcs	2,711	11,075	17,506	10,000	10,000	100.00%	12,500
52500	Rents/Leases	37,322	39,161	39,584	44,000	44,000	100.00%	44,000
52510	Permits/Fees/Software Licenses	174,650	176,309	200,968	195,470	195,470	100.00%	196,160
52910	Non-Capital Equipment	42,104	44,846	32,811	55,000	55,000	100.00%	55,000
	Total Materials, Supplies & Services	304,508	325,409	342,676	374,042	373,982	99.98%	383,580
Capital Outlay								
54010	Capital Equipment - New	11,300	8,371	19,476	13,500	13,500	100.00%	11,800
54020	Capital Equip-Software	354	9,830	-	-	-	-	-
54030	Capital Equip - Replacement	40,993	25,685	28,710	27,800	27,800	100.00%	15,000
	Total Capital Outlay	52,647	43,886	48,186	41,300	41,300	100.00%	26,800
	Sub-Total O&M Fund	\$ 1,321,259	\$ 1,367,760	\$ 1,430,914	\$ 1,491,986	\$ 1,491,926	100.00%	\$ 1,508,239
59200	LESS:							
	Chargebacks to General Fund for	(297,651)	(310,332)	(306,375)	(329,976)	(329,976)	100.00%	(328,846)
	Net Operation & Maintenance Fund	\$ 1,023,608	\$ 1,057,428	\$ 1,124,539	\$ 1,162,010	\$ 1,161,950	99.99%	\$ 1,179,393

## Financial Services

### Organizational Chart



## Financial Services

### Mission Statement

The mission of the Finance, Accounting, and Budget Division is to provide timely, useful, and accurate financial data to all internal and external customers including but not limited to staff, division directors, Board, investors, and the public and to assure prudent control of District cash and investments.

The mission of the Purchasing and Warehouse Division is to provide procurement services to District Departments in the timeliest and cost-effective manner in compliance with all requirements of the District's Purchasing Policy and NC General Statutes while maintaining a complete and sufficient supply of parts and materials required for District operations and asset maintenance.

The mission of Facilities Management Division is to provide professional, crafted, and highly productive trade persons to properly maintain each of the District's (90) structures and facilities. They continuously seek out new and improved products and methods of operation for inclusion into the process of project completion in the longest term, cost effective manner.

The mission of the Fleet Maintenance Division is to oversee the maintenance of all District rolling stock in a timely and cost-efficient manner.

### Key Responsibilities

Finance, Accounting, and Budget—Coordinates and manages the District's Operating and Capital budget preparation; monitors the annual budget through pre-audit of purchase orders and invoice payment; prepares monthly operation and capital projects financial reports for management and the Board; assists in financial analysis as directed by the General Manager or Board; monitors all debt financing obligations for timely payment and reporting; coordinates issuance of debt with professional advisors; oversees the Insurance Programs; prepares billing for industries and customers using well water.

Purchasing and Warehouse—To provide a proper system of internal control for all District acquisitions; to ensure compliance with the North Carolina General Statutes and the Board-approved District Purchasing Policy; to assist and train division requisitioners as required; to effect timely acquisitions and disposals of property.



## Financial Services (continued)

### Key Responsibilities (continued)

Facilities Management—Provides masonry (stone, brick, block) concrete (plaster, refractory, resurface, slab), carpentry (form, frame, finish), industrial painting, tile (quarry, vinyl, ceramic), cabinetry (in-house built), glass installation and glazing, signage (engraving, layout), mechanical installation, in-house fabrication, locksmith (unified master system), and drywall. Prepares Annual District facility/structural evaluations and oversees contract work (i.e. plumbing, roofing, HVAC, etc.). Periodically compares in-house estimates with estimates from the private sector to ensure cost effective and quality services.

Fleet Maintenance—To provide fleet maintenance and management; coordinate Fleet Replacement; write specifications for new and replacement vehicles and equipment; manage fueling facilities; inspections at District owned facilities; maintain fleet inventory; service vehicles on a regular basis.

### Staffing History

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY20-21
Department of Financial Services			
Management			
Director of Financial Services	1	1	1
Total Management	1	1	1
Finance & Budget:			
Budget Analyst	1	1	1
Total Finance & Budget	1	1	1
Accounting, Investments & Cash Flow Management:			
Accounting Technician I	1	1	1
Accounting Technician II	1	1	1
Accounting Manager	1	1	1
Total Acct., Investments & Cash Flow Management	3	3	3

## Financial Services (continued)

### Staffing History (continued)

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY20-21
<b>Purchasing &amp; Warehouse:</b>			
Purchasing Agent I	1	1	1
Purchasing Agent II	1	0	0
Purchasing Supervisor	1	1	1
Total Purchasing & Warehouse	3	2	2
<b>Facilities Maintenance: (moved to Finance Division in FY20)</b>			
Facility Maintenance Technician	-	5	5
Facilities Maintenance Supervisor	-	1	1
Total Structural Maintenance	-	6	6
<b>Fleet Maintenance: (moved to Finance Division in FY20)</b>			
Fleet Mechanic III	-	3	3
Fleet Maintenance Supervisor	-	1	1
Total Fleet Maintenance	-	4	4
<b>Total – Financial Services Department</b>	<b>7</b>	<b>21</b>	<b>21</b>

### Accomplishments for FY 2019-2020

- ★ Received the GFOA “Excellence in Financial Reporting” award for the Comprehensive Annual Financial Report (CAFR) for FY ending June 30, 2019.
- ★ Received the GFOA “Distinguished Budget” award for the Budget Document prepared for FY ending June 30, 2019.
- ★ Continue to offer high level of Customer Service to all customers internal and external to the District.
- ★ Purchasing and Finance Team continue to implement and enhance its E-Payables program with Bank of America.
- ★ Successfully auctioned MSD surplus materials.

## Financial Services (continued)

### Accomplishments for FY 2019-2020 (continued)

- ★ Enhanced paper reduction initiative by scanning and attaching receipts, quotations, emails, and other pertinent information and documentation to purchase orders and the vendor database. Also increased use of email and pdf for Request for Quotations (RFQ) and other communications with vendors.

### Goals & Objectives

- ⦿ Goal: Prepare and administer budget, which effectively meets the short and long-term needs of the District

(Operating Budget Policy #6)

- ↙ *Objective:* Obtain outside verification of the effectiveness of the budget document as a policy, operations, and communications guide by earning GFOA Distinguished Award for Budget Document

- ↙ *Objective:* Maximize accuracy of budgeted revenues and expenditures by striving for variances between budget and actual amounts of less than 5%

- ↙ *Objective:* Maintain affordability of rate increases by limiting rate increase to southern urban cost of living percentage

- ⦿ Goal: Prepare CAFR and other financial information, which effectively meet manager, investor, regulator, and other user needs

- ↙ *Objective:* Obtain outside verification of the effectiveness of the CAFR by earning Government Finance Officers' Association Award of Excellence

- ↙ *Objective:* Maximize availability of financial information to all users by offering CAFR and budget documents on District Website

- ⦿ Goal: Manage the District's debt rating to obtain the lowest cost of borrowing (Debt Policy #3)

- ↙ *Objective:* Achieve compliance with all provisions of Bond Order (Debt Policy #6)

- ↙ *Objective:* Maintain or improve District's debt rating

- ↙ *Objective:* Make efficient use of district funds used for debt service

- ⦿ Goal: Provide services and supplies in a timely manner (LT6 and Purchasing Policy #2)

- ↙ *Objective:* Place purchase orders within three business days of requisition

- ↙ *Objective:* Bid capital equipment within two weeks of requisition

- ⦿ Goal: Operate Finance Department in an efficient manner

- ↙ *Objective:* Minimize finance department expenditures in relation to total expenditures

## Financial Services (continued)

### Goals & Objectives (continued)

- ⦿ Goal: Manage District's investments to maximize rate of return while maintaining safety and meeting cash flow needs
  - ↪ *Objective:* Achieve a total rate of return at least that of a 6-Month T-bill
- ⦿ Goal: Prepare sewage treatment bills, which are accurate and collected in a timely manner
  - ↪ *Objective:* Limit rebilling due to errors to less than 1% of total bills
  - ↪ *Objective:* Collect a minimum of 98% of all residential fees and 90% of industrial fees billed
- ⦿ Goal: Pay for all services rendered and goods delivered to the District in a timely and accurate manner
  - ↪ *Objective:* Not be assessed any late charges on any District accounts
  - ↪ *Objective:* Limit voided accounts payable checks to 10% of total checks written
- ⦿ Goal: Maintain cost-effective and sufficient inventory levels
  - ↪ *Objective:* To maintain an inventory loss level below 3% (Purchasing Policy #2)
  - ↪ *Objective:* To minimize emergency purchases
- ⦿ Goal: Timely and cost-efficient maintenance and rehabilitation of plant buildings and equipment (Goals # 1 & 3)
  - ↪ *Objective:* Maintain annual rehab and replacement of key Building systems according to long-range plan (roofs, HVAC systems, Mechanical systems, exteriors, etc.)
- ⦿ Goal: For the MSD fleet to have minimal environmental impact to the service area (Goal #1)
  - ↪ *Objective:* Monitor all vehicles use of biodiesel (B20) and ethanol (E10) for any fuel related problems or repairs
- ⦿ Goal: Provide high level of quality of service and proficiency
  - ↪ *Objective:* Continuous improvement and training on software upgrades, diesel engine maintenance, and repairs
- ⦿ Goal: Maintain and replace only vehicles and equipment required for efficient and effective operation
  - ↪ *Objective:* Continue to evaluate heavy-duty vehicles essential for sewer line preventative maintenance

## Financial Services (continued)

### Performance Measures

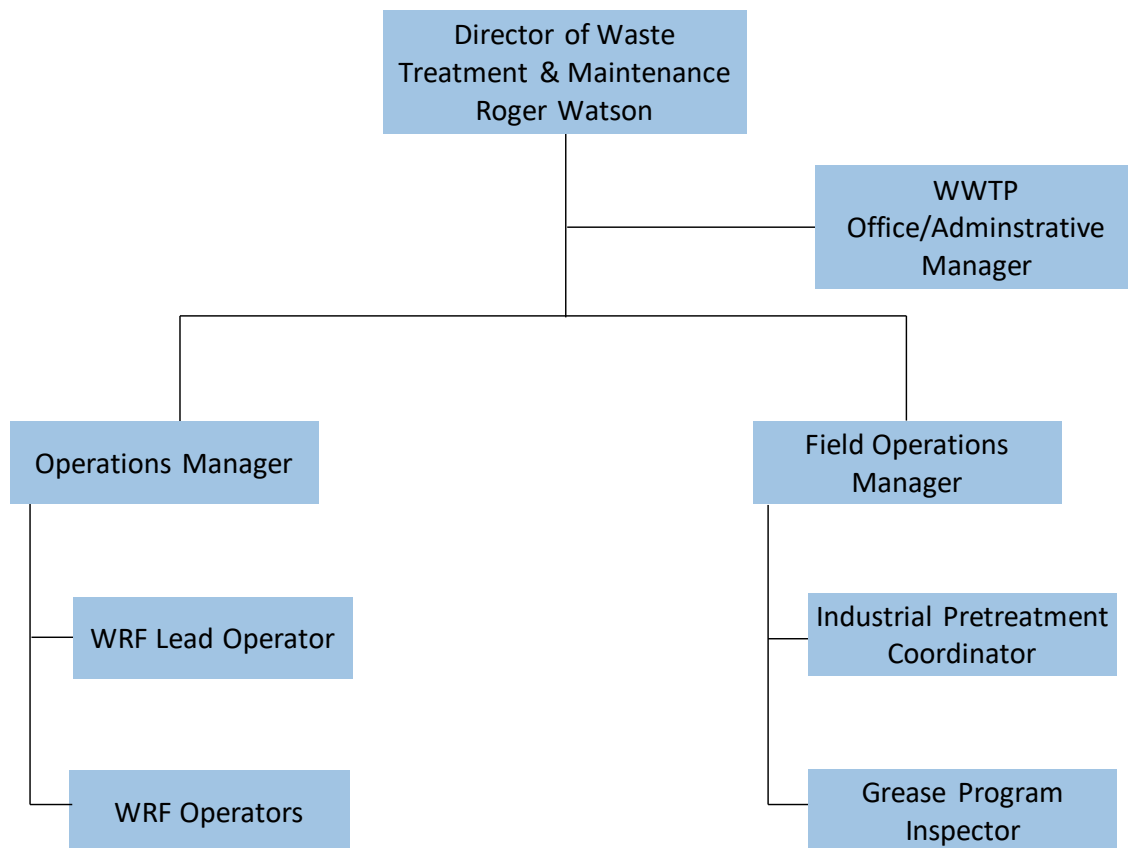
Task	FY17-18	FY18-19	FY19-20
1. Receive the Distinguished Budget Presentation Award	yes	yes	yes
2. Receipt of GFOA Excellence in Financial Reporting	yes	yes	yes
3. CAFR and budget document available on website	yes	yes	yes
4. District debt rating Moody's/Standard & Poor's/Fitch	Aaa/AA+	Aaa/AA+	Aaa/AA+
5. Fitch Ratings	AA+	AA+	AA+
6. Compliance with all provisions of bond order	yes	yes	yes
7. Southern Urban COL % increase	1.89%	1.50%	2.16%
8. MSD rate increase	2.50%	2.50%	0.00%
Comments: Assesses affordability of sewer rate increases when compared to overall regional price increases.			
9. Ratio of actual to budgeted sewer revenues	104.74%	102.44%	98.00%
10. Ratio of operating and maintenance total	96.02%	94.68%	98.92%
Comments: These illustrate the accuracy of financial projections and adequacy of revenues to meet expenditures.			
11. Interest and debt management costs as a percentage	3.86%	4.07%	3.87%
12. MSD Investment Yield	1.17%	2.45%	2.00%
13. NC Cash Management Trust (Money Market)	1.18%	2.11%	1.80%
14. 6-Month T-Bill Secondary Market (Calendar)	1.55%	2.34%	1.72%
Comments: Rates of return reflect overall declining interest rates in the fixed income market.			
15. Collection of internally billed residential accounts	95.75%	95.25%	95.50%
16. Collection of internally billed industrial accounts	100.00%	100.00%	100.00%
17. Percentage of voided accounts payable checks	.02%	.02%	.01%
Comments: This ratio illustrates the effectiveness of the cash disbursement process.			
18. Percentage of total O&M costs expended on Finance	5.05%	5.01%	5.10%
19. Purchase orders placed within 3 business days	98.75%	98.00%	99.00%
20. Requisitions for capital equipment to be bid within	99.00%	99.00%	99.00%
21. Maintain loss of inventory at Warehouse below 3% in	1.38%	1.50%	1.50%
22. Obtain the 12% goal for purchases with minority	11.00%	11.00%	11.00%

## FY21 Budget - Financial Services

No.	Name	ACTUAL 2016-2017	ACTUAL 2017-2018	ACTUAL 2018-2019	Adopted 2019-2020 Budget	Estimated Actual 6/30/2020	Percent Expended To Total Budget	Proposed 2020-2021 Budget
Salaries & Wages								
51100	Salaries & Wages	\$ 1,087,861	\$ 1,095,694	\$ 1,096,495	\$ 1,122,139	\$ 1,122,139	100.00%	\$ 1,124,219
51150	Overtime	15,313	20,465	14,737	21,000	21,000	100.00%	22,000
Total Salaries & Wages		1,103,173	1,116,158	1,111,232	1,143,139	1,143,139	100.00%	1,146,219
Benefits								
51200	North Carolina Retirement	81,889	85,000	87,497	103,110	103,110	100.00%	117,028
51250	Payroll Taxes	80,412	81,564	81,891	87,450	87,450	100.00%	87,686
51300	Medical, Dental & Life	232,131	249,540	249,312	261,999	261,999	100.00%	277,194
51325	Post Retirement Insurance	32,837	30,344	35,090	31,861	31,861	100.00%	31,650
51350	Worker's Compensation	33,203	33,203	31,148	30,735	30,735	100.00%	30,532
51360	State Unemployment Benefits	166	511	378	3,655	3,655	100.00%	3,641
51500	401-K/457 Plan	47,971	50,009	49,595	56,109	56,109	100.00%	56,212
Total Benefits		508,609	530,170	534,911	574,919	574,919	100.00%	603,943
Total Salaries, Wages & Benefits		1,611,782	1,646,329	1,646,143	1,718,058	1,718,058	100.00%	1,750,162
Materials, Supplies & Services								
52050	Dues & Subscriptions	1,485	2,126	1,825	2,000	2,000	100.00%	2,000
52150	Travel, Mtgs & Training	6,100	4,917	4,220	15,500	15,000	96.77%	16,500
52180	Liability Insurance	132,144	132,144	132,144	132,144	132,144	100.00%	132,144
52210	Communications	5,601	6,868	7,348	8,300	8,300	100.00%	8,340
52240	Uniforms	4,714	5,969	6,122	7,700	7,700	100.00%	7,700
52250	Office Supplies	3,053	2,404	3,396	3,750	3,750	100.00%	3,750
52260	Special Dept Supplies	362,894	386,600	370,373	423,600	423,600	100.00%	423,600
52270	Safety Equip/Supplies	1,073	1,604	974	1,250	1,250	100.00%	1,250
52280	Maint Supp/Small Tools	2,943	21,644	4,855	18,500	18,500	100.00%	18,500
52290	Chemical Supplies	2,274	2,243	2,474	4,000	4,000	100.00%	4,000
52350	Prof/Contractual Svcs	141,295	122,875	137,845	96,000	56,000	58.33%	104,300
52410	Maint-Buildings & Grounds	9,392	7,304	4,004	10,000	-	0.00%	-
52450	Equipment Rental	-	-	-	500	500	100.00%	10,500
52460	Motor Fuel & Lubricants	128,800	156,215	146,309	214,300	214,300	100.00%	214,300
52470	Outside Vehicle Maint	11,375	11,585	28,645	15,000	15,000	100.00%	15,000
52510	Permits/ Fees/ Software Licenses	2,983	2,495	3,085	3,900	3,900	100.00%	3,900
52910	Non-Capital Equipment	2,192	549	1,293	1,650	1,650	100.00%	1,650
Total Materials, Supplies & Services		818,317	867,543	854,911	958,094	907,594	94.73%	967,434
Interfund Transfers								
53040	Fleet Replacement Charges	5,574	5,574	6,058	6,058	6,058	100.00%	6,058
Total Interfund Transfers		5,574	5,574	6,058	6,058	6,058	100.00%	6,058
Capital Outlay								
54010	Capital Equipment - New	448	4,902	-	-	-	-	-
54030	Capital Equip - Replacement	-	3,882	-	-	-	-	-
Total Capital Outlay		448	8,784	-	-	-	-	-
Sub-Total O&M Fund		\$ 2,436,121	\$ 2,528,230	\$ 2,507,112	\$ 2,682,210	\$ 2,631,710	98.12%	\$ 2,723,654
Net Operation & Maintenance Fund		\$ 2,436,121	\$ 2,528,230	\$ 2,507,112	\$ 2,682,210	\$ 2,631,710	98.12%	\$ 2,723,654

# Wastewater Treatment Plant

## Organizational Chart





## Wastewater Treatment Plant (continued)

### Mission Statement

The mission of the Wastewater Treatment Facility Division is to maintain the highest level of wastewater quality by meeting Federal and State environment regulations; operating and maintaining facilities in a productive and cost-effective manner; and above all to protect the environment.

### Key Responsibilities

Include the operation of the District's regional water reclamation facility and maintain 24 hour shift operation; assure that all treated wastewater meets all discharge requirements; assure that all Title V air quality permits meet Federal, State and Local requirements; assure that State stormwater permit requirements are met; assure that all Federal and State Pretreatment program requirements are met.

### Staffing History

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY 20-21
Department of Water Reclamation Facility			
<i>Management:</i>			
Director of Waste Treatment & Maintenance Facility	1	1	1
Total Management	1	1	1
<i>Plant Operations:</i>			
Operator in Training	0	0	2
Lead Operator	3	4	4
WRF Operator	8	8	6
WRF Operations Manager	1	1	1
Total Plant Operations	12	13	13
<i>Office Support:</i>			
WWTP Office Manager	1	1	1
Total Office Support	1	1	1

## Wastewater Treatment Plant (continued)

### Staffing History (continued)

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY 20-21
<i>Field Operations:</i>			
Industrial Pretreatment Supervisor	1	1	1
Pretreatment Specialist	1	1	1
SCADA/PLC Technician (moved to SS Division in 2019)	2	-	-
Pretreatment Coordinator	1	1	1
Pretreatment FOG Technician	-	-	1
Total Industrial Waste	5	3	4
Mechanical/Electrical Maintenance: (moved to SS Mtce in 2019)			
Electrical Maintenance Crew Leader	1	-	-
Electrical IV/Specialist	1	-	-
Senior Electrician	2	-	-
Mechanical Maintenance Crew Leader	1	-	-
Mechanical Specialist	0	-	-
Mechanic II	4	-	-
Senior Mechanic	1	-	-
Maintenance Manager	1	-	-
Total Mechanical/Electrical Maintenance	11	-	-
Facilities Maintenance: (moved to Finance Division in FY20)			
Facility Maintenance Technician	5	-	-
Facilities Maintenance Supervisor	1	-	-
Total Structural Maintenance	6	-	-
Fleet Maintenance: (moved to Finance Division in FY20)			
Fleet Mechanic III	3	-	-
Fleet Maintenance Supervisor	1	-	-
Total Fleet Maintenance	4	-	-
Total – Wastewater Treatment Plant Department	40	18	19

## Wastewater Treatment Plant (continued)

### Accomplishments for FY 2019-2020

- ★ Maintained compliance with all National Pollution Discharge Elimination Systems, Stormwater Permit and WNC & EPA Air Quality Title V permit and standards during FY20.
- ★ Recognized for a Peak Performance Award by the National Association of Clean Water Agencies (NACWA) at the Silver Level Award for calendar 2019.
- ★ Replace the four groundwater monitoring wells positioned around the treatment plant.
- ★ Estimated total gallons treated: 8,573 million gallons
- ★ Estimated total solids incinerated: 6504 tons
- ★ Estimated total solids hauled: 641 tons
- ★ Estimated total cubic yards removed by fine screens: 442 cubic yards
- ★ Estimated total cubic yards removed by bar screens: 199 cubic yards
- ★ Estimated total cubic yards removed by grit vortex: 277 cubic yards
- ★ Compliant Stationary Source Testing (Stack Test) for Fluidized Bed Incinerator (FBI) Title V permit
- ★ Continued progress of High-Rate Primary Treatment project; slated for completion in winter of 2020-21.
- ★ Treatment plant staff conducted roughly a dozen guided tours of the facility with approximately 260 student and adult individuals attending.
- 🏆 Update Sewer Use Ordinance to reflect the state formatting and include new sections addressing growing fermented beverage industry and emerging contaminants.

### Budget Highlights/Changes for FY 2020-2021

- ★ Maintain compliance with all National Pollution Discharge Elimination Systems, Stormwater Permit and WNC & EPA Air Quality Title V permit and standards during FY21.
- 🏆 Complete construction of High-rate Primaries (Actiflo system).
- 🏆 Replace Schwing positive displacement pumps used in delivery of sludge cake to Fluidized Bed Incinerator.
- 🏆 Replace Fluidized Bed Incinerator polymer feed system
- 🏆 Install Belt Filter Press (BFP) in-line solids metering equipment
- 🏆 Install a new Belt Filter Press (BFP) for management of increased solids from High Rate Primary Clarifier.

## Wastewater Treatment Plant (continued)

### Goals & Objectives

- ◎ Goal: Operate the Water Reclamation Facility in the most efficient and effective manner and in compliance with all requirements of the Discharge Permit (NPDES) (Objective #2)
  - ↗ *Objective:* Achieve a carbonaceous biochemical oxygen demand (CBOD) removal efficiency of at least 85%
  - ↗ *Objective:* Achieve a total suspended solids (TSS) removal efficiency of 85%
  - ↗ *Objective:* Have NPDES permit non-compliance occurrence of zero (0)
  - ↗ *Objective:* Limit odor complaints by maintaining dissolved hydrogen sulfide (H<sub>2</sub>S) levels below 0.5 mg/L
  - ↗ *Objective:* Maintain treatment costs (cost/MG) at/below NACWA average
- ◎ Goal: Continual improvement of operations
  - ↗ *Objective:* Effectively manage divisional objective(s) identified in the ISO 14001 Environmental Management System
  - ↗ *Objective:* Assist in development of WRF SCADA-integration of controls, reviews of standard operating procedures affecting Operations and Pretreatment.

### Performance Measures

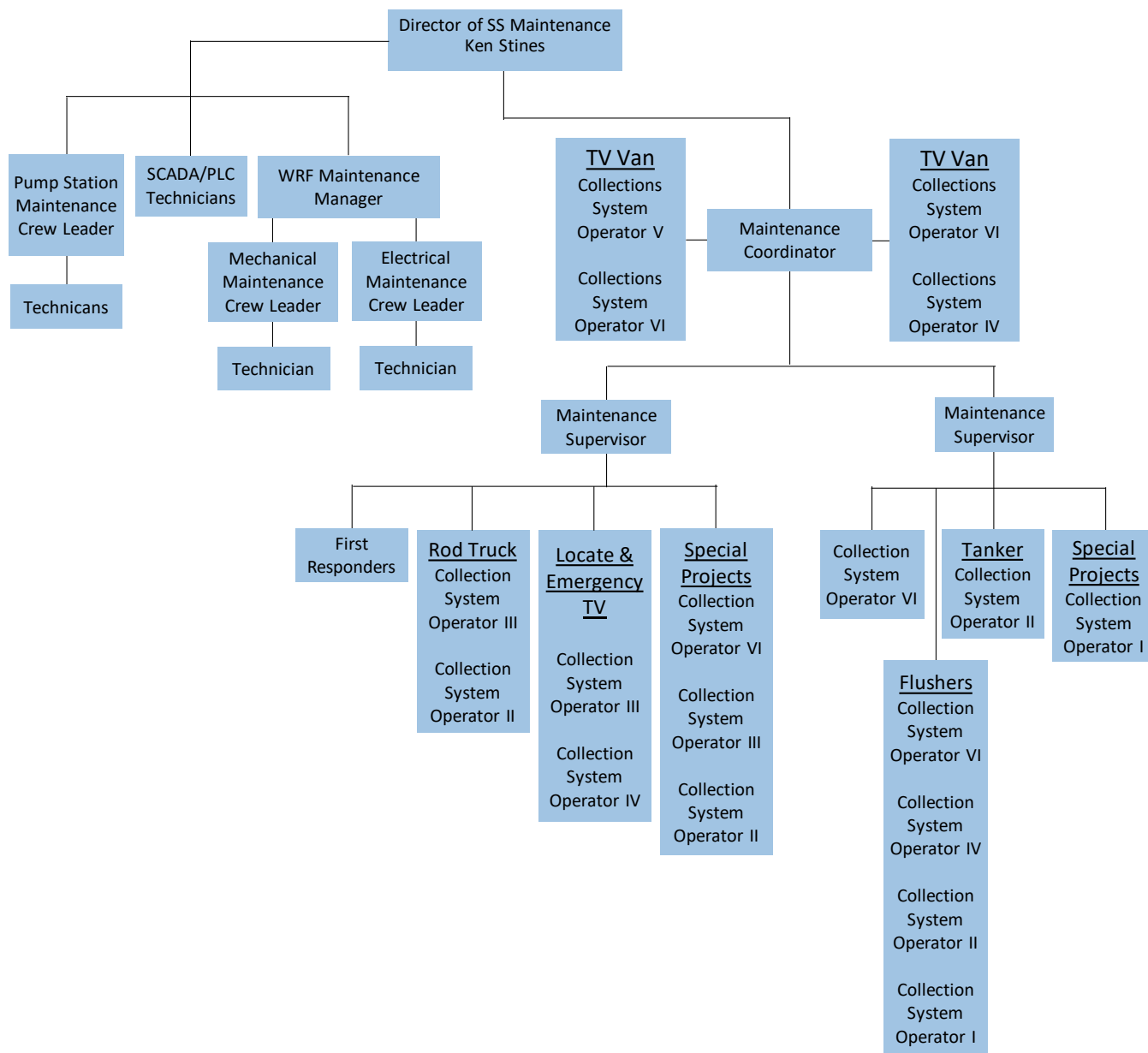
Task	FY17-18	FY18-19	FY19-20 (est.)
1. Average monthly flow treated in million gallons/day (MGD)	20.8	25.9	24.2
2. Maximum daily flow treated in MGD	64.8	67.5	67.2
3. Bio-solids processed in dry tons	7280	7212	7145
4. Cost per million gallons (MG) treated	\$718	\$554	\$593
5. Energy costs per MG treated	\$121	\$107	\$115
6. CBOD removal efficiency percentage	95%	92%	93%
7. TSS removal efficiency percentage	97%	95%	94%
8. Number of NPDES permit violations (non-compliance)	1	3	0

## FY21 Budget - Wastewater Treatment Plant

No.	Name	ACTUAL 2016-2017	ACTUAL 2017-2018	ACTUAL 2018-2019	Adopted 2019-2020 Budget	Estimated Actual 6/30/2020	Percent Expended To Total Budget	Proposed 2020-2021 Budget
Salaries & Wages								
51100	Salaries & Wages	\$ 1,152,585	\$ 1,154,407	\$ 1,023,987	\$ 1,044,951	\$ 1,044,951	100.00%	\$ 1,080,422
51150	Overtime	66,206	62,463	66,507	68,000	68,000	100.00%	69,000
Total Salaries & Wages		1,218,791	1,216,870	1,090,494	1,112,951	1,112,951	100.00%	1,149,422
Benefits								
51200	North Carolina Retirement	89,783	92,551	85,676	100,388	100,388	100.00%	117,356
51250	Payroll Taxes	88,744	88,330	79,880	85,141	85,141	100.00%	87,930
51300	Medical, Dental & Life	232,130	263,404	249,311	277,412	277,412	100.00%	309,805
51325	Post Retirement Insurance	32,838	32,031	35,091	33,735	33,735	100.00%	35,375
51350	Worker's Compensation	33,203	33,203	30,828	32,543	32,543	100.00%	34,125
51360	State Unemployment Benefits	144	511	422	3,870	3,870	100.00%	4,070
51450	Automobile Allowance	-	-	-	-	-	-	3,600
51500	401-K/457 Plan	54,781	52,639	45,742	52,250	52,250	100.00%	54,022
Total Benefits		531,624	562,669	526,950	585,339	585,339	100.00%	646,283
Total Salaries, Wages & Benefits		1,750,415	1,779,540	1,617,444	1,698,290	1,698,290	100.00%	1,795,705
Materials, Supplies & Services								
52010	Advertising	7,413	8,047	2,622	9,500	9,500	100.00%	9,500
52050	Dues & Subscriptions	17,721	18,369	17,991	23,000	23,000	100.00%	23,000
52150	Travel, Mtgs & Training	21,633	16,959	15,900	20,705	20,705	100.00%	30,440
52180	Liability Insurance	101,454	101,454	101,454	101,454	101,454	100.00%	101,454
52210	Communications	30,362	34,231	25,284	31,000	31,000	100.00%	11,000
52240	Uniforms	7,511	9,713	8,159	9,300	9,300	100.00%	9,450
52250	Office Supplies	2,713	2,819	2,405	2,450	2,450	100.00%	3,150
52260	Special Dept Supplies	30,105	35,220	34,722	33,100	33,100	100.00%	34,000
52270	Safety Equip/ Supplies	6,409	9,220	9,006	10,850	10,850	100.00%	13,200
52280	Maint Supp/ Small Tools	4,746	3,279	2,041	2,900	2,900	100.00%	2,900
52290	Chemical Supplies	419,289	421,007	369,324	549,500	549,500	100.00%	699,500
52350	Prof/ Contractual Svcs	225,364	197,978	193,006	208,000	200,000	96.15%	200,000
52510	Permits/ Fees/ Software Licenses	14,464	14,893	21,170	16,900	16,900	100.00%	16,900
52650	Utilities	1,016,535	1,065,032	923,926	1,170,000	1,170,000	100.00%	1,185,000
52910	Non-Capital Equipment	7,820	3,715	4,874	3,800	3,800	100.00%	9,050
Total Materials, Supplies & Services		1,913,541	1,941,936	1,731,886	2,192,459	2,184,459	99.64%	2,348,544
Interfund Transfers								
53040	Fleet Replacement Charges	25,945	25,945	28,202	28,202	28,202	100.00%	28,202
Total Interfund Transfers		25,945	25,945	28,202	28,202	28,202	100.00%	28,202
Capital Outlay								
54010	Capital Equipment - New	1,939	11,332	4,247	13,350	13,350	100.00%	5,000
54030	Capital Equip - Replacement	11,973	18,817	17,836	5,140	5,140	100.00%	3,200
Total Capital Outlay		13,912	30,149	22,083	13,490	13,490	100.00%	8,200
Sub-Total O&M Fund		\$ 3,703,813	\$ 3,777,570	\$ 3,399,614	\$ 3,932,441	\$ 3,924,441	99.80%	\$ 4,180,651
Net Operation & Maintenance Fund		\$ 3,703,813	\$ 3,777,570	\$ 3,399,614	\$ 3,932,441	\$ 3,924,441	99.80%	\$ 4,180,651

# SS Maintenance

## Organizational Chart



## SS Maintenance (continued)

### Mission Statement

The mission of the System Services Maintenance Division is to maintain MSD's Collection System, Pump Stations, and Water Reclamation Facility in such a way as to protect the health, safety, and environment. In short, our mission is to "Keep it Flowing" through more than one thousand miles of piping, 41 pump stations, and the treatment process until discharged into the French Broad River.

### Key Responsibilities

Include maintenance and inspection of 1,128 miles of sanitary sewer line, operation, and maintenance of 41 remote pump stations, maintenance of 40 MGD Water Reclamation Facility, and operation and maintenance of 2.5-megawatt Hydro Electric Generation Facility. Provide customer service and emergency response 24 hours/day, 365 days/year. Provide preventive, proactive, and corrective maintenance of all mechanical, electrical, pneumatic, HVAC, instrumentation/controls, and Scada communication throughout the District. Maintain compliance with MSD's Collection System Permit and provide support to plant operations in maintaining HPDS discharge permit.

### Staffing History

Division & Position	Approved Positions 18-19	Approved Positions 19-20	Budgeted Positions 20-21
Department of System Services - Maintenance			
<i>Management:</i>			
Director of SS Maintenance	1	1	1
Total Management	1	1	1
<i>Office Support:</i>			
Dispatcher II	1	1	1
Office Assistant I	1	1	1
Office Assistant II	1	1	1
SSD Administrator	1	1	1
Total Office Support	4	4	4



## SS Maintenance (continued)

### Staffing History (continued)

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY20-21
<i>Pump Station Maintenance:</i>			
Technicians	4	4	4
Crew Leader	1	1	1
Total Pump Station Maintenance	5	5	5
<i>Maintenance:</i>			
First Responder	2	2	2
Technical Services Worker I	0	0	0
Technical Services Worker II	6	6	6
Technical Services Worker III	7	7	7
Technical Services Operator I	1	1	1
Technical Services Operator II	2	2	2
Technical Services Operator III	5	5	5
Night Supervisor	1	1	1
Collection System Maintenance Supervisor	2	2	2
Maintenance Coordinator	1	1	1
Total Maintenance	27	27	27
<i>Maintenance/Electrical Maintenance:</i>			
Electrical Maintenance Crew Leader	-	1	1
Electrical IV/Specialist	-	1	1
Senior Electrician	-	2	2
Mechanical Maintenance Crew Leader	-	1	1
Mechanical Specialist	-	0	0
Mechanic II	-	3	3
Scada PLC Technician	-	2	2
Senior Mechanic	-	1	1
Maintenance Manager	-	1	1
Total Maintenance/Electrical Maintenance	-	12	12
Total - SS Maintenance Department	37	49	49

## SS Maintenance (continued)

### Accomplishments for FY 2019-2020

- ★ Cleaned over 943,000 LF of pipeline with in-house crews.
- ★ CCTV'd over 231,000 LF of sanitary sewer lines.
- ★ Mechanically rodded over 61,000 LF of pipeline for root removal.
- ★ Achieved an average 31-minute response time to Collections System customer service calls during working hours, nights, and weekends.
- ★ Performed over 316,000 LF of acoustic inspection on the Collection System.
- ★ Smoke tested over 29,000 LF of Collection System. Continuing to decrease I & I along with assisting Engineering in flow monitoring studies.
- ★ Inspected over 700,000 LF of High Priority/Creek Crossings.
- ★ Continue public awareness education/FOG by handing out information packets to all customer service calls. Increase awareness of problem with disposable wipes through public education.
- ★ Recovery of over \$291,000 in electric power savings from the Hydro Electric Generation Facility.
- ★ Installed new 1/8" strainer basket for WRF raw water system.
- ★ Created new waste oil dump station.
- ★ Upgrades to Aqua Filters. Quad #3 upgraded hoses, backwash shoes, and welded all headers. Quad #4 and Quad #2-2 upgraded hoses, backwash shoes, welded headers, new filter cloth.
- ★ Upgraded Waightstill Mountain Pump Station. Installed new guide rails and piping to valve vaults.
- ★ Replaced purge air blowers with new Atlas/Copco units, including new piping, upgraded electrical wiring.
- ★ Installed new bearings and mechanical seals in #1 and #3 hydro turbines. Rebuild hydro generator motor #2.
- ★ Corrected foaming problem at the Filter Building by fabricating a spray system to knock the foam to a manageable level.
- ★ Rebuilt conduit catwalk to intermediate pumps.

## SS Maintenance (continued)

### Accomplishments for FY 2019-2020 (continued)

- ★ Rebuilt south thickener rake and drive.
- ★ Installed bearing on RBC blower #1. Rebuilt RBC blower motor #5.
- ★ Patched the roof of the cupula on the Fluidized Bed Incinerator (FBI).
- ★ Installed plumbing for flush water for mechanical seals on scrubber and ash transfer pumps.
- ★ Turned and sleeved 6 RBC shafts for an estimated savings of \$162,000.
- ★ Replaced PVC piping with stainless steel piping on the belt filter presses.
- ★ Updated 17 pump station RTU's completing the task of updating all 55 remote sites with new PLC's with cellular communications enabling rapid alarm notification. Thus, lowering the cost by 50% for a savings of \$6,000 per year.
- ★ Built and installed SCADA RTU's on 3 Godwin pumps.
- ★ Installation of new control panels for the Belt Filter Presses (BFP). Installation of Variable Frequency Drives for the conveyor section of the BFP.
- ★ Built a new industrial rated fiber optic network cabinet for the effluent hut with a failure resistant power system.
- ★ Consolidated Polling Master System 1 & 2 including updating programming on Polling Master 1 sites.
- ★ Purchased and installed new RBC blower filters.
- ★ Installed new pumps, electrical panels, generator, and grinder at Avery Creek.
- ★ Upgraded Lake Julian pump station. Installed new arc flash electrical control panel, larger generator, upgraded pumps, base elbows, and rail system.
- ★ Installed new Blue Star Generator at Biltmore Lake #1.
- ★ Installed new ATS at the Cliffs Wellness Center (Cliffs #2).
- ★ Installed new generator, pump motors and rotating assemblies at Erwin Hills.
- ★ Rebuilt dimminutor wastewater grinder at Carrier Bridge Pump Station.

## SS Maintenance (continued)

### Accomplishments for FY 2019-2020 (continued)

- ★ Awarded a new HVAC maintenance contract.
- ★ Created an Electric Panel Manual for the entire MSD campus. Detailing all electrical panels, type, size, location, and mapping all components and feeds.
- ★ Replaced roof exhaust fan in FBI.
- ★ Crews vacuumed out sand from the incinerator twice.
- ★ Investigated contamination to Reed Creek.

### Budget Highlights/Changes for FY 2020-2021

- 🏆 5 Year PM Service to main WRF Electrical Main Switch Gears, Remote Switches, and TC PM. Service 1600-amp breakers, 1000 kva transformers, and incoming breakers.
- 🏆 Fabricate and install cable elevator at bar screen headworks.
- 🏆 Replace RBC blower bearings.
- 🏆 Installation of new incinerator sand line and motivators.
- 🏆 Replace wear rings on all three influent pumps.
- 🏆 Rebuild southeast Clarifier.
- 🏆 Purchase and install new double mechanical seals on hydro turbines.
- 🏆 Maintain/inspect additional 8 miles of Cane Creek Collection System.
- 🏆 Maintain, inspect, and operate an additional 10 Cane Creek Pump Stations.
- 🏆 Provide excellent customer service while maintaining less than one-hour response times to an additional 3,700 Cane Creek customers.
- 🏆 Purchase new CCTV inspection van.
- 🏆 Purchase new sewer easement machine.
- 🏆 Purchase and install entire quad of filter cloth media, backwash shoes, and hoses.

## SS Maintenance (continued)

### Goals & Objectives

- ◎ Goal: Promote safety first (Goals #1 - 4)
  - ↗ *Objective:* Training
    - Personal Protective Equipment
    - Traffic Control
    - Confined Space
    - Vehicle/Equipment Operation
    - Arc Flash
    - Rigging, Chains, and Hoists
- ◎ Goal: Reduce number of Sanitary Sewer Overflows (Goals #1 - 4)
  - ↗ *Objective:* Continue to identify areas with heavy Inflow and Infiltration (I & I)
    - Flow Monitoring Investigation
    - Smoke testing Investigation
    - Identify major/minor sources of I & I
  - ↗ *Objective:* Maintain an aggressive Preventive Maintenance Program
    - Clean a minimum of 600,000 LF of sanitary sewer lines
    - Utilize acoustic inspection to help strengthen impact of lines cleaned
  - ↗ *Objective:* Evaluate/update priorities for increased preventive maintenance areas and recommendations of areas for rehabilitation
    - CCTV Inspection/score 400,000 LF sewer pipeline
    - Continue to expand pipe rating program
    - Utilize SL-RAT to prioritize preventive maintenance program to gain optimal performance and save resources
    - Completion of CCTV'ing and re-scoring of all current CIP lines in Collection System into new PACP format
- ◎ Goal: Provide excellent customer service internal/external (Goals #1 – 4)
  - ↗ *Objective:* Maintain on call status 24 hours/day, 7 days/week
  - ↗ *Objective:* Respond to all customer service requests within one hour
  - ↗ *Objective:* Maintain great relationship with outside entities and internal divisions

## SS Maintenance (continued)

### Goals & Objectives (continued)

- ⊙ Goal: Maintain a qualified and motivated work force (Goals #1 – 4)
  - ↗ *Objective:* Cross train to promote positive employee relationships and teamwork
  - ↗ *Objective:* Provide opportunities for additional trainings that promote increased knowledge and abilities for all SS Maintenance staff
  - ↗ *Objective:* Exploration of new technologies for continuous improvement
- ⊙ Goal: Decrease in Equipment Failure (Goals #1 – 4)
  - ↗ *Objective:* Increase predictive/preventive maintenance program.
  - ↗ *Objective:* Continue to develop equipment maintenance SOP's on all equipment.
  - ↗ *Objective:* Continue to develop electrical preventive maintenance program.

### Performance Measures

Task	FY17-18	FY18-19	FY19-20 (est.)
1. Customer Service Response calls during normal working hours	1,364	1,300	1,075
2. Average Response Time	.45	.43	.42
3. Customer Service Request calls (after hours & holidays)	796	748	720
4. Average Response Time (after hours & holidays)	.57	.59	.58
5. Lines Washed (lineal feet)	1,052,024	900,249	943,950
6. Root Control chemical & rod (lineal feet)	72,196	88,354	61,350
7. TV Report (lineal feet)	295,754	254,168	231,200
8. Sanitary Sewer Overflow Totals	25	40	21
9. Smoke Testing	35,510	148,668	29,400
10. SL Rat Testing	107,946	153,572	316,100
11. WFR Preventive to Corrective Maintenance Ratio	30/70	40/60	40/60
12. Hydro Electric Generated KWH	5,906,769	10,603,831	5,215,959

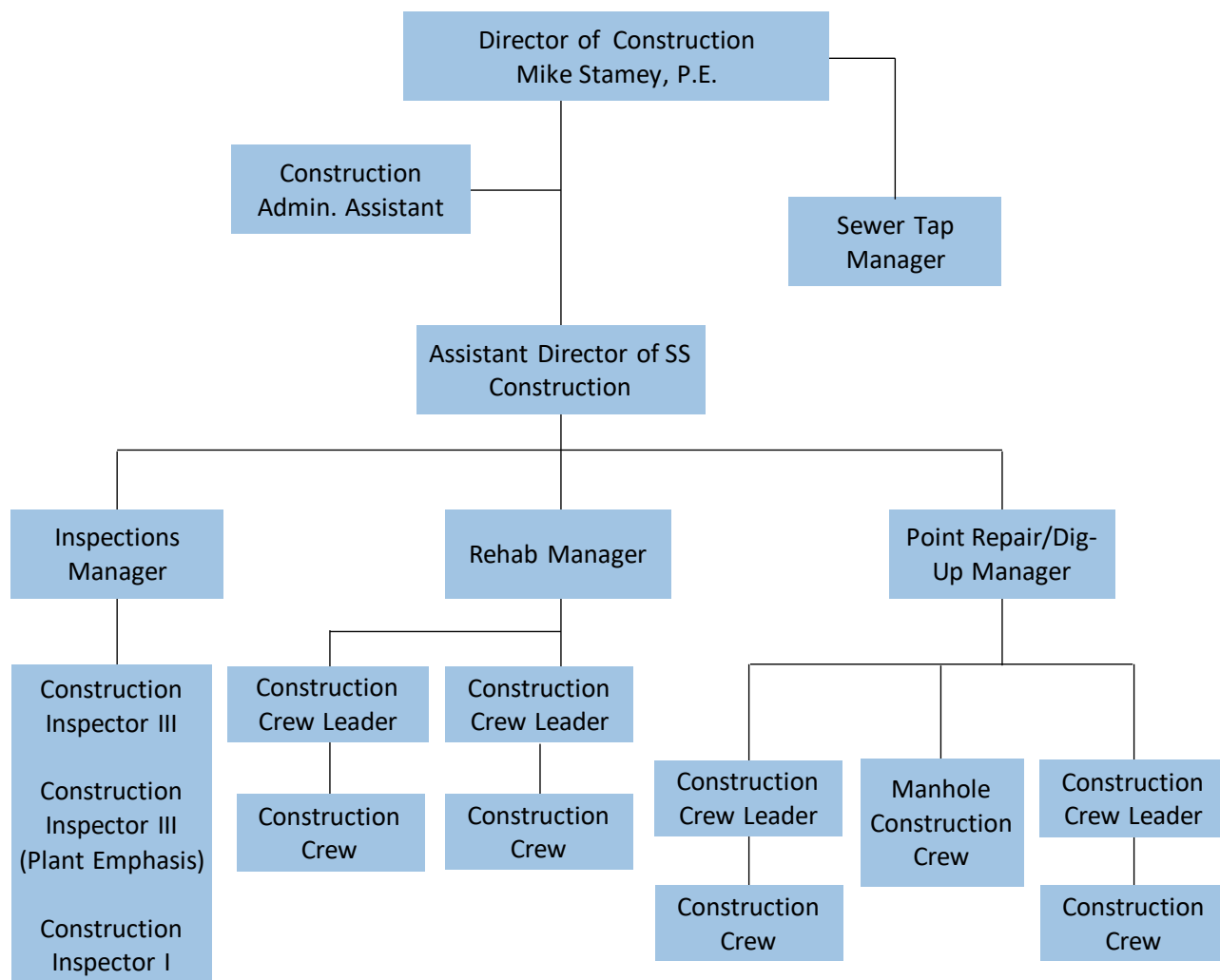
## FY21 Budget - SS Maintenance

No.	Name	ACTUAL 2016-2017	ACTUAL 2017-2018	ACTUAL 2018-2019	Adopted 2019-2020 Budget	Estimated Actual 6/30/2020	Percent Expended To Total Budget	Proposed 2020-2021 Budget
Salaries & Wages								
51100	Salaries & Wages	\$ 2,186,838	\$ 2,197,032	\$ 2,423,224	\$ 2,489,703	\$ 2,441,406	98.06%	\$ 2,456,381
51150	Overtime	136,440	164,660	173,144	165,000	157,000	95.15%	159,000
Total Salaries & Wages		2,323,278	2,361,691	2,596,368	2,654,703	2,598,406	97.88%	2,615,381
Benefits								
51200	North Carolina Retirement	170,859	178,215	202,496	239,455	231,724	96.77%	267,031
51250	Payroll Taxes	169,014	172,201	190,525	203,085	198,778	97.88%	200,077
51300	Medical, Dental & Life	567,429	609,987	689,273	724,353	724,353	100.00%	766,360
51325	Post Retirement Insurance	80,270	74,176	97,016	88,086	88,086	100.00%	87,507
51350	Worker's Compensation	81,163	81,163	86,433	84,974	84,974	100.00%	84,416
51360	State Unemployment Benefits	289	1,220	977	10,105	10,105	100.00%	10,068
51500	401-K/457 Plan	93,545	96,293	106,935	124,488	124,488	100.00%	122,820
Total Benefits		1,162,568	1,213,255	1,373,655	1,474,546	1,462,508	99.18%	1,538,279
Total Salaries, Wages & Benefits		3,485,846	3,574,946	3,970,023	4,129,249	4,060,914	98.35%	4,153,660
Materials, Supplies & Services								
52010	Advertising	3,991	6,054	2,498	7,000	4,500	64.29%	4,500
52050	Dues & Subscriptions	4,062	4,882	6,878	8,900	6,900	77.53%	7,100
52150	Travel, Mtgs & Training	32,998	33,963	38,178	58,875	58,875	100.00%	58,850
52180	Liability Insurance	74,050	74,050	74,050	74,050	74,050	100.00%	74,050
52210	Communications	29,443	30,803	50,350	67,000	67,000	100.00%	67,000
52240	Uniforms	34,323	35,838	34,920	42,200	41,100	97.39%	41,100
52250	Office Supplies	4,854	5,521	4,510	8,800	8,500	96.59%	8,500
52260	Special Dept Supplies	2,591	1,928	3,619	3,500	2,250	64.29%	2,250
52270	Safety Equip/Supplies	25,841	28,001	31,068	30,000	30,000	100.00%	30,000
52280	Maint Supp/Small Tools	57,082	58,074	44,905	72,500	72,500	100.00%	72,500
52290	Chemical Supplies	-	112	-	-	-	-	-
52300	Line Cleaning Supplies	64,291	45,516	47,141	53,000	53,000	100.00%	53,000
52350	Prof/Contractual Svcs	75,843	66,745	67,945	127,100	126,300	99.37%	143,760
52410	Maint-Buildings & Grounds	3,499	-	668	61,000	61,000	100.00%	61,000
52420	Maintenance-Equipment	522,595	443,989	436,248	504,220	504,220	100.00%	520,000
52430	Landscape Restoration	1,411	2,143	1,277	3,300	3,000	90.91%	3,000
52440	Pump Maintenance	80,410	105,799	48,711	102,500	102,500	100.00%	102,500
52450	Equipment Rental	-	3,086	2,805	7,500	7,500	100.00%	7,500
52510	Permits/Fees/Software Licenses	21,984	21,004	24,253	26,300	26,300	100.00%	26,300
52910	Non-Capital Equipment	3,900	6,359	3,750	12,470	12,470	100.00%	14,545
Total Materials, Supplies & Services		1,043,166	973,866	923,773	1,270,215	1,261,965	99.35%	1,297,255
Interfund Transfers								
53040	Fleet Replacement Charges	210,602	228,102	247,935	247,935	247,935	100.00%	247,935
53050	VWTP Replacement Charges	200,000	200,000	180,000	200,000	200,000	100.00%	200,000
Total Interfund Transfers		410,602	428,102	427,935	497,935	497,935	100.00%	497,935
Capital Outlay								
54010	Capital Equipment - New	8,911	27,529	3,021	16,300	16,300	100.00%	14,160
54030	Capital Equip - Replacement	14,683	32,241	15,322	28,650	28,650	100.00%	31,700
Total Capital Outlay		23,594	59,770	18,344	44,950	44,950	100.00%	45,860
Sub-Total O&M Fund		\$ 4,963,208	\$ 5,036,685	\$ 5,340,075	\$ 5,942,349	\$ 5,865,764	98.71%	\$ 5,994,710
Net Operation & Maintenance Fund		\$ 4,963,208	\$ 5,036,685	\$ 5,340,075	\$ 5,942,349	\$ 5,865,764	98.71%	\$ 5,994,710



## SS Construction

### Organizational Chart



## SS Construction (continued)

### Mission Statement

The mission statement of the System Services Construction Division is to undertake construction and repair activities in the MSD Sewer System as “Good Stewards of the Environment” to provide construction related support to other departments of the District and to demonstrate the highest level of customer service and professionalism in all internal and external interactions.

### Key Responsibilities

Include timely, quality, and cost effective connections, repairs, and rehabilitation to the MSD Sewer System while protecting the waters of the state and the environment of Buncombe County and the District; working closely with the MSD System Services Maintenance Division in maintaining a properly operating collection system; and being exceptional public servants in all activities and interactions with others.

### Staffing History

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY20-21
Department of System Services - Construction			
<i>Management:</i>			
Director of Construction	1	1	1
Total Management	1	1	1
<i>Construction Administration:</i>			
Administrative Assistant – Construction	1	1	1
Construction Inspector I	1	1	1
Construction Inspector III	2	2	2
Construction Inspector IV	0	0	0
System Services Rehabilitation Manager	0	1	1
Lead Construction Inspector	1	1	1
Total Construction Administration	6	6	6

## SS Construction (continued)

### Staffing History (continued)

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY20-21
<i>Construction:</i>			
Construction Worker I	1	1	1
Construction Worker II	6	6	6
Construction Worker III	4	4	4
Construction Operator I	1	1	1
Construction Operator II	1	1	1
Construction Operator III	1	1	1
Construction Crew Leader	4	4	4
Senior Construction Crew Leader	1	1	1
Construction & Repair Supervisor	1	1	1
Heavy Equipment Excavator I	2	2	2
Heavy Equipment Excavator II	5	5	3
Heavy Equipment Excavator III	1	1	1
Assistant Director of System Services Construction	1	1	1
Total Construction	27	27	27
Total – SS Construction Department	34	34	34

### Accomplishments for FY 2019-2020

- ★ Rehabilitated 14,000 LF of main sewer line with in-house construction crews.
- ★ Utilized Trenchless Technologies for over 2,600 LF of mainline rehabilitation and 9000 LF of service line installation. Through these efforts approximately 3,500 LF of existing asphalt surfaces were maintained.
- ★ Cleared over 54,000 LF of sewer line Right-of-Way.
- ★ Completed over 900 work order requests during the year.
- ★ Coordinated (7) joint venture projects with the other agencies to facilitate overall cost savings and/or other benefits for both agencies.

## SS Construction (continued)

### Accomplishments for FY 2019-2020 (continued)

- ★ Utilized recycled asphalt and concrete materials for select backfill on current sewer rehabilitation projects.
- ★ Two construction employees participated as members of MSD's ISO team.
- ★ Replaced approximately 1,400 LF of existing force main with in-house crews on joint projects with other departments at MSD on pump station improvement projects.
- ★ Continued annual paving contract with the City of Asheville Street Department to expedite economical, efficient repairs and restoration to City streets affected by MSD construction and repair work.
- ★ SSD Construction continued participation in the Buncombe County Utility Coordinating Committee, which promotes safe digging and improved coordination between various utility agencies.
- ★ Performed emergency stream bank restoration and creek crossing repair projects at 4 locations during FY 19-20. These activities protected the environment and our sewer lines from harm.
- ★ Continued participation in the City of Asheville joint task force for Infrastructure Committee. This committee plans and coordinates projects to facilitate cost savings for multiple utility departments. These efforts contributed to several joint venture activities throughout the year between MSD and various City departments.
- ★ Updated step program for Worker and Operator employees to provide promotion opportunities, increase overall department moral, and advance training and knowledge in sewer construction and repair.
- ★ The Construction Administration group provided inspection services for thirteen (13) Collection System CIP projects; six (6) Water Reclamation Facility related projects, two (2) HVAC/electrical related projects at the WH Mull Building, eighty-one (81) Planning and Development related sewer extensions, and twenty-three (23) contractor installed sewer taps.

## SS Construction (continued)

### Budget Highlights/Changes for FY 2019-2020

- 🏆 Purchase Brush Cutter for CAT mini excavator to improve safety in ROW clearing operations.
- 🏆 Purchase Spartan Power Supply to improve efficiency with pipe bursting equipment and increase use of trenchless technology.
- 🏆 Purchase of new Core boring machine to improve safety when making manhole and pipe connections.

### Goals & Objectives

- 🕒 Goal: Operate collection system in compliance with all provisions of State Permit (Goal #1)
  - ↪ *Objective:* Clear a minimum of 20,000 LF of sewer line easement each year
  - ↪ *Objective:* Rehabilitate 20,000 LF of sewer line with Dig-and-Replace, IRS, and other trenchless technology rehabilitation methods
- 🕒 Goal: Work with City of Asheville Street, Storm Water, and Water Departments as well as other agencies where possible on strategic planning and joint projects (Goal #4)
  - ↪ *Objective:* Conduct yearly meetings with departments
  - ↪ *Objective:* Remove service lines from water meter boxes
  - ↪ *Objective:* Coordinate tap installation to reduce permit fees
  - ↪ *Objective:* Establish joint ventures for paving overlays
  - ↪ *Objective:* Coordination of service line renewals
- 🕒 Goal: Maintain a qualified and motivated work force (Goal #1-4)
  - ↪ *Objective:* Continue cross training schedule for “worker” and “operator” employees
  - ↪ *Objective:* Continue training program for “excavator” employees
  - ↪ *Objective:* Provide opportunities for additional trainings that promote increased knowledge and abilities for all construction staff
- 🕒 Goal: Promote a “Safety First” work environment (Goal #1)
  - ↪ *Objective:* Continue developing the role and responsibilities of the Construction Safety Committee to facilitate discussion, review, and updates to safety procedures and policies for the Construction Division
  - ↪ *Objective:* Continue working closely with the MSD Safety Division to ensure safety policies and procedures are followed

## SS Construction (continued)

### Goals & Objectives (continued)

- ⦿ Goal: Explore various cost savings options for the division (Goal #3)
- ↪ *Objective:* Continue exploring and developing pipe-bursting, boring, and other trenchless technology options
- ↪ *Objective:* Facilitate cost savings through the recycling and reuse of excavated concrete and asphalt materials

### Performance Measures

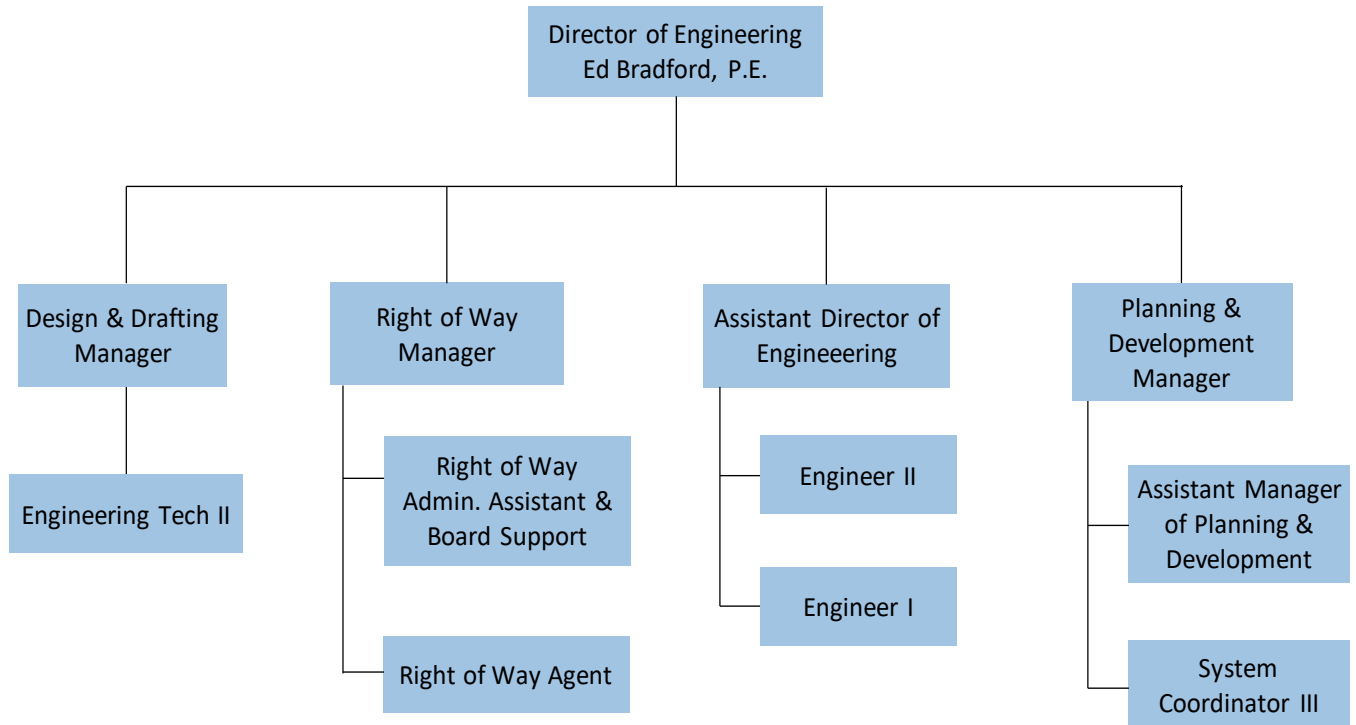
Task	FY17-18	FY18-19	FY19-20 (est.)
1. Construction Repairs	508	493	380
2. Taps Installed	351	324	260
3. Manhole Repairs	323	286	255
4. Right-of-Way Clearing (lineal feet)	42,238	74,620	54,000
5. Other Trenchless Line Rehabilitation (lineal feet)	1,045	1,159	825
6. Dig & Replace Rehabilitation (lineal feet)	10,123	16,912	8,305
7. IRS (lineal feet)	522	0	0
8. Construction Rehabilitation (lineal feet)	1,759	2,209	3,110
9. Pipe Bursting Main Line (lineal feet)	4,348	459	150
10. Boring Main Line (lineal feet)	3,399	1,434	2,435
11. Total Construction Rehabilitation Footage (lineal feet) (Items 6, 7, 8, 9, 10)	20,151	20,923	14,000
12. Sewer Rehabilitation Inspected on CIP Projects (lineal feet)	28,165	23,907	14,121
13. Sewer Extensions Inspected from Development Projects (linear feet)	27,830	32,836	33,434

## FY21 Budget - SS Construction

No.	Name	Actual 2016-2017	Actual 2017-2018	Actual 2018-2019	Adopted 2019-2020 Budget	Estimated Actual 6/30/2020	Percent Expended To Total Budget	Proposed 2020-2021 Budget
Salaries & Wages								
51100	Salaries & Wages	\$ 1,617,819	\$ 1,705,911	\$ 1,740,125	\$ 1,828,687	\$ 1,828,687	100.00%	\$ 1,803,666
51150	Overtime	<u>37,745</u>	<u>34,113</u>	<u>59,615</u>	<u>69,000</u>	<u>69,000</u>	100.00%	<u>73,000</u>
Total Salaries & Wages		1,655,564	1,740,024	1,799,740	1,897,687	1,897,687	100.00%	1,876,666
Benefits								
51200	North Carolina Retirement	124,080	133,911	142,772	171,172	171,172	100.00%	191,607
51250	Payroll Taxes	122,295	128,532	132,068	145,173	145,173	100.00%	143,565
51300	Medical, Dental & Life	451,366	485,217	527,952	554,825	554,825	100.00%	586,999
51325	Post Retirement Insurance	63,852	59,004	74,310	67,470	67,470	100.00%	67,027
51350	Worker's Compensation	64,561	64,561	65,959	65,087	65,087	100.00%	64,657
51360	State Unemployment Benefits	253	993	800	7,740	7,740	100.00%	7,711
51500	401-K/457 Plan	<u>70,296</u>	<u>75,238</u>	<u>79,663</u>	<u>91,437</u>	<u>91,437</u>	100.00%	<u>90,185</u>
Total Benefits		896,702	947,455	1,023,523	1,102,904	1,102,904	100.00%	1,151,751
Total Salaries, Wages & Benefits		<u>2,552,266</u>	<u>2,687,480</u>	<u>2,823,264</u>	<u>3,000,591</u>	<u>3,000,591</u>	100.00%	<u>3,028,417</u>
Materials, Supplies & Services								
52010	Advertising	313	306	-	500	500	100.00%	500
52050	Dues & Subscriptions	3,218	3,961	3,199	5,150	5,000	97.09%	5,000
52150	Travel, Mtgs & Training	21,098	21,150	19,839	28,100	28,100	100.00%	28,500
52180	Liability Insurance	88,006	88,006	88,006	88,006	88,006	100.00%	88,006
52210	Communications	16,192	20,079	22,360	23,600	23,600	100.00%	23,600
52240	Uniforms	25,770	22,139	23,362	24,800	24,800	100.00%	24,800
52250	Office Supplies	1,305	1,370	974	2,900	2,900	100.00%	2,900
52260	Special Dept Supplies	463	716	895	1,000	1,000	100.00%	1,000
52270	Safety Equip/Supplies	22,514	25,504	23,181	23,450	23,450	100.00%	23,450
52280	Maint Supp/Small Tools	48,557	51,268	50,560	53,000	53,000	100.00%	53,600
52300	Line Cleaning Supplies	94	139	344	750	750	100.00%	750
52350	Prof/Contractual Svcs	10,842	8,021	2,816	13,000	13,000	100.00%	13,000
52420	Maintenance-Equipment	1,225	36	78	1,400	1,400	100.00%	1,500
52430	Landscape Restoration	7,779	10,786	11,062	11,700	11,700	100.00%	11,700
52450	Equipment Rental	9,648	6,717	6,940	19,000	19,000	100.00%	19,000
52510	Permits/ Fees/ Software Licenses	15,695	16,778	19,196	21,500	21,500	100.00%	22,500
52910	Non-Capital Equipment	<u>9,679</u>	<u>11,755</u>	<u>8,792</u>	<u>7,150</u>	<u>7,150</u>	100.00%	<u>9,000</u>
Total Materials, Supplies & Services		282,396	288,730	281,604	325,006	324,856	99.95%	328,806
Interfund Transfers								
52340	Debt Administration Expenses	178,881	170,478	175,765	168,680	168,680	100.00%	162,183
53040	Fleet Replacement Charges	<u>172,787</u>	<u>190,287</u>	<u>206,836</u>	<u>206,836</u>	<u>206,836</u>	100.00%	<u>206,836</u>
Total Interfund Transfers		351,668	360,765	382,601	375,516	375,516	100.00%	369,019
Capital Outlay								
54010	Capital Equipment - New	6,248	6,365	10,700	11,720	11,720	100.00%	12,700
54030	Capital Equip - Replacement	<u>16,731</u>	<u>12,989</u>	<u>13,731</u>	<u>24,900</u>	<u>24,900</u>	100.00%	<u>30,700</u>
Total Capital Outlay		22,979	19,354	24,430	36,620	36,620	100.00%	43,400
Sub-Total O&M Fund		<u>\$ 3,209,309</u>	<u>\$ 3,356,329</u>	<u>\$ 3,511,899</u>	<u>\$ 3,737,733</u>	<u>\$ 3,737,583</u>	100.00%	<u>\$ 3,769,642</u>
59200 LESS:								
Chargebacks to General Fund for		(647,644)	(655,735)	(747,014)	(860,548)	(860,398)	99.98%	(869,521)
Chargebacks to General Fund for		<u>(1,565,956)</u>	<u>(1,666,400)</u>	<u>(1,729,039)</u>	<u>(1,740,831)</u>	<u>(1,740,831)</u>	100.00%	<u>(1,759,962)</u>
Net Operation & Maintenance Fund		<u>\$ 995,709</u>	<u>\$ 1,034,194</u>	<u>\$ 1,035,846</u>	<u>\$ 1,136,354</u>	<u>\$ 1,136,354</u>	100.00%	<u>\$ 1,140,159</u>

# Engineering

## Organizational Chart





## Engineering (continued)

### Mission Statement

The mission of the Engineering Division is to produce, manage, and complete engineering projects for the planning, repair, and rehabilitation of the District's Collection System and Water Reclamation Facility (WRF), and to ensure that new extensions to the Collection System are designed and constructed to District Standards. This shall be undertaken in the most efficient and effective manner necessary to ensure the reliable delivery and treatment of wastewater at an equitable price and in an environmentally sensitive manner.

### Key Responsibilities

Prepare a complete budget and schedule for all Capital Improvement Projects each fiscal year and adhere to it. For all capital projects: Produce quality, timely, and cost-effective engineering designs, plans, and specifications; Acquire necessary rights-of-way; and Administer construction through each project's completion. Prepare CIP cash flows quarterly to be submitted to the Finance Director for accurate cash flow management. Procure, manage, and direct design work performed by various consulting engineers, as needed. Provide various special studies and analyses, including master planning of the collection system and treatment facilities, evaluation of projected flow allocations, plan review, and quality control of developer-constructed extensions; perform specialized related duties; and serve as a technical resource for the District.

### Staffing History

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY20-21
Department of Engineering			
Management:			
Director of Engineering	1	1	1
Total Management	1	1	1
Engineers:			
Engineer I	2	2	2
Engineer II	1	1	1
Assistant Director of Engineering	1	1	1
Total Engineers	4	4	4

## Engineering (continued)

### Staffing History (continued)

Division & Position	Approved Positions FY18-19	Approved Positions FY19-20	Budgeted Positions FY20-21
Design and Drafting:			
Engineering Technician II	2	2	2
Design & Drafting Manager	1	1	1
Total Design and Drafting	3	3	3
Right of Way:			
Administrative Assistant – Right of Way (Board Support)	1	1	1
Right of Way Agent	1	1	1
Right of Way Manager	1	1	1
Total Right of Way	3	3	3
Planning & Development:			
Systems Coordinator III	2	2	2
Planning & Development Technician	1	0	0
Assistant Manager of Planning & Development	0	1	1
Planning & Development Manager	1	1	1
Total Planning and Development	4	4	4
Total – Department of Engineering	15	15	15

### Accomplishments for FY 2019-2020

- 44,790 Linear Feet (LF) of collection system were rehabilitated during FY19. This included 23,867 LF rehabilitated through contract construction and development projects, plus 20,923 LF rehabilitated in-house by System Services.
- Managed over 89 projects and line items within the CIP. Projects are within the various stages of lifecycles - from preliminary design, to active construction, to complete/closeout.
- Reorganized the Planning and Development Section after two staff retirements. This has increased efficiency, provided for better workflow within the group, and has improved customer service.

## Engineering (continued)

### Accomplishments for FY 2019-2020 (continued)

- Processed over 997 applications and reviewed 67 plans for new connections and extensions to the collection system. (Estimated as of April 2020.)
- Acquired Rights-of-Way across 80 properties. Settled one condemnation action, saving expenses of trial. (Estimated as of April 2020.)
- Continued to manage the construction phase of the Plant High Rate Primary Treatment Project. This \$16.8 million project is the mid-term recommendation of the Plant Facility Plan and will provide much needed primary treatment for the plant. Construction of this project is expected to be complete by Spring 2021.
- Began the design for the replacement of the Carrier Bridge Pump Station (construction scheduled to begin FY21-22).
- Completed the final Phase 4 of the lining project for the interceptor through the Biltmore Estate (3,976 LF). This four-year project totaled almost 22,000 LF of lining for a critical interceptor serving major areas within the District.
- Completed the Weaverville Force Main @ Plant project. This short but significant project replaced an aging, problematic force main with a gravity line, and will provide increased line capacity for areas north of the MSD Treatment Plant.
- Continued to emphasize the use of MSD's online sewer application/plan review process. During the COVID-19 outbreak, this system has provided an important option to help maintain the sewer application process.

### Budget Highlights/Changes for FY2020-2021

- ✚ Begin construction of the Christian Creek Interceptor, which is over 12,000LF and will span two fiscal years.
- ✚ Complete the design for the replacement of the Carrier Bridge Pump Station, to be ready for construction in FY21-22.
- ✚ Effectively manage the sewer application process and new capital projects for the Cane Creek Water and Sewer District (CCWSD). The merger of the District and CCWSD is currently planned to become effective on July 1, 2020.

## Engineering (continued)

### Goals & Objectives

- ◀ Goal: Rehabilitate approximately 40,000 feet of the collection system each year, in close collaboration with System Services Construction Division. (MSD Objective #1)
- ◀ Goal: Verify adequate capacity of lines prior to authorizing construction of new lines or connection of any new facility, and ensure that all developer-constructed projects conform to MSD requirements (MSD Goal #1)
- ◀ Goal: Begin construction of the Christian Creek Interceptor project.
- ◀ Goal: Effectively manage the construction phase of the Plant High Rate Primary Treatment project.
- ◀ Goal: Meet the time and budget predictions established in the CIP for FY21. (MSD Goal #3)
- ◀ Goal: Utilize consulting engineers for unexpected rehabilitation projects, or those requiring specialized expertise, as necessary to produce a timely response for other Divisions' engineering requests. (MSD Goal #2)
- ◀ Goal: Coordinate projects with member agencies whenever possible. This is accomplished by sharing information on upcoming projects.
- ◀ Goal: Prepare special studies and designs as necessary for other Divisions. (MSD Goal #2)
- ◀ Goal: Safeguard the structural integrity and accessibility of MSD sewer lines against damage from grading activities by other jurisdictions and private parties (MSD Objective #4)
- ◀ Goal: Obtain feedback from developers and engineers concerning the District's regulations and process for sewer lines to be accepted for public use. (MSD Objective #5)
- ◀ Goal: Reduce use of paper when possible and minimize file space needs.

### Performance Measures

Task	FY17-18	FY18-19	FY19-20 (est.)
1. Linear footage rehabilitated	49,918	44,790	27,303
2. CIP expenditures	\$22.5M	\$20.9M	\$24.0M
3. CIP projections vs. actual expenditures	80%	89%	80%
4. Allocations	216	197	164
5. Sewer Tap Applications	1,443	1,169	997
6. Plans Reviewed	78	68	67
7. Value of accepted systems	\$3,241,420	\$4,494,034	\$4,462,268

## FY21 Budget – Engineering

No.	Name	Actual 2016-2017	Actual 2017-2018	Actual 2018-2019	Adopted 2019-2020 Budget	Estimated Actual 6/30/2020	Percent Expended To Total Budget	Proposed 2020-2021 Budget
Salaries & Wages								
51100	Salaries & Wages	\$ 982,572	\$ 1,031,100	\$ 1,107,994	\$ 1,132,522	\$ 1,132,522	100.00%	\$ 1,132,091
51150	Overtime	619	1,126	1,004	2,000	2,000	100.00%	2,000
Total Salaries & Wages		983,191	1,032,226	1,108,998	1,134,522	1,134,522	100.00%	1,134,091
Benefits								
51200	North Carolina Retirement	72,747	78,509	87,135	102,334	102,334	100.00%	115,791
51250	Payroll Taxes	71,262	75,117	81,637	86,792	86,792	100.00%	86,759
51300	Medical, Dental & Life	193,441	194,087	219,981	231,175	231,175	100.00%	244,583
51325	Post Retirement Insurance	27,365	23,600	30,962	28,113	28,113	100.00%	27,928
51350	Worker's Compensation	27,669	27,669	27,484	27,119	27,119	100.00%	26,941
51360	State Unemployment Benefits	123	426	333	3,225	3,225	100.00%	3,214
51500	401-K/457 Plan	43,475	45,648	49,387	56,628	56,628	100.00%	56,606
Total Benefits		436,082	445,056	496,919	535,386	535,386	100.00%	561,822
Total Salaries, Wages & Benefits		1,419,273	1,477,282	1,605,917	1,669,908	1,669,908	100.00%	1,695,913
Materials, Supplies & Services								
52050	Dues & Subscriptions	4,595	4,755	4,573	5,285	5,250	99.34%	5,750
52150	Travel, Mtgs & Training	13,996	14,853	7,820	24,000	20,500	85.42%	30,283
52180	Liability Insurance	34,741	34,741	34,741	34,741	34,741	100.00%	34,741
52210	Communications	1,869	2,872	3,722	4,326	4,326	100.00%	4,400
52240	Uniforms	2,139	1,749	1,318	2,000	2,000	100.00%	2,350
52250	Office Supplies	2,655	2,139	2,154	4,558	3,500	76.78%	4,100
52260	Special Dept Supplies	2,094	1,781	2,256	3,300	3,300	100.00%	5,374
52270	Safety Equip/ Supplies	123	118	107	350	345	98.57%	350
52330	Legal Fees	2,590	1,080	722	2,000	1,975	98.75%	2,500
52350	Prof/ Contractual Svcs	15,379	15,560	6,912	24,674	22,500	91.19%	51,317
52420	Maintenance- Equipment	-	-	-	250	250	100.00%	500
52500	Rents/Leases	-	-	800	800	800	100.00%	1,000
52910	Non-Capital Equipment	691	-	-	2,942	2,942	100.00%	-
Total Materials, Supplies & Services		80,871	79,648	65,125	109,226	102,429	93.78%	142,665
Capital Outlay								
54010	Capital Equipment - New	-	8,836	-	-	-	-	2,500
Total Capital Outlay		-	8,836	-	-	-	-	2,500
Sub-Total O&M Fund		\$ 1,500,143	\$ 1,565,767	\$ 1,671,042	\$ 1,779,134	\$ 1,772,337	99.62%	\$ 1,841,078
59200 LESS:								
Chargebacks to General Fund for		(1,343,585)	(1,387,528)	(1,512,304)	(1,607,324)	(1,600,535)	99.58%	(1,671,835)
Net Operation & Maintenance Fund		\$ 156,558	\$ 178,239	\$ 158,738	\$ 171,810	\$ 171,802	100.00%	\$ 169,243

# Insurance Funds



## Insurance Funds

### Overview

The Insurance Funds are funded through annual appropriations from the Operations and Maintenance Fund Budget. The District has established four (4) Insurance Funds as part of its sewer rate stabilization strategy. Background information and current year budget highlights of the insurance funds are discussed on the following pages.

## Insurance Funds (continued)

### Self-funded Employee Medical Program

The District offers medical, dental, and life insurance to all employees. Employees may purchase optional dependent coverage through payroll deduction. These benefits are funded by a combination of District contributions as well as commercial insurance premiums.

The District has established a self-insured group health and dental insurance program, with premiums paid to commercial carriers for stop-loss and aggregate coverage to limit the amount of risk the District will assume. A third-party administrator processes all claims, and a commercial healthcare provider network is retained to negotiate fees and authorize payments. Prescription benefits are administered through a private contractor.

Employees pay a nominal amount for individual medical and dental coverage and pay approximately 30% to 36% of the cost for dependent coverage. After employee payment of specified deductibles and co-payments for medical and dental services, the Plan covers the remaining authorized charges in total. The budget for FY21 includes an employer contribution increase of 6.5% to cover anticipated expenditures needs.

### FY21 Self-funded Employee Medical Program Budget

	Actual 2018-2019	Estimated Actual 2019-2020	Budget 2020-2021
Beginning Balance	\$ 1,198,068	\$ 1,361,878	\$ 1,558,203
Income:			
District Contributions	2,185,141	2,327,175	2,478,441
Employee Contributions	343,194	348,590	359,048
Transfer from Other Insurance Funds	150,000	150,000	150,000
Interest	30,330	20,560	8,000
Total Income	2,708,665	2,846,325	2,995,489
Total Funds Available	3,906,732	4,208,203	4,553,692
Expenses:			
Expected Claim Liability	2,075,792	2,200,000	2,464,412
Fixed Costs (see note below)	469,063	450,000	400,000
Total Expenses	2,544,854	2,650,000	2,864,412
Ending Balance	\$ 1,361,878	\$ 1,558,203	\$ 1,689,280



## Insurance Funds (continued)

### Post-Employment Insurance

The District has established a post-employment insurance fund to accumulate funds now, which will reduce future operational expenditures when retirees begin taking advantage of this benefit. The District will annually fund the equivalent of the annual required contribution less expenses as determined by an actuarial study as required by GASB 75. The accumulated funds will only be used for post-employment insurance. However, the District's Board does reserve the right to use the reserve funds for unforeseen emergencies. FY21 funding of \$283,000 represents a 1.6% of total operations. As of May 2019, the District has eighteen (16) eligible participants in the post-employment insurance plan.

#### FY21 Post-Employment Insurance Budget

	Actual 2018-2019	Estimated Actual 2019-2020	Budget 2020-2021
Beginning Balance	\$ (1,299,524)	\$ (1,294,178)	\$ (1,294,000)
Income			
District Contributions	307,560	283,000	283,000
Interfund Transfer In			
Employee Contributions	32,737	29,046	30,000
Interest Income	<u>37,049</u>	<u>31,741</u>	<u>1,500</u>
Total Income	377,346	343,787	314,500
Total Funds Available	(922,178)	(950,391)	(979,500)
Expenses			
Interfund Transfer Out			
OPEB Expense	222,000	193,609	-
Transfer to Other Insurance Funds	<u>150,000</u>	<u>150,000</u>	<u>150,000</u>
Total Expenses	372,000	343,609	150,000
Ending Balance	<u>\$ (1,294,178)</u>	<u>\$ (1,294,000)</u>	<u>\$ (1,129,500)</u>

## Insurance Funds (continued)

### Worker's Compensation

The District established a separate insurance fund for worker's compensation, which will facilitate allocation of costs to respective department, division, and section budgets. The Safety Officer acts as liaison with the insurance carrier to administer claims and to minimize future claims by providing training and equipment designed to prevent injuries. The budget for FY21 includes a 0.0% increase to cover anticipated expenditure needs.

#### FY21 Worker's Compensation Financial Plan

	Actual 2018-2019	Estimated Actual 2019-2020	Budget 2020-2021
Beginning Balance	\$ 332,684	\$ 357,107	\$ 413,107
Income			
District Contributions	273,000	273,000	273,000
Interfund Transfer In	-	-	-
Interest Income	<u>3,500</u>	<u>2,000</u>	<u>1,500</u>
Total Income	276,500	275,000	274,500
Total Funds Available	609,184	632,107	687,607
Expenses			
Interfund Transfer Out	100,000	50,000	100,000
Deductibles for Individual Claims	2,000	6,000	8,500
Premiums to commercial carrier	<u>150,077</u>	<u>163,000</u>	<u>180,000</u>
Total Expenses	252,077	219,000	288,500
Ending Balance	<u>\$ 357,107</u>	<u>\$ 413,107</u>	<u>\$ 399,107</u>

## Insurance Funds (continued)

### General Liability

The District's general liability insurance fund was established to ① allocate insurance costs to all departments, divisions, and sectional budgets, ② provide funds for payment of no-fault sewer back-ups and ③ establish reserves to offset future unanticipated increases in sewer back-up liabilities in excess of budgeted amounts. The budget for FY21 includes a 0.0% increase based on anticipated expenditure needs.

### FY21 General Liability Financial Plan

	Actual 2018-2019	Estimated Actual 2019-2020	Budget 2020-2021
Beginning Balance	\$ 379,186	\$ 366,762	\$ 392,171
Income			
District Contributions	547,746	547,746	547,746
Interfund Transfer In	137,880	50,000	100,000
Interest Income	<u>2,200</u>	<u>2,200</u>	<u>1,500</u>
Total Income	687,826	599,946	649,246
Total Funds Available	1,067,012	966,708	1,041,417
Expenses			
Interfund Transfer Out	-	-	-
Premiums to commercial carrier	363,439	413,635	419,850
No Fault Sewer Back-Up Claims	9,500	30,000	30,000
Claim Deductibles	289,637	120,000	120,000
Flood Insurance	<u>10,666</u>	<u>10,902</u>	<u>11,100</u>
Total Expenses	700,250	574,537	580,950
Ending Balance	<u>\$ 366,762</u>	<u>\$ 392,171</u>	<u>\$ 460,467</u>

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# Replacement & Equipment Funds



## Replacement & Equipment Funds

### Overview

The replacement funds are funded through annual appropriations from the Operations and Maintenance Fund Budget. The District has established three (3) replacement and equipment funds as part of its sewer rate stabilization strategy, with fourth reserve fund required under the Bond Order. Background information and current year budget highlights of the replacement and equipment funds are discussed on the following pages.

## Replacement & Equipment Funds (continued)

### Fleet & Heavy Equipment Fund

The District has projected replacement dates and estimated prices for all vehicles and construction-type equipment over \$10,000. This information has been used to develop a funding plan whereby relatively constant amounts are to be transferred in from the annual Operations and Maintenance budget, with annual expenditures to be made in varying amounts to secure new vehicles and equipment as indicated in the plan's timetable. The FY21 contribution is \$500,000, with anticipated expenditures of \$896,000, including a Forklift rebuild, Barn door dump bed, (2) 1-Ton Pickups, (1) ¾ Ton Pickup, (2) ½ Ton Pickup, Easement Machine, (1) Dump Truck, CCTV Van, and Water Tanker Truck.

### FY21 Fleet & Heavy Equipment Fund Budget

	Actual 2018-2019	Projected 2019-2020	Budget 2020-2021
Beginning Balance:	\$ 388,619	\$ 720,888	\$ 777,146
Revenue:			
District Contributions	500,000	500,000	500,000
Sale of Surplus Property	141,235	66,840	71,680
Interest Income	16,459	14,418	3,886
Total Revenue	657,693	581,258	575,566
Expenditures:			
Various	325,424	525,000	-
Forklift Rebuild	-	-	13,000
Barn Door Dump Bed for 2808	-	-	25,000
Ford Escape	-	-	25,000
(1) ¾ Ton Pickup	-	-	39,000
(2) ½ Ton Pickup	-	-	70,000
Easement Machine	-	-	78,000
(2) 1-Ton Pickups	-	-	96,000
CCTV Van	-	-	125,000
Dump Truck	-	-	145,000
Water Tanker Truck	-	-	280,000
Total Expenditure Replacements	325,424	525,000	896,000
Ending Balance:	\$ 720,888	\$ 777,146	\$ 456,712

## Replacement & Equipment Funds (continued)

### Wastewater Treatment Plant Replacement

The replacement fund for the wastewater treatment plant was set up to develop a reserve to address general equipment replacement cost at these facilities. A similar strategy of periodic, uniform contributions from the Operations and Maintenance Fund and withdrawals for planned equipment rehabilitation or replacement are employed. The FY21 contribution is \$200,000 with anticipated expenditures of \$319,227 including General Rehab, General Rehab @ Incinerator Building; Dechlor Pumps; RBC Bearings; Thickner-Seepex Pump; AquaDisk 1-cell repl. Filters; General Rehab including new bearing and seal @ Hydro Building.

### FY21 Wastewater Treatment Plant Fund Budget

	Actual 2018-2019	Projected 2019-2020	Budget 2020-2021
Beginning Balance:	\$ 287,375	\$ 275,767	\$ 204,767
Revenue:			
District Contributions	180,000	200,000	200,000
Interest Income	<u>6,712</u>	<u>4,000</u>	<u>1,024</u>
Total Revenue	186,712	204,000	201,024
Expenditures:			
Various	148,320	275,000	-
General Rehab	-	-	65,000
Dechlor Pumps	-	-	10,000
Incinerator General Rehab	-	-	10,300
RBC Bearings	-	-	28,000
Thickner - Seepex pump	-	-	30,000
Hydro General Rehab & Bearing Seal	-	-	85,000
AquaDisk 1-cell repl. filters	-	-	90,177
Transfer Out	<u>50,000</u>	<u>-</u>	<u>-</u>
Total Expenditure Replacements	198,320	275,000	319,227
Ending Balance:	<u>\$ 275,767</u>	<u>\$ 262,633</u>	<u>\$ 86,564</u>



## Replacement & Equipment Funds (continued)

### Pump Maintenance Replacement Fund

The replacement fund for the pump stations was set up to develop a reserve to address general equipment replacement cost at these facilities. A similar strategy of periodic, uniform contributions from the Operations and Maintenance Fund and withdrawals for planned equipment rehabilitation or replacement are employed. The FY21 contribution is \$50,000 with anticipated expenditures of \$65,000, which includes General rehab, in addition to rehab at the Lake Julian Pump Station.

### FY21 Pump Maintenance Replacement Fund Budget

	Actual 2018-2019	Projected 2019-2020	Budget 2020-2021
Beginning Balance:	\$ 145,362	\$ 184,092	\$ 176,592
Revenue:			
District Contributions	50,000	50,000	50,000
Transfer In	50,000		-
Sale of Surplus Property	6,999		-
Interest Income	<u>4,584</u>	<u>2,500</u>	<u>883</u>
Total Revenue	111,583	52,500	50,883
Expenditures:			
Various	72,853	60,000	-
General Rehab	-	-	20,000
Lake Julian Pump Station	-	-	45,000
Transfer Out	<u>-</u>	<u>-</u>	<u>16,500</u>
Total Expenditure Replacements	72,853	60,000	81,500
Ending Balance:	<u>\$ 184,092</u>	<u>\$ 176,592</u>	<u>\$ 145,975</u>

## Replacement & Equipment Funds (continued)

### Capital Reserve Fund

This fund is mandated by the Bond Order to contain six percent (6%) or such greater percentage, as may be determined from time to time by the Board, of the amount shown by the Annual Budget to be necessary for current expenses for the current Fiscal Year. As this fund is to be tapped only for unusual and unforeseen expenditures, none is budgeted. There will be a \$16,500 FY21 transfer to the fund to meet the FY21 requirements.

### FY21 Capital Reserve Fund

	Actual 2018-2019	Projected 2019-2020	Budget 2020-2021
Beginning Balance:	\$ 977,151	\$ 995,302	\$ 1,009,302
Revenue:			
Interfund Transfer	-	-	16,500
Interest Income	<u>18,151</u>	<u>14,000</u>	<u>5,000</u>
Total Revenue	18,151	14,000	21,500
Ending Balance:	<u>\$ 995,302</u>	<u>\$ 1,009,302</u>	<u>\$ 1,030,802</u>

NOTE: Ending balance must be at least 6% of the annual O&M current expenses. FY2020-2021 O&M Budget (\$18,050,226 - \$750,000 transfer to reserves - \$126,760 capital equipment) x 6% = \$1,030,408

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# CIP Program



## Capital Improvement Program

### Overview

The District's Capital Improvement Program commands the largest portion of budgeted expenditures, and as such, is planned strategically and in great detail for all infrastructure projects in excess of the \$15,000 infrastructure capitalization threshold. The District updates its ten-year capital improvement program (CIP) annually to comply with state regulatory and bond order requirements. Objectives of constructing these capital projects include replacing and rehabbing structurally defective sewer lines, handling wet-weather flow conditions, improving the performance at the wastewater treatment plant, and preparing the system to handle expected future wastewater flows over the upcoming decade.

The process begins with engineering staff developing projects, which often originate from problem areas identified by field crews during emergency and preventative maintenance procedures and includes consideration of those projects outlined in the 20-year Wastewater System Master Plan. Engineers evaluate and prioritize each proposed project based upon the District's short-term requirements and long-term mission. Engineering staff then prepare cost estimates for identified projects and a proposed timetable for construction.

Once the CIP is drafted, the CIP Committee, consisting of representatives from the member agencies, meet to review the costs, locations, and necessity of proposed projects and make a recommendation to the District's Board. A copy of the CIP summary sheets follows in the succeeding pages of this budget document. A separate document compiling individual pages for each project with detailed costs and location map as presented to the CIP Committee and may be obtained upon request to W. Scott Powell, Director of Finance at (828) 225-8211 or [spowell@msdbc.org](mailto:spowell@msdbc.org).

## Capital Improvement Program (continued)

### Overview (continued)

The District maintains a Ten-Year CIP and rehabilitates approximately 40,000 Linear Feet (LF) of the collection system every year. The ten-year CIP prioritizes projects identified by the Board as fulfilling the District's mission but does not obligate District resources for their construction past the end of the current budget year.

### Background

The Capital Improvement Program is essential to the efficient functioning of the District, as evidenced by the requirement from both the bond order and state collection system permit. A well-planned CIP provides customers with the assurance of having reliable and affordable wastewater collection and treatment both now and in the future.

The Board has consistently financed its Capital Improvement Program through revenue bonds and pay-as-you-go moneys. As of June 30, 2020, the District will have \$100.4 million in outstanding revenue bond debt, with total debt service of \$9.8 million due before the end of the fiscal year. Unlike counties and cities, the District does not have a legally mandated debt limit. However, the District does have a rate covenant. The covenant requires the District to set rates and charges so that income available for debt service will not be less than 120% of fiscal year debt service requirement.

Throughout the history of the District, staff has continued to seek increasingly effective ways of identifying and prioritizing individual projects, to ensure a more comprehensive and balanced CIP. In 1990, as part of the political process of forming the District, certain construction and rehabilitation projects were identified by the various member municipalities and sanitary districts.

Once these designated projects were completed, the District then focused on rehabilitating aging, undersized collection lines to minimize unregulated discharges of raw sewage (sanitary sewer overflows or SSOs) and inflow/infiltration (I/I). Inflow and infiltration are the intrusion of groundwater and storm water runoff into the collection system, which can deplete capacity in sewer mains and at wastewater treatment plants.

## Capital Improvement Program (continued)

### Background (continued)

As part of this comprehensive evaluative process, the District developed and implemented a program to monitor wastewater flows from the various parts of the sewerage system. The flow monitoring data was used to develop a computer hydraulic model of the flows of the sewerage system to help identify and remediate the worst areas of inflow and infiltration.

In 1999, MSD began an aggressive line cleaning and television inspection program wherein the District contracted with outside companies to clean the pipes with water under high pressure and then to send a video camera (also known as closed circuit television or CCTV camera) through the line. The videotapes have enabled the District to accurately determine the condition of the lines and to prioritize necessary repairs. Each year 10% of the pipes will be cleaned and then inspected by CCTV cameras to maintain the efficient operation of the collection system.

The District developed a proactive cost-effective rehabilitation strategy with the development of the Pipe Rating Program. Pipe rating is a proactive planning tool, which utilizes Closed Circuit Television (CCTV) information, GIS database, and actual maintenance history to view, rate, and computer-score pipe segments based on several factors. These factors, manhole-to-manhole, include work order history, number and severity of defects, and record overflows on that segment, which are combined to yield a numerical rating used to prioritize efforts. Staff recently updated the District's Pipe Rating Program to include additional parameters over previous versions. Each line project now has an objective numerical rating based upon overflow history, structural issues, customer service requests, and impacts to surface waters. This rating is then used to prioritize the District's collection system projects.

Pipe Rating minimizes costs by helping the District focus rehabilitation dollars where they are needed most, rather than the usual full-scale replacement of entire collector lines. In recognition of this innovative program, the Association of Metropolitan Sewerage Agencies (AMSA) awarded the District one of only two 2003 National Environmental Achievement Awards.

## Capital Improvement Program (continued)

### Background (continued)

#### Wastewater System Master Planning

- **Comprehensive Master Plan**—This plan was prepared in 2001 by Camp, Dresser & McKee (CDM). It is a comprehensive sewer system management program, which was prepared to identify system improvements needed to handle wet-weather flow conditions, to improve performance at the wastewater treatment plant, and to prepare the system to handle future system wastewater flows.

The report contained recommendations for improvements to the collection system as well as the treatment plant. A CIP was developed which included specific projects and their associated costs.

Reduction of Sanitary Sewer Overflows (SSO's) was, and remains, a key objective of this plan. Over the past twelve years, this has been accomplished using a “three-prong” approach, which combines: ❶ An effective Management, Operations and Maintenance (MOM) program to reduce line blockages and optimize response time when blockages do occur; ❷ An ongoing rehabilitation program to improve the structural condition of the system; and ❸ Providing capacity to handle flows during wet-weather and future projected dry-weather flows.

This plan helped to establish the basis for the District's on going, aggressive Preventative Maintenance and Capital Improvement Programs. These two programs have resulted in substantially reducing SSO's over the past twelve years, in addition to greatly improved system integrity.

- **Facilities Plan**—This plan was prepared in 2007 by Camp, Dresser & McKee (CDM). It is a focused, specific study of the Water Reclamation Facility (WRF). The plan is the result of a process evaluation of the WRF, including a detailed capacity evaluation of the Rotating Biological Contactors (RBCs).

The report also includes a physical facilities evaluation for the major process equipment at the WRF. Recommendations to improve the performance of each process were included in the report.



## Capital Improvement Program (continued)

### Background (continued)

In March 2014, MSD began the process of updating this important plan. The Facilities Plan Update is now complete. This significant, comprehensive study examined the various unit processes within the plant, with a focus on headworks, biological treatment alternatives, and the future regulatory climate. After extensive research of various options, the plan recommends adding new grit removal, a fine screening system, storage for peak flows (using existing decommissioned digesters), and chemically enhanced primary clarification.

- **Collection System Master Plan**—In 2008, McGill Associates completed a Collection System Master Plan (the “2008 Collection System Plan”). The 2008 Collection System Plan focuses on the District’s comprehensive growth issues by incorporating all the recent planning and zoning changes from the District’s member agencies. This plan also describes where and how areas will be served and provides for orderly growth of the sewer system to meet the needs of the region for the future.

The District’s Collection System Master Plan addresses the orderly extension of the District’s collection system into future service areas. The plan has been prepared in close cooperation with the District’s member agencies and regional stakeholders. The land use policies and zoning regulations of each agency were used for land usage, growth projections/densities, and line locations. For areas outside of corporate or jurisdictional limits, Buncombe County’s Zoning Ordinance has played an integral role in defining future service areas.

### Types of Projects

The projects in the CIP are classified into several types, based on the objective of the project. The projects are determined and scheduled based on the Master Plan, the pipe-rating score, and other factors impacting the overall well-being of the District.

## Capital Improvement Program (continued)

### Types of Projects (continued)

The District's Capital Improvement Program is divided into the following six areas, generally based upon type of project or expense category:

- Interceptor & Wet Weather Rehabilitation
- General Sewer Rehabilitation
- Private Sewer Rehabilitation
- Treatment Plant, Pump Stations, and General Capital Improvements
- Design, ROW, and Construction Management Expenses
- Reimbursement Projects

The District maintains a CIP, which details necessary system improvements. The state permit requires a minimum of three years in the CIP; however, the District utilizes a ten-year window for more accurate prioritization and planning. The District rehabilitates approximately 40,000 LF of the collection system each year.

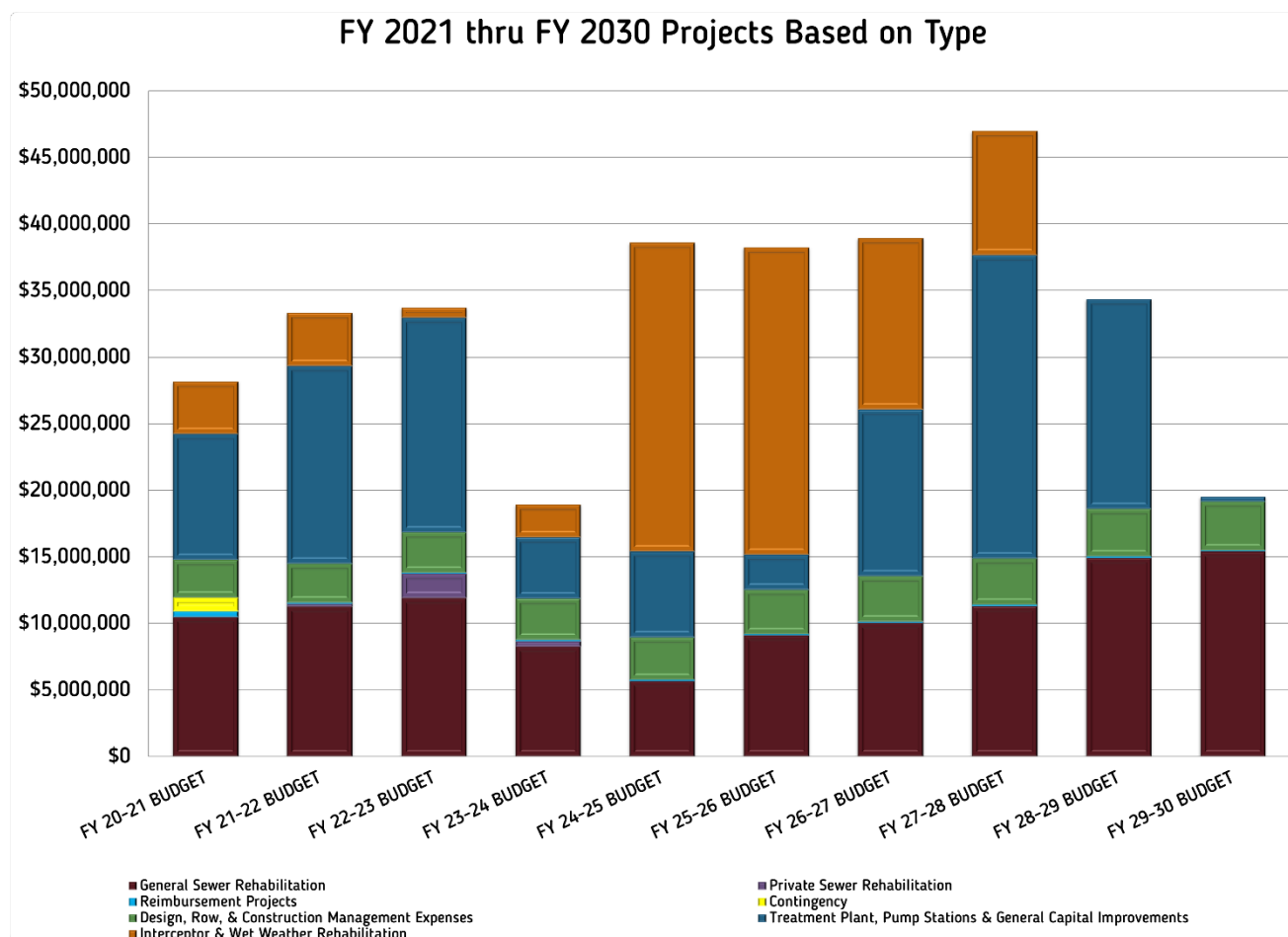
The Interceptor and Wet Weather Rehabilitation projects address the third prong of the Master Plan by providing increased system conveyance. The General Sewer Rehabilitation projects combine the first and second prongs by surveying all lines to plan maintenance activities and to improve the structural condition of the system. The Private Sewer Rehabilitation projects have the same objectives as the General but are separately presented to address environmental concerns resulting from sewers that were not publicly maintained at the time the District was formed. A limited amount of funding is budgeted annually to address the problem locations on a "worst first" basis as identified.

The District's Water Reclamation Facility (WRF) has a permitted capacity to treat up to 40 million gallons of wastewater a day and uses roughly half of this capacity. In accordance with the Master Plan's twenty-year planning period, there are no plans to replace or expand the plant in the near future. However, Water Reclamation Facility & pump station improvements are included in the CIP to maintain these facilities at their optimum level and to replace equipment that has exceeded its maintenance level.

Reimbursement projects include one Annexation Project from Consolidation, Developer Reimbursements, and NCDOT Reimbursements.

## Capital Improvement Program (continued)

### Types of Projects (continued)



## Capital Improvement Program (continued)

### Current Year Highlights

The proposed Capital Budget for FY20-21 is \$28,131,316 which includes a contingency of \$1,000,000. The \$1,000,000 contingency line item is used for the entire program rather than having a separate contingency for each project. This is more efficient and continues to provide sufficient reserves for the District's capital program.

A budget for Reimbursement Projects totaling \$437,000 is proposed for a Master Plan project located in Woodfin. For these types of projects, the District will reimburse a developer for constructing a system, which will serve larger areas upstream of their development.

Total project costs over the ten-year window are estimated at \$350.5 million. Costs are updated each year during budget preparation to accurately reflect current bid pricing and market conditions. Included in future years' is an inflation factor of 2.79%, which utilizes the previous ten-year ENR Construction Cost Index as a basis. This factor is also updated each year.

Approximately 71 infrastructure projects are included in the CIP for FY21, ranging in length from 180 linear feet to over 36,000 linear feet. Six new collection system projects have been added to the CIP for FY2021 and beyond. In-house forces, as well as, outside contractors will be used to rehabilitate or replace approximately 40,000 linear feet per year.

#### ✦ Collection System Capital Improvements:

MSD initiated and maintains a major program to rehabilitate its Wastewater Collection System. This program will conform to the North Carolina Department of Environmental and Natural Resources (NCDENR) Collection System Permit requirements and will improve the operational performance and extend the life of the collection system. This Permit ushers in a change in focus of the District's Capital Improvement Plan. In the previous decade, efforts had been directed to expediting completion of certain projects identified by the member agencies and assumed by the District during the consolidation process. For example, construction of the 23.8-mile North Swannanoa Interceptor begun in 1993 was completed during FY2004 at a cost in excess of \$44 million.

## Capital Improvement Program (continued)

### Current Year Highlights (continued)

Now that most of these “consolidation” projects are completed, our focus has been redirected to rehabilitation of approximately 40,000 linear feet of sewer line every ten (10) years and other projects identified in the Master Plan. The estimated cost over a 10-year period is approximately \$224.0 million out of a total CIP budget of \$330.5 million.

Major projects for FY21 include the \$3,792,000 Christian Creek Interceptor with approximately 8,200 linear feet, \$1,782,000 Chestnut Lodge Road with over 4,560 linear feet, \$1,671,000 Jarnaul Avenue 4,684 linear feet, \$403,000 Walnut Street at Rankin Avenue, with over 500 linear feet.

#### ✦ Wastewater Treatment Plant Capital Improvements:

The Incinerator System Emissions Upgrades project completed last year, received a 2017 NACWA Environmental Achievement Award in February 2017. This \$7.4 million project reduced emissions from the incinerator and utilized a new mercury removal technology, which saved \$5 million over traditional technology.

The Plant Facility Plan is serving as guidance for planning significant capital projects at the plant. These projects include new bar screens and grit removal, a fine screening system, storage for peak flows using existing decommissioned digesters, and chemically enhanced primary clarification.

Another key aspect of the Facility Plan Update was to gain a solid understanding of regulatory issues that may impact future treatment requirements and identify long-term biological treatment alternatives to comply with anticipated future regulation changes.

Near-term and mid-term project recommendations from the Facility Plan include:

- **Plant Headworks Project:** This \$9.6 million project spans 2 years and consists of a new grit removal system to replace the existing problematic system, a fine screening facility which will supplement the WRF’s existing bar screens, and storage at the plant using existing decommissioned tanks to provide more effective treatment during peak flow events.

## Capital Improvement Program (continued)

### Current Year Highlights (continued)

In addition, by removing more grit than the current process, it will help to better protect downstream processes within the plant. Construction of the Plant Headworks Project began in early April 2017 and is currently operational.

- **High Rate Primary Treatment Project:** This \$15.1 Million project will provide primary clarification by removing solids before the biological treatment stage. This will provide a more effective treatment and will help the Rotating Biological Contactors (RBC's) to better perform. During high flow (storm) events, this treatment can be ramped-up in order to match the higher flows. Construction began in FY2019 and will be completed in the spring 2021.
- **Biological System Upgrades:** This \$50 million project is being driven by the water quality regulations as set forth in MSD's NPDES permit (effluent discharge permit). Compliance with effluent ammonia levels must be achieved by October 2030 and will require significant upgrades to the existing biological treatment system. Design will begin in FY25 with construction starting in FY27.

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>Interceptor &amp; Wet Weather Rehabilitation</b>						
<b>Christian Creek Interceptor</b> This project is located along Christian Creek, between US 70 Hwy and I-40, east of Asheville. The project includes the replacement of approximately 12,226 LF of existing 8-inch VCP sewer pipe with new 8", 12" and 16" DIP. The existing lines serve a large collection area and are undersized. Additionally, they are in poor structural condition and have experienced multiple SSO's.	\$ 3,792,303	\$ 1,842,000	\$ -	\$ -	\$ -	-
<b>Lower Swannanoa Interceptor</b> This project is to eliminate problems associated with the splitter box and the downstream twin 36-inch lines.	-	32,500	-	33,000	27,500	6,526,250
<b>Mud Creek Interceptor - Phase 3</b> This project consists of approximately 9,200 LF of 18-inch and 24-inch pipe that will extend gravity sewer along Mud Creek to the Mountain Home Industrial Park. The extension will allow for the abandonment of an existing CCWSD pump station that connects to the City of Hendersonville system and the abandonment of several private pump stations.	46,000	-	10,500	315,000	3,883,000	-
<b>South French Broad Relief Interceptor</b> This project is to implement the recommendations of the French Broad/Carrier Bridge Preliminary Engineering Report. This project includes paralleling the existing 36" interceptor from Dingle Creek north to Hominy Creek with a new 36" interceptor. It also includes installing a new 60" interceptor between Hominy Creek and Carrier Bridge Pump Stations. The new interceptor will provide relief to the existing system during wet weather.	50,000	-	8,500	515,000	7,635,000	22,955,000
<b>Swannanoa Equalization Tank</b> This project is to implement the recommendations of the French Broad/Carrier Bridge Preliminary Engineering Report. This project will help mitigate wet weather impacts to the Swannanoa Interceptor by shaving peak wet weather flows. Equalizing flow will help reduce SSOs and prevent inundation and surcharging of downstream infrastructure, including the treatment plant. The estimated costs shown are planning level only, and incorporate a new 8.1MG EQ tank, 16MGD pump station and associate piping.	27,500	2,004,000	700,000	1,400,000	9,212,500	9,212,500
<b>SUBTOTAL</b>	3,915,803	3,878,500	719,000	2,263,000	20,758,000	38,693,750
Inflation per ENR Const. Cost Index	1.0000	1.0279	1.0566	1.0861	1.1164	1.16942282
<b>SUBTOTAL with inflation</b>	3,915,803	3,986,710	759,680	2,457,747	23,173,358	45,249,354

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>General Sewer Rehabilitation</b>						
<b>Albemarle Commons Pump Station Elimination</b>	-	38,000	-	233,000	-	-
This project is located in East Asheville just off Winkworth Place at MSD's Albemarle Commons Pump Station. This project will eliminate the existing pump station by installing approximately 832 LF of 8-inch DIP						
<b>Arlington Street @ Furman Avenue</b>	-	-	-	-	-	130,000
This project is located in Asheville crossing beneath several houses fronting Arlington Street. This project consists of approximately 240 LF of existing 8-inch VCP to be re-aligned and replaced with 310 LF of 8-inch DIP. The existing 8-inch VCP system is having frequent service calls and is located directly underneath dwellings which would prohibit future rehab or emergency repairs.						
<b>Atkins Street</b>	-	-	-	-	-	692,850
This project is located in Arden just north of Lake Julian. Approximately 1,833 LF of existing 6-inch vitrified clay pipe will be replaced with new 8-inch ductile iron pipe. The existing sewer line is in poor condition due to roots, fractures, and sags in the line. The line is undersized and has flooded houses in the area.						
<b>Aurora Drive</b>	60,500	1,108,500	-	-	-	-
This project runs along Aurora Drive in the Kenilworth area of Asheville, runs through several properties, and ends on Springdale Road. The existing 6-inch clay pipes have structural defects, heavy root intrusion, and deteriorating manholes. All of these problems contribute to I/I issues.						
<b>Beale Road at Copney Lane</b>	125,000	93,000	-	1,323,000	-	-
This project ties into the Lake Julian Phase 4 project just west of Glenn Bridge Road, extending northward to Ducker Road, and Lower Glenn Bridge Road. It serves several major manufacturing sites. The lines are in poor condition with broken segments and leaking joints, have resulted in SSO's, and are difficult to access for maintenance and repairs.						
<b>Bellevue Road</b>	7,000	58,000	429,000	-	-	-
This project is located in South Asheville along properties on Bellevue Road and will replace 1,100 LF of 6-inch VCP and PVC. The existing line is in poor condition and has too many point repairs.						



# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>General Sewer Rehabilitation</b>						
<b>Bent Tree Road</b>	92,000	746,000	-	-	-	-
This project runs adjacent to Bent Tree Road in Asheville. It begins on Old Toll Road, crosses Bent Tree Road, and ends at Crestwood Road. There are numerous structural problems and bends within the lines which contribute to I/I issues.						
<b>Braddock Way - PRP 20002</b>	-	-	-	-	-	1,662,587
This project will replace, line, and pipe burst several existing sewer mains in Park Avenue and Braddock Way subdivisions. Problems with these lines include leaking joints, broken pipes, high inflow and infiltration. In some areas, the existing lines will be relocated from private property to public rights of way for better access and maintenance.						
<b>Bryson Street</b>	203,300	-	-	-	-	-
This project is a high priority project in Biltmore Village, at the intersection of Bryson Street and Biltmore Avenue. It will replace a failing 4-inch PVC line serving multiple businesses with a 210 LF 8-inch DIP line.						
<b>Buchanan Avenue</b>	87,000	-	1,001,500	-	-	-
This project is located in downtown Asheville near Biltmore Avenue and is comprised of 2,228 LF of 8-inch ductile iron pipe. The existing line is 6-inch clay with heavy root intrusion, fractures, and one section exposed along a steep grade.						
<b>Caledonia Road</b>	1,500	69,000	866,750			
This project is located at the Caledonia Road entrance to the Kenilworth neighborhood, approximately 0.3 mile south of the Mission Hospital campus. The project includes replacement of approximately 2,291 LF of 8-inch VCP pipe with new 8-inch DIP. The existing pipe has structural defects which have resulted in multiple SSO's.						
<b>Central Avenue @ I-240</b>	-	-	-	-	-	429,500
Woodfin Street and is comprised of 990 LF of 12-inch ductile iron pipe. The existing line is 6, 10, and 12-inch vitrified clay pipe.						
<b>Chatham Road</b>	-	-	-	-	1,000	642,900
This project is located in North Asheville near W.T. Weaver Boulevard and is comprised of 1,450 LF of 8-inch ductile iron pipe. The existing line is 6-inch vitrified clay pipe in poor condition with heavy root intrusion.						

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>General Sewer Rehabilitation</b>						
<b>Cherokee Road</b>	1,000	186,000	656,000	-	-	-
This project will replace (or pipe burst) the existing sewer main from the end of the Macon Avenue @ Sunset Parkway project to an existing manhole east of Cambridge Road in North Asheville. The line is old vitrified clay pipe and is in very poor condition. Several segments are under houses, walls, or other physical features which make repairs very difficult.						
<b>Chestnut Lodge Road</b>	1,782,000	-	-	-	-	-
This project is located in Black Mountain near Blue Ridge Road and is comprised of 4,560 LF of 8-inch ductile iron pipe. The existing line is 6-inch and 8-inch clay with root problems, fractures, and multiple SSO's.						
<b>Cub Road</b>	-	-	-	18,500	83,000	355,500
This project is located south of Elk Mountain Road between I-26 and the French Broad River. It is comprised of approximately 4,101 LF of 8-inch ductile iron pipe. The existing vitrified clay sewer line is in poor condition and has experienced SSO's.						
<b>East Chestnut Ave @ Five Points</b>	-	-	-	-	13,800	1,754,250
This project is located in North Asheville and is comprised of 5,225 LF of 8-inch ductile iron pipe. The existing line is aging 6, 8, and 10-inch VCP in poor shape with multiple structural defects per segment.						
<b>Elk Mountain Place</b>	55,000	236,500	1,139,250	-	-	-
This project is located in North Asheville and is comprised of 5,225 LF of 8-inch ductile iron pipe. The existing line is aging 6", 8", and 10" VCP in poor shape with multiple structural defects per segment.						
<b>Fairmont Road</b>	-	-	-	-	-	1,654,000
This project is located in North Asheville approximately 0.25 miles east of Charlotte Street. The project will run along roads and properties from Glendale Road to Sunset Drive. The 6-inch clay lines are in poor condition which have caused manhole overflows and SSOs.						
<b>Forestdale Drive</b>	-	-	-	-	15,000	916,000
This project begins at Carnell Street and ends at Caribou Road. The system runs along side roads and properties parallel to Hendersonville Road. System Services crews have reported numerous problems including multiple SSO's. The existing pipes will be replaced with 8-inch ductile iron pipe.						

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>General Sewer Rehabilitation</b>						
<b>Four Inch Main - Patton Hill Road</b>	294,000	-	-	-	-	-
This Four Inch Main project is located in Swannanoa at the intersection of Old US-70 Highway and Patton Hill Road. It consists of replacing approximately 618 LF of undersized 4-inch orangeburg pipe with 8-inch DIP.						
<b>Harmony Lane</b>	-	-	-	-	-	190,000
This project runs along Harmony Lane in Asheville's Oakley area. The existing system has two parallel lines that collect on both side of the street. Problems with the system consist of root intrusion, poor access for maintenance, and close proximity to houses.						
<b>Hazel Mill Road @ Richland Street</b>	-	-	-	-	-	1,236,700
This project is located in West Asheville, near the Bowen Bridge and consists of 3,300 LF of 8-inch ductile iron pipe. The current pipe is 6-inch, 8-inch clay, and PVC. Lines are undersized and in poor condition with multiple pipe sags, cracks, and fractures.						
<b>Highland Farms Road</b>	32,500	246,050	-	-	-	-
This project is located adjacent to the WNC Veterans Cemetery, just upstream of the Old US70 @ Pine Circle project, completed in 2016. Approx. 1,131 LF of existing 8" VCP will be replaced with new 8" DIP. The existing sewer has multiple sags that catch rags and debris, and has also experienced many SSOs.						
<b>Hill Street @ Cross Place</b>	-	-	1,475	-	16,000	71,500
This project runs along Hill Street to the intersection of Cross Place abutting the I-240 & I-26 Interchange. It consists of replacing approximately 635 LF of existing 6-inch VCP with 8-inch DIP. The line has numerous structural issues, experienced frequent stoppages, and flooded structures over the years.						
<b>Horizon Hill Road (Hy-Vu-Drive)</b>	275,000	-	-	-	-	-
This project is located in Asheville near Merrimon Avenue. It consists of 713 LF of 8-inch ductile iron pipe. The current 8-inch orangeburg and vitrified clay line has had repeated overflows due to root intrusion and pipe collapse.						
<b>Howland Road @ Sunset Trail</b>	-	-	-	-	4,500	459,600
This project will replace an existing 8-inch main from 5 Howland Road up to the rear of 371 Sunset Drive. System Services recently completed another portion of this system due to SSO's and line condition.						

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>General Sewer Rehabilitation</b>						
<b>Jarman Avenue</b> This project is located in North Asheville, between Elkwood Avenue (to the west) and Beaver Lake (to the east). The project consists of replacing approximately 4,640 LF of existing 4" and 6" VCP with new 8" DIP. The existing lines and manholes are in poor structural condition and have experienced multiple SSOs and manhole overflows.	1,671,212	-	-	-	-	-
<b>Johnston Boulevard @ Providence Road</b> This project is located in West Asheville, approximately 0.6 miles west of New Leicester Highway. The project consists of replacing 2,000 LF of existing 6-inch vitrified clay and PVC pipe with new 8-inch ductile iron pipe. The existing line contains many offset joints and bends and is in poor structural condition.	-	-	-	-	-	621,000
<b>Jonestown Road @ Riverside Drive</b> This project is located upstream from MSD's WWTP along Riverside Drive on Jonestown Road. It consists of approximately 1,890 LF of existing 6-inch VCP to be replaced with 8-inch DIP. This system is full of structural defects, has heavy I & I issues, and deteriorating manholes.	-	-	25,500	15,000	23,000	560,000
<b>Kimberly Avenue @ Sedley Avenue</b> This project is located in North Asheville along Kimberly Avenue. The existing 6-inch VCP will be replaced with 3,005 LF of 8-inch HDPE through pipe bursting operations. This 6-inch VCP line is in poor structural condition, roots present throughout, mis-aligned joints, and problematic spur lines.	-	-	-	-	39,000	1,194,000
<b>Le An Hurst Road</b> This project is located in South Asheville running along the rear of properties fronting Le An Hurst Road. It parallels a tributary to Sweeten Creek. The existing 8-inch VCP is in very poor condition due to heavy root intrusion and has to be routinely rodded. It will be replaced by 8-inch DIP.	98,000	-	239,000	-	-	-
<b>Lincoln Avenue</b> This project is located in the Oakley neighborhood in southeast Asheville, just north of I-40. It consists of replacing approximately 1,415 LF of existing 6-inch vitrified clay pipe with 8-inch ductile iron pipe. The existing line is in very poor structural condition.	-	-	-	-	-	537,500

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>General Sewer Rehabilitation</b>						
<b>Logan Avenue</b>	-	8,200	76,500	662,300	-	-
This project is located in West Asheville near Craven Street and consists of 1,884 LF of 8" DIP. The existing clay pipe is undersized and has a large number of pipe defects.						
<b>Lynn Cove Road</b>	-	-	-	25,000	-	1,826,000
This project is located off of Beaverdam Road and runs through multiple properties along Lynn Cove Road from Governor Circle to 225 Lynn Cove Road. The lines and manholes have heavy I & I which have created multiple SSOs.						
<b>Manetta Road @ Johnson Drive</b>	-	-	-	-	33,000	2,504,700
This project is located in North Asheville near Merrimon Avenue and consists of 6,500 LF of 8-inch ductile iron pipe. The existing clay pipe is undersized, has voids, fractures, and root intrusions which have contributed to multiple SSO's.						
<b>Manetta Road @ Maywood Road</b>	8,000	69,000	-	178,500	-	-
This project is located in North Asheville between Kimberly Avenue and Manetta Road at the rear of properties fronting Maywood Road. The rehabilitation consists of approximately 605 LF of existing 8-inch VCP to be replaced with 8-inch DIP. The existing 8-inch VCP system is full of structural defects, has heavy root intrusion, and has been a source of SSO's.						
<b>Meadow Road @ Train Yard</b>	-	-	-	-	-	1,027,000
This project is located in Asheville on Meadow Road between the Biltmore Estate and Asheville-Buncombe Technical Community College. It consists of replacing 2,001 LF of existing 6-inch VCP with new 8-inch DIP. The existing line is in poor condition, is undersized, and runs underneath various structures.						
<b>Montford Avenue @ Montford Park</b>	6,300	6,750	100,000	401,100	-	-
This project is located just south of Montford Park and includes the replacement of approximately 1,258 LF of existing 8-inch VCP with new 8-inch DIP. The existing pipe has sags, multiple structural defects, and areas where the pipe is almost non-existent.						

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>General Sewer Rehabilitation</b>						
<b>Mountainbrook Road @ Chunns Cove</b>	175,000	857,000	-	-	-	-
This project will relocate lines from the rear yards of lots fronting on Mountainbrook Road (off Chunns Cove Road) where access and maintenance is extremely difficult to public street rights of way. This project will also eliminate one high aerial creek crossing where existing support piers are failing due to erosion.						
<b>New Haw Creek Road @ Dogwood Grove</b>	-	-	-	-	-	693,400
This project is in East Asheville near Haw Creek Road and consists of 1,900 LF of 8-inch ductile iron pipe. Existing 4-inch and 6-inch clay pipe is undersized, with fractures, root intrusion, and misaligned joints. Existing 8-inch ductile iron pipe has corrosion issues and existing manholes are in poor condition.						
<b>New Stock Road</b>	-	-	-	8,000	83,000	2,534,000
This project runs along New Stock Road in Woodfin, beginning at Nichols Hill Drive & New Stock Road, running under I-26, and ending at Weaverville Road. The existing 8-inch lines have structural issues which have led to root intrusion and multiple SSOs.						
<b>Northwest Avenue @ No. 215</b>	30,500	84,700	-	-	-	-
This project is in the Grovemont community of Swannanoa and includes the replacement of approximately 1,049 LF of existing 6" VCP and CIP with new 8" DIP. The existing lines are in poor structural condition; one of which is highly corroded CIP. The lower portion of the project runs parallel with a creek, has overflowed on multiple occasions, and is a confirmed source of I & I.						
<b>Oakland Drive @ Church Street</b>	-	-	-	-	-	207,000
This project is located in Black Mountain running through properties from Pine Street to Oakland Drive. The project will replace 575 LF of 4-inch orangeburg and 6-inch VCP. The existing lines are in poor condition and have too many point repairs.						
<b>Riverside Drive @ Riverside Baptist</b>	-	-	-	-	6,500	226,000
This project is located along Riverside Drive at the Riverside Baptist Church. It consists replacing approximately 510 LF of existing 6-inch VCP with 8-inch DIP. The existing 6-inch VCP segments are structurally unsound and experience heavy I & I.						

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>General Sewer Rehabilitation</b>						
<b>Rosewood Avenue @ Riverside Cemetery</b>	\$ -	\$ -	\$ -	\$ -	\$ -	79,150
This project is located off of Rosewood Avenue in Montford, adjacent to Riverside Cemetery. This project includes the replacement of approximately 180 LF of 6-inch VCP pipe with new 8-inch DIP. The existing line is in poor structural condition and is located next to a broken storm drain, causing heavy I & I.						
<b>Royal Pines Drive - PRP 47009</b>	\$ -	\$ -	\$ -	\$ -	\$ -	1,089,000
This project is located in South Asheville and is comprised of 2,888 LF of 8-inch ductile iron pipe. The existing line is 8-inch vitrified clay pipe which has had a history of root problems.						
<b>Sand Hill Road @ Baker Place</b>	\$ 1,500	\$ 30,500	\$ 351,700	\$ -	\$ -	-
This project is located in West Asheville and is comprised of 1,100 LF of 8-inch ductile iron pipe. The existing line is a 6-inch VCP with multiple structural defects and access issues due to being located under several houses.						
<b>S. Main Street @ Reems Creek Road</b>	\$ 52,000	\$ 182,500	\$ -	\$ -	\$ -	-
This project is located on South Main Street in Weaverville, adjacent to the intersection with Reems Creek Road. The project consists of replacing approximately 513 LF of existing 6 and 8-inch VCP with 565 LF of new 8-inch DIP. The existing lines routinely cause stoppages in flow and require frequent maintenance. Maintenance is made difficult by several structures located over the existing lines.						
<b>Springside Road @ Overlook Road</b>	\$ -	\$ 1,360,400	\$ -	\$ -	\$ -	-
This project is located in South Asheville near Overlook Road and is comprised of 3,922 LF of 8-inch ductile iron pipe. The existing line is 6-inch and 8-inch vitrified clay pipe in poor shape, with a history of SSO's at various points.						
<b>Sulphur Springs Road @ Covington Street</b>	\$ -	\$ -	\$ -	\$ -	\$ 15,000	505,500
This project begins in the area of the Sulphur Springs Road/Delaware Avenue intersection and runs through the back properties along Belmont Avenue. The existing 6-inch clay pipe will be replaced with 8-inch ductile iron pipe. The 6-inch clay line has had numerous problems and runs under a house.						

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>General Sewer Rehabilitation</b>						
<b>Sweeten Creek Road @ Buck Shoals Road</b>	\$ 6,600	\$ 73,000	\$ 543,900	\$ -	\$ -	-
This project is located in Royal Pines on Buck Shoals Road between Hendersonville Road (US 25) and Sweeten Creek Road (US 25A). Approximately 1,558 LF of existing 6-inch vitrified clay pipe will be replaced with 8-inch ductile iron pipe. The existing line is in poor condition and is undersized.						
<b>Sweeten Creek Road @ Mills Gap Road</b>	\$ 134,500	\$ -	\$ 1,091,000	\$ -	\$ -	-
This project is located in South Asheville near Mills Gap Road and is comprised of 2,572 LF of 8-inch ductile iron pipe. The existing line is 6-inch and 8-inch vitrified clay pipe in poor condition, with a history of SSO's.						
<b>Toxaway Street</b>	\$ 1,000	\$ 281,600	\$ -	\$ -	\$ -	\$ -
This project is located in West Asheville and is comprised of 722 LF of 8-inch DIP. The existing sewer line is 6-inch clay with extensive structural problems and roots.						
<b>Walnut Street @ N. Lexington Avenue</b>	\$ -	\$ -	\$ -	\$ -	\$ 7,000	656,500
This project runs along Walnut Street in downtown Asheville. The project begins at N. Lexington Avenue, runs along Walnut Street and down the side roads of Langren Alley, Market Street, Lawyers Walk, and ends near the corner of E. Walnut Street. The existing 6-inch and 8-inch clay pipes have structural issues and yearly maintenance is needed.						
<b>Walnut Street @ Rankin Avenue</b>	\$ 403,000	\$ -	\$ -	\$ -	\$ -	-
This project is located in downtown Asheville and consists of 2,495 LF of 8-inch ductile iron pipe. The current 6-inch clay line is undersized and deteriorated, with many structural problems.						
<b>Waynesville Avenue @ Brownwood Avenue</b>	\$ -	\$ -	\$ -	\$ 19,500	\$ -	1,351,250
This project is located in West Asheville between Haywood Road and Craven Street and is comprised of 3,022 LF of 8-inch ductile iron pipe. The existing line is 8-inch vitrified clay pipe that is in poor condition with heavy root intrusion, structural defects, and I & I problems, resulting in a long history of SSO's.						
<b>West Crabapple Lane</b>	\$ 69,000	\$ 465,500	\$ -	\$ -	\$ -	-
This project is on West Crabapple Lane which is a private road. The existing 8-inch clay pipe is in poor condition and will be replaced with 8-inch ductile iron pipe. System Services crews have reported multiple structural defects which are resulting in major infiltration and inflow.						



# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>General Sewer Rehabilitation</b>						
<b>White Oak Road</b>	\$ 48,000	\$ -	\$ -	\$ -	\$ -	-
This project is located in Arden along White Oak Road, near Hendersonville Road. The project will replace 960 LF of 6-inch orangeburg and VCP. The existing lines are in bad condition and have too many point repairs. Construction will be done by System Services In-House crew.						
<b>Wildwood Park</b>	\$ -	\$ -	\$ -	\$ -	\$ -	221,400
This project is located in Weaverville at the corner of N. Main Street and Wildwood Park. It consists of installing 582 LF of 8-inch DIP to replace existing 8-inch VCP. The existing pipe has multiple fractures, root problems, and runs underneath multiple structures making maintenance difficult.						
<b>SSD Rehabilitation &amp; Replacement</b>	\$ 4,675,000	\$ 4,675,000	\$ 4,675,000	\$ 4,675,000	\$ 4,675,000	\$ 23,375,000
This line item is for the replacement of capital assets using in-house construction crews and materials. This includes new taps, small repairs, lining, as well as larger rehabilitation projects. Also included is paving when required for these repairs and rehabilitation projects. The total estimated project cost shown is the total within the ten year window.						
<b>Surveys for Design</b>	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	250,000
New rehabilitation projects are generated continuously throughout the year. This line item provides the surveying needs for these new projects, in order that preliminary work may begin prior to being formally incorporated into the next year's CIP. This helps to ensure projects are completed efficiently.						
<b>SUBTOTAL</b>	\$10,445,412	\$10,925,200	\$11,246,575	\$ 7,608,900	\$ 5,064,800	\$ 49,653,787
Inflation per ENR Const. Cost Index	1.0000	1.0279	1.0566	1.0861	1.1164	1.22117195
<b>SUBTOTAL with inflation</b>	\$10,445,412	\$11,230,013	\$11,882,888	\$ 8,263,699	\$ 5,654,130	60,635,812
<b>PRIVATE SEWER REHABILITATION</b>						
<b>Homeland Park</b>	\$ -	\$ 123,000	\$ -	\$ 348,500	\$ -	\$ -
This project is located in East Asheville just south of the intersection of Swannanoa River Road and Tunnel Road in Homeland Park. This project consists of 921 LF of existing 4-inch VCP replacing with new 8-inch DIP. The existing 4-inch private sewer is the main line for this subdivision and is full of roots, which has triggered numerous service calls.						

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>PRIVATE SEWER REHABILITATION</b>						
<b>Old County Home Road</b>	\$ 14,400	\$ 76,500	\$ 1,704,500	\$ -	\$ -	-
This project is located in West Asheville and is comprised of 4,600 LF of 8-inch ductile iron pipe and 182 LF of 12-inch ductile iron pipe. The existing line is a problematic 4 and 8-inch sewer line composed of PVC and VCP with many defects.						
<b>SUBTOTAL</b>	\$ 14,400	\$ 199,500	\$ 1,704,500	\$ 348,500	\$ -	\$ -
Inflation per ENR Const. Cost Index	1.0000	1.0279	1.0566	1.0861	0.0000	-
<b>SUBTOTAL with inflation</b>	\$ 14,400	\$ 205,066	\$ 1,800,938	\$ 378,491	\$ -	-
<b>Treatment Plant, Pump Stations &amp; General Capital Improvements</b>						
<b>Biological Treatment</b>	-	-	-	500,000	2,010,000	43,130,000
This project is the final and most significant recommendation from the Plant Facilities Plan. It will replace the Rotating Biological Contactors (RBC's) with an alternative biological treatment technology. This project will be driven by regulatory requirements.						
<b>Building and Facility Rehabilitation</b>	79,000	51,000	42,000	40,000	47,500	250,000
This item is for the replacement of larger capital items such as roofing systems, HVAC, and subcontracts on buildings and structures within the MSD campus and treatment plant facility. Total estimated project cost shown is the total within the ten year window.						
<b>Carrier Bridge Pump Station Replacement</b>	1,703,000	12,970,000	12,970,000	5,000	-	-
This project is to implement the recommendations of the French Broad/Carrier Bridge Preliminary Engineering Report. This project will increase the capacity of the Carrier Bridge Pump Station to 34 MGD to accommodate future growth in south and west Asheville, as well as CCWSD. The estimated costs shown are planning level only and incorporate a new pump station with screening, odor control, electrical building, and emergency generator. The project also includes a new 36" force main.						
<b>Collection System Master Plan Update</b>	-	200,000	-	-	-	-
The District's Collection System Master Plan was completed in 2008 and needs to be updated. The Master Plan Update will include the merger with Cane Creek Water & Sewer District and any updates from MSD member agencies.						

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>Treatment Plant, Pump Stations &amp; General Capital Improvements</b>						
<b>Flow Monitoring</b>	50,000	50,000	50,000	50,000	50,000	250,000
This project is for expenses related to the continued operation, maintenance, and improvements of the District's flow monitoring program.						
<b>HVAC Rehabilitation</b>	52,500	54,000	55,500	57,000	50,000	250,000
This item is for replacement of HVAC systems within the MSD campus, treatment plant facility, and pump stations. Total estimated project cost shown is the total within the ten year window.						
<b>Incinerator Polymer System Replacement</b>	200,000	-	-	-	-	-
This project is for the replacement of the polymer system at the Incinerator Building. Polymer is added to thickened sludge to improve its dewatering characteristics prior to the belt filter presses. The polymer system consists of a feed hopper, aging tanks, mixers and dosing pumps. The existing system was installed when the incinerator was placed online and is now approximately 28 years old.						
<b>Mull Building HVAC</b>	317,000	-	-	-	-	-
MSD's Mull Building HVAC system is approaching 20 years of service life and experiences hot/cold zones and frequent service calls. As suggested per McGill Associates HVAC study completed in 2019, MSD will be performing a complete overhaul on these aging core components. This will include the replacement of the air handlers, cooling tower (with two air cooled chillers), pumps, and electrical components.						
<b>Plant High Rate Primary Treatment</b>	6,877,000	-	-	-	-	-
This project is a recommendation from the Facilities Plan Update, a WRF master planning document completed by HDR in April 2015. High rate primary treatment will improve water quality ahead of the RBC's thereby extending their useful life and improving treatment efficiency.						
<b>Solids Handling Capacity Improvements</b>	-	180,000	1,872,000	-	-	-
This project will increase the capacity of the solids handling and dewatering processes at the treatment plant. Additional capacity will be needed to accommodate future flow rates as well as increased sludge generation from the High Rate Primary Treatment process. Further testing will confirm exact timing of this capital investment. The project will include a third belt filter press, third cake pump, and new piping between the Thickener Bldg. and Incinerator Bldg.						

# Capital Improvement Program (continued)

## Program Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>Treatment Plant, Pump Stations &amp; General Capital Improvements</b>						
<b>Weaverville Pump Station Replacement</b>	20,000	770,000	130,750	3,435,000	3,473,000	-
This project is for the replacement of Weaverville Pump Stations No. 1 & No. 2. Heavy growth has led to an increased demand for sewer allocations in Weaverville and as a result both stations are low on available capacity. This project includes replacing pump station No. 1, replacing the existing 12" force main with 18", and converting pump station No. 2 into a smaller residential station. Pump Station No. 1 will be designed to pump directly to the WRF.						
<b>General Capital Equipment</b>	150,000	150,000	150,000	150,000	150,000	750,000
This is for the purchase of capital equipment in excess of \$15,000. Examples include pumps, plant equipment, computer servers, large concrete saws, etc.						
<b>SUBTOTAL</b>	\$ 9,448,500	\$ 14,425,000	\$ 15,270,250	\$ 4,237,000	\$ 5,780,500	\$ 44,630,000
Inflation per ENR Const. Cost Index	1.0000	1.0279	1.0566	1.0861	1.1164	1.21128093
<b>SUBTOTAL with inflation</b>	\$ 9,448,500	\$ 14,827,458	\$ 16,134,216	\$ 4,601,623	\$ 6,453,107	\$ 54,059,468
<b>Design, Row, &amp; Construction Management Expenses</b>						
<b>Design, ROW, &amp; Const. Mgmt. Exp.</b>	\$ 2,870,201	\$ 2,950,214	\$ 3,027,163	\$ 3,106,329	\$ 3,187,830	17,481,611
This line item is for expenses related to the District's Capital Improvement Program (CIP). Included are salaries for the CIP Division, capital equipment, and bond debt expenses related to the financing of the CIP program.						
<b>SUBTOTAL</b>	\$ 2,870,201	\$ 2,950,214	\$ 3,027,163	\$ 3,106,329	\$ 3,187,830	17,481,611
<b>Budget Summary</b>						
<b>SUBTOTAL with Inflation</b>	\$26,694,316	\$33,199,460	\$33,604,885	\$18,807,889	\$38,468,425	\$ 177,426,245
<b>CONTINGENCY</b>	\$ 1,000,000					
<b>REIMBURSEMENT PROJECTS</b> (Developer Reimbursements)	437,000	100,000	100,000	100,000	100,000	500,000
This is for reimbursements for extensions that qualify under the District's Extension Policy. Refer to the "Policy and Procedures for the Extension of Sewer Service" for further information. For FY20-21 there are two reimbursement agreements: 1) Olivette Master Plan Interceptor \$350,000; 2) 17 North Market Street \$87,000.						
<b>TOTAL</b>	\$28,131,316	\$33,299,460	\$33,704,885	\$18,907,889	\$38,568,425	\$ 177,926,245

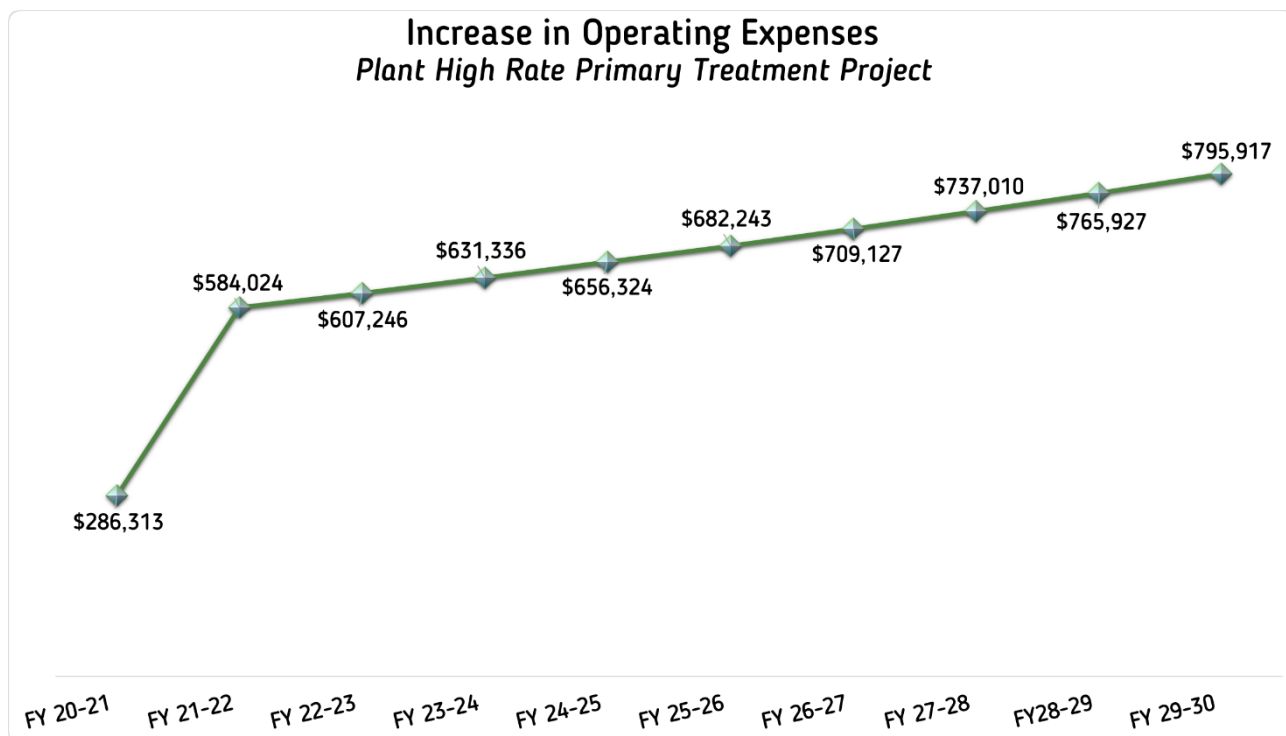
## Capital Improvement Program (continued)

### Impact of CIP on Operations

One of the purposes of a budget document is to describe the impact of significant non-routine capital expenditures on a government's current and future operating budgets. For most municipal and county governments, non-routine capital improvements consist of expansion of facilities, which often result in higher operating costs. For example, larger buildings increase utility expenses, and new structures such as libraries or swimming pools involve hiring additional staff. In addition, for most municipal and county governments, non-routine capital improvements are, for the most part, based upon the decisions of the local governing authority.

The District's CIP is different in two respects. First, almost all non-routine capital expenditures involve rehabilitation of already existing sewer pipe infrastructure, and secondly, the District's capital improvements to infrastructure are mandated by the state environmental regulatory department, imposing limits on discretionary action and cost. Through major capital improvements to the sewer collection system, the District expects to realize long-term cost reduction in wastewater treatment operations.

The following detail illustrates the impact of the Capital Improvement Program on the District's current and future operational budgets.



# Capital Improvement Program (continued)

## Operational Impact Summary

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>INTERCEPTOR AND WET WEATHER REHABILITATION</b>						
<b>Christian Creek Interceptor</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Lower Swannanoa Interceptor</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Mud Creek Interceptor - Phase 3</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>South French Broad Relief Interceptor</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Swannanoa Equalization Tank</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>INTERCEPTOR AND WET WEATHER REHABILITATION</b>						
<b>GENERAL SEWER REHABILITATION</b>						
<b>Albemarle Commons Pump Station Elimination</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Arlington Street @ Furman Avenue</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						

# Capital Improvement Program (continued)

## Operational Impact Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>GENERAL SEWER REHABILITATION</b>						
<b>Atkins Street</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Aurora Drive</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Beale Road at Copney Lane</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Bellevue Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Bent Tree Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Braddock Way - PRP 20002</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Bryson Street</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Buchanan Avenue</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Caledonia Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						

# Capital Improvement Program (continued)

## Operational Impact Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>GENERAL SEWER REHABILITATION</b>						
<b>Central Avenue @ I-240</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Chatham Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Cherokee Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Chestnut Lodge Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Cub Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>East Chestnut Ave @ Five Points</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Elk Mountain Place</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Fairmont Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Forestdale Drive</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						



# Capital Improvement Program (continued)

## Operational Impact Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>GENERAL SEWER REHABILITATION</b>						
<b>Four Inch Main - Patton Hill Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Harmony Lane</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Hazel Mill Road @ Richland Street</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Highland Farms Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Hill Street @ Cross Place</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Horizon Hill Road (Hy-Vu-Drive)</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Howland Road @ Sunset Trail</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Jarnaul Avenue</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						

# Capital Improvement Program (continued)

## Operational Impact Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>GENERAL SEWER REHABILITATION</b>						
<b>Johnston Boulevard @ Providence Road</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Johnstown Road @ Riverside Drive</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Kimberly Avenue @ Sedley Avenue</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Le An Hurst Road</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Lincoln Avenue</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Logan Avenue</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Lynn Cove Road</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Manetta Road @ Johnson Drive</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Manetta Road @ Maywood Road</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-

# Capital Improvement Program (continued)

## Operational Impact Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>GENERAL SEWER REHABILITATION</b>						
<b>Meadow Road @ Train Yard</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Montford Avenue @ Montford Park</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Mountainbrook Road @ Chunns Cove</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>New Haw Creek Road @ Dogwood Grove</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>New Stock Road</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Northwest Avenue @ No. 215</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Oakland Drive @ Church Street</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Riverside Drive @ Riverside Baptist</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-

# Capital Improvement Program (continued)

## Operational Impact Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>GENERAL SEWER REHABILITATION</b>						
<b>Rosewood Avenue @ Riverside Cemetery</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Royal Pines Drive - PRP 47009</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Sand Hill Road @ Baker Place</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>S. Main Street @ Reems Creek Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Springside Road @ Overlook Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Sulphur Springs Road @ Covington Street</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Sweeten Creek Road @ Buck Shoals Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>Sweeten Creek Road @ Mills Gap Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						

# Capital Improvement Program (continued)

## Operational Impact Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>GENERAL SEWER REHABILITATION</b>						
<b>Toxaway Street</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Walnut Street @ N. Lexington Avenue</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Walnut Street @ Rankin Avenue</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Waynesville Avenue @ Brownwood Avenue</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>West Crabapple Lane</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>White Oak Road</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>Wildwood Park</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
<b>SSD Rehabilitation &amp; Replacement</b> No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-

# Capital Improvement Program (continued)

## Operational Impact Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>GENERAL SEWER REHABILITATION</b>						
<b>Surveys for Design</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>GENERAL SEWER REHABILITATION</b>						
<b>PRIVATE SEWER REHABILITATION</b>						
<b>Old County Home Road</b>	-	-	-	-	-	-
No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.						
<b>PRIVATE SEWER REHABILITATION</b>						
<b>TREATMENT PLANT, PUMP STATIONS &amp; GENERAL CAPITAL IMPROVEMENTS</b>						
<b>Biological Treatment</b>	-	-	-	-	-	-
Impact to Operating Budget will be negligible.						
<b>Building and Facility Rehabilitation</b>	-	-	-	-	-	-
Impact to Operating Budget will be negligible.						
<b>Carrier Bridge Pump Station Replacement</b>	-	-	-	-	-	-
Impact to Operating Budget will be negligible.						
<b>Collection System Master Plan Update</b>	-	-	-	-	-	-
Impact to Operating Budget will be negligible.						
<b>Flow Monitoring</b>	-	-	-	-	-	-
Impact to Operating Budget will be negligible.						
<b>HVAC Rehabilitation</b>	-	-	-	-	-	-
Impact to Operating Budget will be negligible.						
<b>Incinerator Polymer System Replacement</b>	-	-	-	-	-	-
Impact to Operating Budget will be negligible.						
<b>Mull Building HVAC</b>	-	-	-	-	-	-
Impact to Operating Budget will be negligible.						

# Capital Improvement Program (continued)

## Operational Impact Summary (continued)

PROJECT NAME	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 BUDGET	FY 25-26 thru FY 29-30 BUDGET
<b>Treatment Plant, Pump Stations &amp; General Capital Improvements</b>						
<b>Plant High Rate Primary Treatment</b> The process will not be online until 2020. Impact to operating budget includes additional materials, energy, and disposal costs.	286,313	584,024	607,246	631,336	656,324	3,690,223
<b>Solids Handling Capacity Improvements</b> Impact to Operating Budget will be negligible.	-	-	-	-	-	-
<b>Weaverville Pump Station Replacement</b> Impact to Operating Budget will be negligible.	-	-	-	-	-	-
<b>General Capital Equipment</b> Impact to Operating Budget will be negligible.	-	-	-	-	-	-
<b>Treatment Plant, Pump Stations &amp; General Capital Improvements</b>	\$ 286,313	\$ 584,024	\$ 607,246	\$ 631,336	\$ 656,324	\$ 3,690,223
<b>Design, Row, &amp; Construction Management Expenses</b>						
<b>Design, ROW, &amp; Const. Mgmt. Exp.</b> No Impact to Operating Budget	-	-	-	-	-	-
<b>Design, Row, &amp; Construction Management Expenses</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Operational Impact Summary</b>						
Interceptor & Wet Weather Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
General Sewer Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Private Sewer Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Treatment Plant, Pump Station and General Capital Improvements	\$ 286,313	\$ 584,024	\$ 607,246	\$ 631,336	\$ 656,324	\$ 3,690,223
Design, ROW, & Construction Management Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total - Operational Impact Summary</b>	<b>\$ 286,313</b>	<b>\$ 584,024</b>	<b>\$ 607,246</b>	<b>\$ 631,336</b>	<b>\$ 656,324</b>	<b>\$ 3,690,223</b>

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# Debt Financing



## Debt Financing

### Debt Management

Prior to the 1990s, the District's policy was to fund capital improvements from user fees. Having inherited aging collector lines, some in excess of 100 years old, this policy forced the District to increase rates dramatically yet never provided enough funding to keep up with the magnitude of desperately needed repairs. Coming to realize the benefit of integrating capital-planning and debt-financing activities, the District Board developed a long-range plan to utilize bonds and pay-as-you-go in a coordinated capital improvement plan.

This combined strategy allows for more equity between long-term and new ratepayers while providing the necessary funding for an adequately functioning system. Issuing debt provides the capital to rehabilitate crumbling infrastructure while allowing present and future ratepayers who will enjoy the benefit to share the cost through annual principal and interest payments. This contrasts with a strategy that uses only pay-as-you-go whereby a resident will pay higher rates for many years to accumulate the funds needed for rehabilitation before enjoying any benefit, yet new users joining after completion of a project will have immediate use of the new facilities without sharing in any of the cost. Another advantage of combining borrowed funds with current funding is the ability to structure debt repayment schedules to avoid dramatic rate increases otherwise needed to provide adequate amounts for multi-million-dollar projects.

The District's bonds are rated by national rating agencies as follows:

Moody's Investors Service	Standard & Poor's	Fitch Ratings
Aaa	AA+	AA+

In June 2017, the District received a ratings upgrade from Aa1 to Aaa from Moody's Investors Service. Moody's Investors Service recognized the District's sound financial performance characterized by ample liquidity, healthy debt service coverage, and comprehensive fiscal planning. The rating also incorporates

## Debt Financing (continued)

### Debt Management (continued)

MSD's regional customer base, adequate system capacity, manageable debt levels, and satisfactory protections for bondholders. These high ratings enable the District to pay a lower rate of interest than many other utilities, which has a positive effect on the current and future budgets.

Unlike North Carolina's cities and counties, MSD does not have a debt limit. However, provisions in the District's Bond Order require minimum debt coverage of 120% of net revenues to bonded debt service.

The Board established a revenue policy, which sets a goal for debt coverage ratio to be approximately 150% for forecasting and planning purposes, realizing the impact of the increased debt coverage ratio on bond ratings.

The District maintains a ten-year forecast to budget capital improvements financed by a combination of debt and current fees. Based on projections using modest, consistent rate increases and capital improvement projects as outlined in the District's 10-year Capital Improvement Plan, an additional \$40 million in debt is anticipated to be issued in FY2023 without affecting the planned rate of user charge increases.

### Capital Projects Funding

Funding for capital projects comes from a combination of revenue bonds and pay-as-you-go financing. Details may be found in the Policies & Budget Process tab of this budget document where Debt Policy is presented and, in the schedule, "Budget/Rate Forecast" which illustrates the timing of debt issues and accumulation of revenues over expenditures anticipated to be available for capital financing. Generally speaking, half of the funds for capital improvements come from debt financing, with the other half funded by the excess of revenues over expenditures (pay-as-you-go).

## Debt Financing (continued)

### Capital Projects Funding (continued)

During FY18, the District issued \$37.5 million fixed rate revenue bonds. \$11.4 million was used to refund portions of the 2009A Series bonds. The remaining \$26.1 million has been expended. The District will accumulate funding from operations to finance a portion of the capital budget until the next debt issuance, anticipated to be in FY23.

As of June 30, 2020, the District will have \$100.4 million par value of outstanding revenue bond debt. During FY21, over \$9.8 million in principal will be repaid. The District anticipates issuing an additional \$40 million in revenue bonds in FY24. Debt service from this future bond issue has been included in the District's long-term business plan and sewer rate increases. A summary of outstanding debt at June 30, 2020 and anticipated principal repayment during FY21 begin below and continue on the following two (2) pages.

### Outstanding Debt as of June 30, 2020

	Balance 6/30/2020	Additions	Retirements	Balance 6/30/2021
Enka-Candler Water and Sewer District Bonds liability assumed by Metropolitan Sewerage District of Buncombe County, North Carolina on July 2, 1990 as stated in the sewer consolidated agreement:				
5.00% serial bonds assumed July 2, 1990 with maturities on each June 1 through 2024 varying from \$19,000 to \$64,000, interest payable annually.	\$ 212,000	\$ -	\$ 64,000	\$ 148,000
Total Bonds - Enka Candler Series	\$ 212,000	\$ -	\$ 64,000	\$ 148,000
Revenue Bonds, Series 2008A issued to refund Series 2005 Revenue Bonds				
Interest at variable rates in the weekly mode, payable monthly, due serially until 2031.	\$ 27,145,000	\$ -	\$ 2,075,000	\$ 25,070,000
Total Bonds - Series 2008A	\$ 27,145,000	\$ -	\$ 2,075,000	\$ 25,070,000

## Debt Financing (continued)

### Outstanding Debt as of June 30, 2020 (continued)

	Balance 6/30/2020	Additions	Retirements	Balance 6/30/2021
2009 North Carolina Water Pollution Control Revolving Fund used to construct certain sewerage projects:				
\$672,980 revolving loan issued August 18, 2009 unpaid principal sum is reduced by one-half as "Principal Forgiveness", interest accrues at 0%, 20 annual installments May 1, 2011 to 2030.	\$ 168,240	\$ -	\$ 16,825	\$ 151,415
Total State Revolving Fund	\$ 168,240	\$ -	\$ 16,825	\$ 151,415

### Revenue Bonds Series 2013 issued to refund Series 2003 and Series 2008B Revenue Refunding Bonds:

2.0% to 5.00% serial bonds issued May 1, 2013, with maturities on each July 1, 2014 through 2029 varying from \$1,065,000 to \$4,255,000; interest payable semi-annually	\$ 13,725,000	\$ -	\$ 1,760,000	\$ 11,965,000
Total Bond - Series 2013	\$ 13,725,000	\$ -	\$ 1,760,000	\$ 11,965,000

### Revenue Bonds Series 2014 issued to construct certain sewerage projects:

2.0% to 5.00% serial bonds issued May 21, 2014, with maturities on each July 1, 2015 through 2039 varying from \$535,000 to \$1,430,000; interest payable semi-annually	\$ 18,170,000	\$ -	\$ 770,000	\$ 17,400,000
5.00% term bonds issued May 21, 2014, at 112.950%, due July 1, 2039; interest payable semi-annually.	\$ 4,685,000	\$ -	\$ -	\$ 4,685,000
Total Bond - Series 2014	\$ 22,855,000	\$ -	\$ 770,000	\$ 22,085,000

## Debt Financing (continued)

### Outstanding Debt as of June 30, 2020 (continued)

	Balance 6/30/2020	Additions	Retirements	Balance 6/30/2021
Revenue Bonds Series 2017 issued to refund Series 2009A and to construct certain sewerage projects:				
3.0% to 5.00% serial bonds issued July 11, 2017, with maturities on each July 1, 2018 through 2039 varying from \$620,000 to \$2,260,000; interest payable semi-annually	\$ 31,725,000	\$ -	\$ 1,170,000	\$ 30,555,000
5.00% term bonds issued July 11, 2017, at 97.704%, due July 1, 2042; interest payable semi-annually.	\$ 4,520,000	\$ -	\$ -	\$ 4,520,000
Total Bond - Series 2017	\$ 36,245,000	\$ -	\$ 1,170,000	\$ 35,075,000
Total Bonds - All Series	\$ 100,350,240	\$ -	\$ 5,855,825	\$ 94,494,415

## Aggregate Debt Service

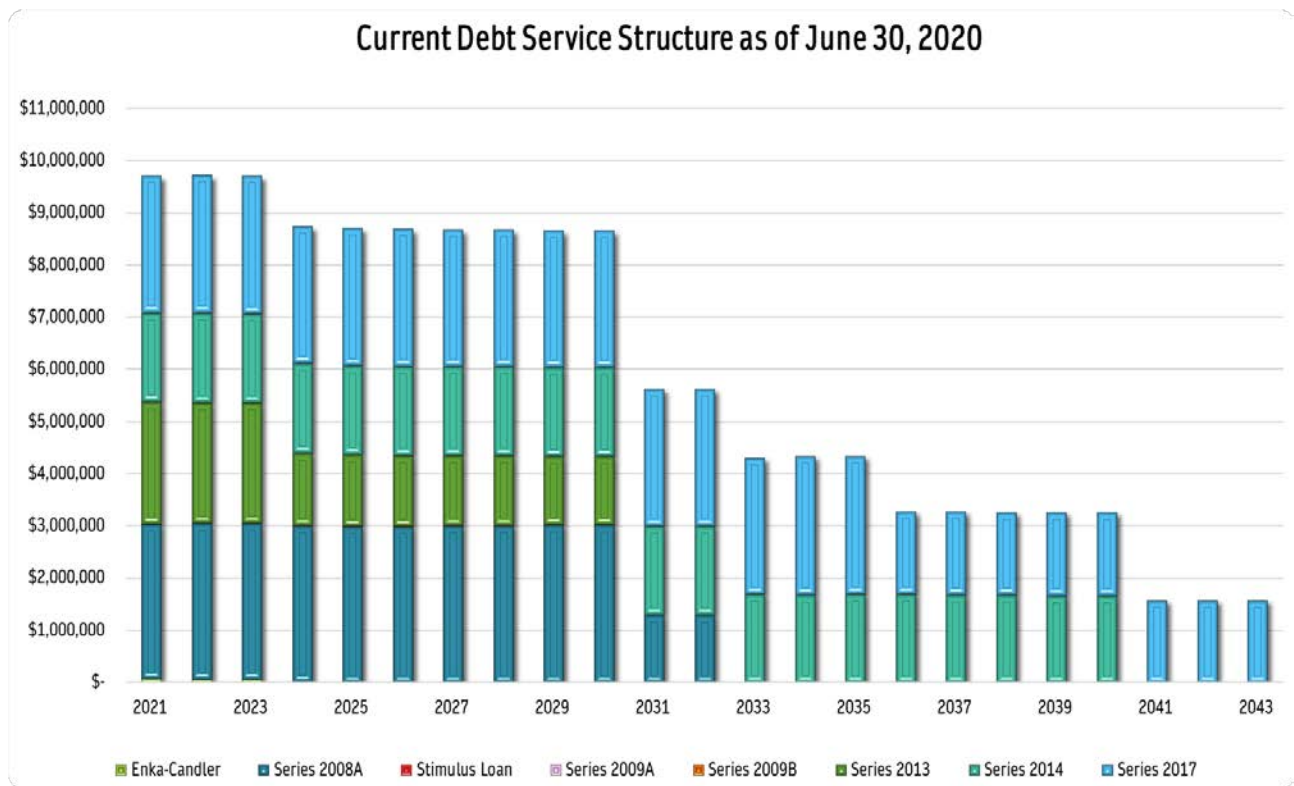
Year Ending June 30	Enka Candler Bonds	Series 2008A Refunding	North Carolina Water Pollution Control Revolving	Series 2013 Refunding	Series 2014
2021	74,600	2,967,245	16,825	2,322,594	1,701,025
2022	71,400	2,979,356	16,825	2,302,844	1,709,625
2023	68,200	2,979,445	16,825	2,298,219	1,705,775
2024	21,000	2,986,599	16,825	1,377,719	1,706,675
2025	-	2,986,194	16,825	1,363,469	1,708,025
2026	-	2,987,324	16,825	1,352,944	1,703,275
2027	-	3,000,803	16,825	1,341,444	1,695,775
2028	-	3,010,738	16,825	1,323,644	1,706,625
2029	-	3,017,451	16,825	1,304,644	1,695,475
2030	-	3,025,226	16,825	1,294,922	1,697,675
2031	-	1,304,929	-	-	1,698,175
2032	-	1,306,777	-	-	1,696,875
2033	-	-	-	-	1,698,675
2034	-	-	-	-	1,693,575
2035	-	-	-	-	1,698,138
2036	-	-	-	-	1,697,325
2037	-	-	-	-	1,692,850
2038	-	-	-	-	1,682,125
2039	-	-	-	-	1,681,000
2040	-	-	-	-	1,681,000
2041	-	-	-	-	-
2042	-	-	-	-	-
2043	-	-	-	-	-
	<u>\$ 235,200</u>	<u>\$ 32,552,088</u>	<u>\$ 168,245</u>	<u>\$ 16,282,441</u>	<u>\$ 33,949,688</u>

## Aggregate Debt Service (continued)

Year Ending June 30	Series 2017	Aggregate Debt Service
2021	2,619,450	9,701,739
2022	2,629,200	9,709,249
2023	2,633,775	9,702,238
2024	2,625,850	8,734,668
2025	2,622,225	8,696,737
2026	2,625,100	8,685,467
2027	2,619,350	8,674,196
2028	2,614,975	8,672,806
2029	2,621,475	8,655,870
2030	2,618,600	8,653,247
2031	2,616,350	5,619,454
2032	2,614,475	5,618,127
2033	2,612,725	4,311,400
2034	2,637,675	4,331,250
2035	2,635,850	4,333,988
2036	1,583,050	3,280,375
2037	1,584,650	3,277,500
2038	1,580,125	3,262,250
2039	1,579,475	3,260,475
2040	1,582,550	3,263,550
2041	1,578,438	1,578,438
2042	1,577,109	1,577,109
2043	1,579,297	1,579,297
	<u>\$ 51,991,769</u>	<u>\$ 135,179,430</u>



## Current Debt Service Structure as of June 30, 2020



# Statistical Information



## Introduction

This part of MSD's comprehensive annual financial report presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the District's overall financial health.

## Financial Trends

These schedules contain trend information to help the reader understand how the District's financial performance and well-being have changed over time.

- ▲ Net Position by Component
- ▲ Changes in Net Position
- ▲ General Revenue by Source
- ▲ Expenses by Function

## Revenue Capacity

These schedules contain information to help the reader assess the District's most significant revenue sources.

- ▲ Principal Commercial Users

## Debt Capacity

These schedules present information to help the reader assess the affordability of the District's current levels of outstanding debt and the District's ability to issue additional debt in the future.

- ▲ Ratio of Outstanding Debt
- ▲ Revenue Bond Coverage

## Introduction (continued)

### Demographic and Economic Information

These schedules offer demographic and economic indicators to help the reader understand the environment within which the District's financial activities take place.

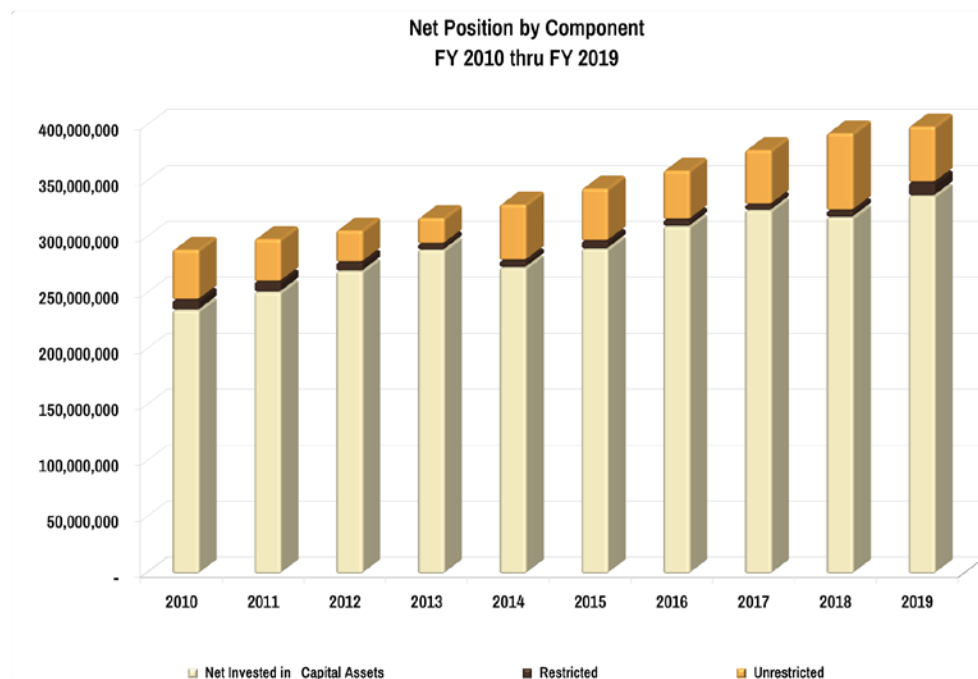
- ▲ Demographic & Economic Statistics
- ▲ Personal Income by Industry
- ▲ Principal Employers

Source: Unless otherwise noted, the information in these schedules is derived from the comprehensive annual financial reports for the relevant year.

## Net Position by Component

FY 2010 to FY 2019

Fiscal Year Ended June 30	Net Invested in Capital Assets	Restricted	Unrestricted	Total Net Position
2010	235,471,938	9,248,713	45,195,178	289,915,829
2011	251,754,578	9,294,955	38,170,812	299,220,345
2012	270,297,021	8,117,494	28,687,702	307,102,217
2013	289,369,009	5,472,550	23,332,868	318,174,427
2014	273,702,824	6,238,648	50,388,726	330,330,198
2015	290,329,700	6,930,286	47,164,270	344,424,256
2016	310,277,965	6,087,649	44,227,370	360,592,984
2017	324,826,191	5,169,667	48,827,214	378,823,072
2018	318,591,132	6,045,516	69,374,003	394,010,651
2019	337,729,290	11,860,481	64,530,210	414,119,981



## Changes in Net Position

(Accrual Basis of Accounting)

FY 2010 to FY 2019

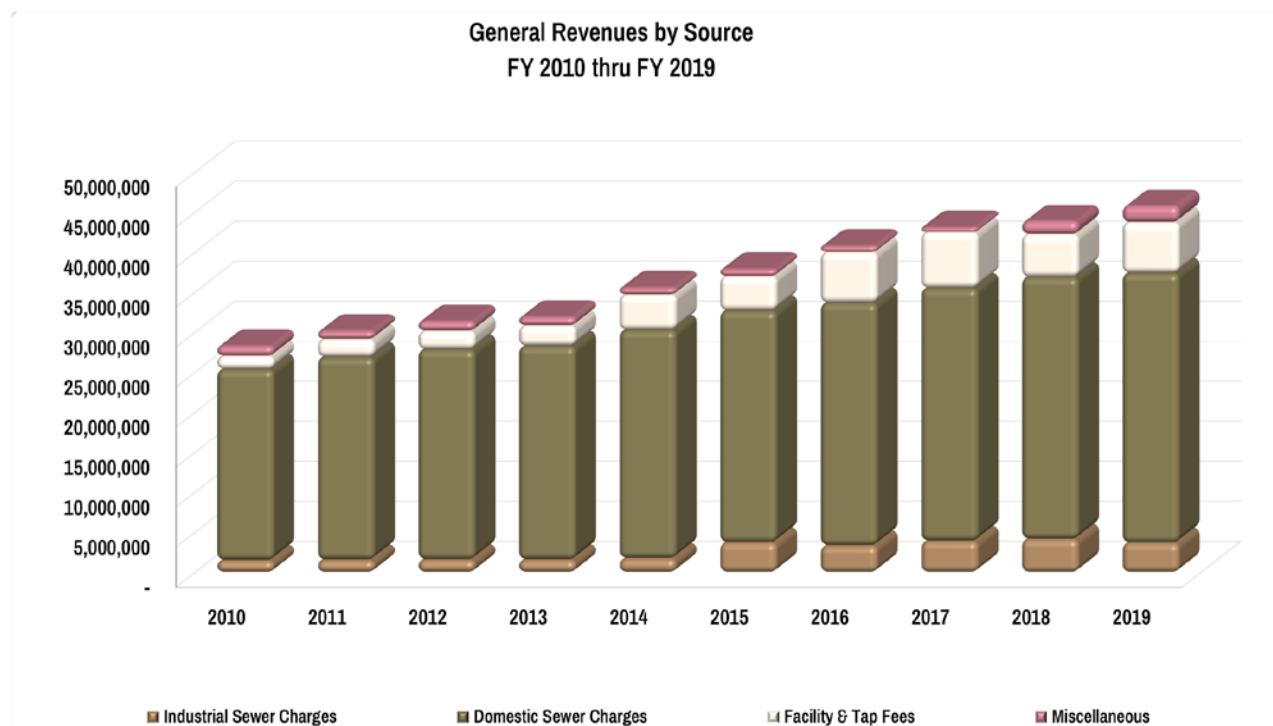
	FISCAL YEAR										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<b>Operating revenues:</b>											
Sewer charges	\$25,369,818	\$26,894,894	\$27,849,176	\$28,268,850	\$30,287,440	\$32,617,886	\$33,679,560	\$35,521,220	\$36,891,000	\$37,393,609	
Facility and tap fees	1,654,010	2,238,171	2,321,474	2,566,635	4,430,475	4,311,259	6,324,596	6,977,097	5,357,008	6,343,842	
Miscellaneous	770,389	612,721	907,987	663,003	728,937	757,619	764,928	681,243	745,022	716,441	
Total operating revenues	<u>27,794,217</u>	<u>29,745,786</u>	<u>31,078,637</u>	<u>31,498,488</u>	<u>35,446,852</u>	<u>37,686,764</u>	<u>40,769,084</u>	<u>43,179,560</u>	<u>42,993,030</u>	<u>44,453,892</u>	
<b>Operating expenses:</b>											
Salaries & employee benefits	6,303,951	6,536,352	6,663,907	6,878,737	7,019,623	6,758,251	7,183,043	7,656,858	7,846,038	8,043,728	
Contractual services	1,240,175	1,337,258	1,452,459	1,230,543	1,247,204	1,398,288	1,472,795	1,653,918	1,598,381	1,657,789	
Utilities	1,111,644	1,234,810	1,106,158	1,013,310	1,059,709	1,144,711	1,058,299	1,234,029	1,295,636	1,170,937	
Repairs and maintenance	851,966	927,655	958,738	971,919	982,524	938,977	998,758	1,019,150	985,838	919,882	
Other supplies and expenses	1,468,655	1,344,307	1,545,557	1,616,021	1,662,793	1,545,531	1,500,249	1,736,302	1,886,837	1,728,385	
Insurance claims and expenses	1,778,336	2,142,086	2,255,450	1,963,988	2,109,844	2,682,426	2,990,973	2,467,567	2,765,151	2,528,122	
Depreciation	8,556,365	7,520,744	7,681,340	7,965,835	8,310,114	8,543,402	9,332,957	9,929,559	10,393,126	10,659,346	
Total operating expenses	<u>21,311,092</u>	<u>21,043,212</u>	<u>21,663,609</u>	<u>21,640,353</u>	<u>22,391,811</u>	<u>23,011,586</u>	<u>24,537,074</u>	<u>25,697,383</u>	<u>26,771,007</u>	<u>26,708,189</u>	
<b>Operating income</b>	<u>6,483,125</u>	<u>8,702,574</u>	<u>9,415,028</u>	<u>9,858,135</u>	<u>13,055,041</u>	<u>14,675,178</u>	<u>16,232,010</u>	<u>17,482,177</u>	<u>16,222,023</u>	<u>17,745,703</u>	
<b>Nonoperating revenues (expenses):</b>											
Investment Income	578,302	493,002	311,807	507,644	175,797	209,220	237,604	343,988	960,222	1,844,280	
Interest Expense	(2,934,980)	(2,619,031)	(2,534,946)	(2,132,131)	(2,104,758)	(2,771,525)	(2,586,670)	(2,794,077)	(3,515,801)	(3,399,735)	
Amortization of bond issuance costs	(145,827)	(156,120)	(144,651)	-	-	-	-	-	-	-	
Bond issuance costs	-	-	-	(393,694)	(434,357)	-	-	-	(355,583)	-	
Gain (loss) on sale of surplus property	67,099	42,232	86,165	14,410	67,663	17,258	(106,997)	(280,337)	10,187	(434,989)	
Total nonoperating revenues (expenses)	<u>(2,435,406)</u>	<u>(2,239,917)</u>	<u>(2,281,625)</u>	<u>(2,003,771)</u>	<u>(2,295,655)</u>	<u>(2,545,047)</u>	<u>(2,456,063)</u>	<u>(2,730,426)</u>	<u>(2,900,975)</u>	<u>(1,990,444)</u>	
<b>Income before contributions &amp; special items</b>	<u>4,047,719</u>	<u>6,462,657</u>	<u>7,133,403</u>	<u>7,854,364</u>	<u>10,759,386</u>	<u>12,130,131</u>	<u>13,775,947</u>	<u>14,751,751</u>	<u>13,321,048</u>	<u>15,755,259</u>	
<b>Capital contribution</b>	<u>1,128,684</u>	<u>2,841,859</u>	<u>2,047,550</u>	<u>3,217,846</u>	<u>1,396,385</u>	<u>3,078,520</u>	<u>2,392,781</u>	<u>3,478,337</u>	<u>3,222,031</u>	<u>4,354,071</u>	
<b>Change in Net Position</b>	<u>\$ 5,176,403</u>	<u>\$ 9,304,516</u>	<u>\$ 9,180,953</u>	<u>\$11,072,210</u>	<u>\$12,155,771</u>	<u>\$15,208,651</u>	<u>\$16,168,728</u>	<u>\$18,230,088</u>	<u>\$16,543,079</u>	<u>\$20,109,330</u>	

## General Revenues by Source

FY 2010 to FY 2019

Fiscal Year Ended June 30	Industrial Sewer Charges	Domestic Sewer Charges	Facility & Tap Fees	Miscellaneous	Total
2010	1,498,529	23,871,289	1,654,010	1,348,691	28,372,519
2011	1,565,402	25,329,492	2,238,171	1,147,955	30,281,020
2012	1,599,819	26,249,357	2,321,474	1,305,959	31,476,609
2013	1,577,916	26,690,934	2,566,635	1,185,057	32,020,542
2014	1,758,818	28,528,622	4,430,475	972,397	35,690,312
2015	3,725,584	28,978,958	4,311,259	984,097	37,999,898
2016	3,344,074	30,335,486	6,324,596	895,535	40,899,691
2017	3,909,925	31,611,295	6,977,097	744,894	43,243,211
2018	4,159,767	32,731,233	5,357,008	1,715,431	43,963,439
2019	3,687,703	33,705,906	6,343,842	2,125,732	45,863,183

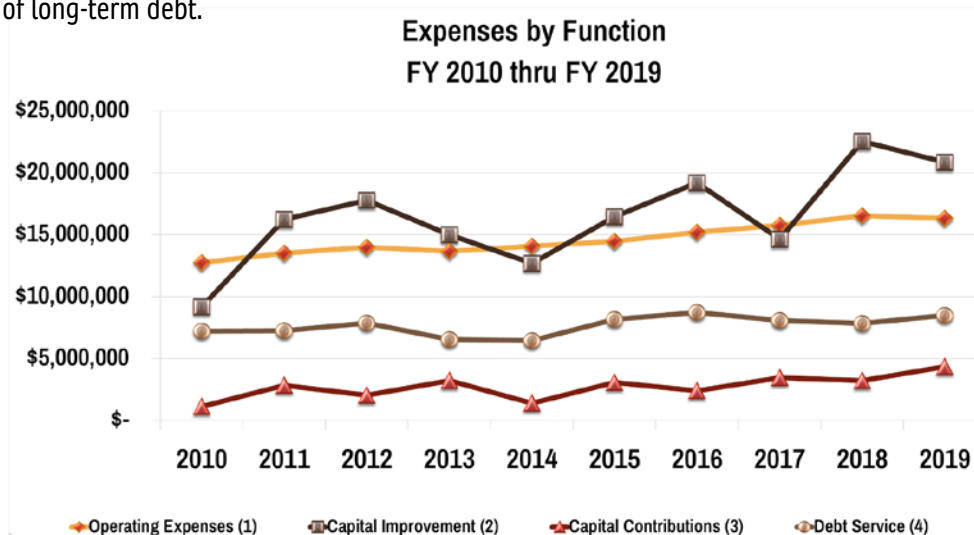
Note: Does not include Capital Contributions.



## Expenses by Function (Non-GAAP)

FY 2010 to FY 2019

Fiscal Year Ended June 30	Operating Expenses <sup>(1)</sup>	Capital Improvement <sup>(2)</sup>	Capital Contributions <sup>(3)</sup>	Debt Service <sup>(4)</sup>	Total
2010	12,754,727	9,173,231	1,128,684	7,212,980	30,269,622
2011	13,522,468	16,226,145	2,841,859	7,255,856	39,846,328
2012	13,982,269	17,775,391	2,047,550	7,859,771	41,664,981
2013	13,674,518	14,988,922	3,217,846	6,553,956	38,435,242
2014	14,081,697	12,701,810	1,396,385	6,464,583	34,644,475
2015	14,468,184	16,455,653	3,078,520	8,154,350	42,156,707
2016	15,204,117	19,201,501	2,392,781	8,722,495	45,520,894
2017	15,767,824	14,631,155	3,478,337	8,069,902	41,947,218
2018	16,536,830	22,528,740	3,222,031	7,841,626	50,129,227
2019	16,315,760	20,860,363	4,354,071	8,505,560	50,035,754

<sup>1</sup>Includes general operations.<sup>2</sup>Excludes depreciation expense.<sup>3</sup>This includes collection system infrastructure contributed by developers.<sup>4</sup>Includes Bond Principal Expense and Bond Interest Less Capitalized Interest Portion and excludes early retirement of long-term debt.



## Principal Commercial Users

FY 2010 &amp; FY 2019

Commercial User	Type of Business	2010			2019		
		Total Charges	Rank	Percentage of Total Charges	Total Charges	Rank	Percentage of Total Charges
Milkco, Inc.	Dairy Products & Juices	\$ 541,928	1	2.14%	\$ 692,257	1	1.85%
Jacob Holm Industries America	Textile Manufacturing	80,917	7	0.32%	517,297	2	1.38%
Mission Health System	Health & Emergency Services	235,074	2	0.93%	289,988	3	0.78%
Sierra Nevada	Micro-Brewery Manufacturer	-----			287,081	4	0.77%
Duke Progress Energy	Electric Utility	-----			226,352	5	0.61%
Arcadia Beverage	Beverage Supplier for local/global retailers	93,601	5	0.37%	220,843	6	0.59%
Ridgecrest Baptist Conference Center	Christian Conference Center	170,978	3	0.67%	204,754	7	0.55%
New Belgium Brewing	Micro-Brewery Manufacturer	-----			190,521	8	0.51%
VA Medical Center	Veterans Hospital	93,307	6	0.37%	184,338	9	0.49%
- Asheville Department of Veterans Affairs							
The Biltmore Company	Tourist Attraction/Winery/Resort Services	61,229	9	0.24%	157,643	10	0.42%
BONAR	Chemical Manufacturer	126,145	4	0.50%	-----		
- (formerly Colbond)							
Day International	Textile Machine Parts	68,276	8	0.27%	-----		
UNC-Asheville		<u>55,591</u>	<u>10</u>	<u>0.22%</u>	-----		
TOTAL		<u>\$ 1,527,046</u>		<u>6.02%</u>	<u>\$ 2,971,074</u>		<u>7.95%</u>

Source: District Billing Records

## Ratio of Outstanding Debt

FY 2010 to FY 2019

Fiscal Year Ended June 30	Total Outstanding Debt	Debt Per Capita <sup>1</sup>	Per Capita Income <sup>2</sup>	Percentage of Personal Income
2010	104,804,725	921	34,603	2.66%
2011	99,967,436	820	36,040	2.28%
2012	94,534,320	783	38,205	2.05%
2013	86,909,009	721	37,995	1.90%
2014	110,407,625	921	40,634	2.27%
2015	104,325,293	857	43,164	1.99%
2016	97,627,539	789	44,412	1.78%
2017	91,896,562	731	46,143	1.58%
2018	117,202,111	928	48,592	1.91%
2019	111,137,457	871	Unavailable	-

<sup>1</sup>This ratio was calculated by using the number of domestic accounts and multiplying by Buncombe County census average of 2.3 persons per household to get the number of users in the District.

<sup>2</sup>Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce; Last updated: November 14, 2019-- new statistics for 2018; revised statistics for 2010-2017.

See Personal Income by Industry on page 157 to assess economic base of the County.

## Revenue Bond Coverage

FY 2010 to FY 2019

From 1985 to 2002, the District was subject to Section 501 of the 1985 Bond Order which covenants that the District will set rates to produce sufficient revenues, together with any other available funds, including the amounts transferred by the District from the General Fund to the Revenue Fund, to permit the deposit and transfer to the credit of the Revenue Fund in the then current fiscal year of a sum at least equal to the total of the following:

1. the current expenses of the Sewerage System for the current fiscal year, and
2. to provide for the higher of either:
  - a. the amounts needed for making the required cash deposits in each fiscal year to the credit of the several accounts in the Bond Service Fund and to the credit of the Subordinated Indebtedness Service Fund, the Debt Service Reserve Fund and the Maintenance Reserve Fund, or
  - b. one hundred twenty per centum (120%) of the amount of the principal and interest requirements for the current fiscal year on account of the indebtedness then outstanding excluding principal and interest requirements on account of indebtedness incurred to finance improvements or additional improvements which have not been completed as of the beginning of such fiscal year.

However, with the issuance of refunding bonds on April 3, 2003, a sufficient amount of debt subject to the 1985 bond order was defeased allowing application of the 1999 Amended Bond Order whose rate covenant is summarized in the following paragraph.

*The District covenants to set rates and charges so that the Income Available for Debt Service (defined as the excess of "Revenues" over "Current Expenses") will not be less than the greater of (i) one hundred twenty percent (120%) of the Long-Term Debt Service Requirement for Parity Indebtedness only for such Fiscal Year and (ii) one hundred percent (100%) of the Long-Term Debt Service Requirement for Parity Indebtedness and Subordinated Indebtedness for such Fiscal Year. The definition of revenues for this purpose does not include grants, contributions, investment income credited to non-operating funds, or tap and connection fees. Current expenditures include operating expenses other than additions to reserve funds, depreciation or amortization, or debt service payments.*

## Revenue Bond Coverage

FY 2010 to FY 2019

The District does not currently have any subordinated indebtedness, so the computation of the current fiscal year's compliance with this covenant is based solely on 120% of the debt service requirement.

Long-Term Debt Service Requirement is defined as interest and principal required to be remitted to the Trustee, except that interest shall be excluded from the determination of Long-Term Debt Service Requirement to the extent the same is provided from the proceeds of the Long-Term Indebtedness. The coverage ratio is computed on the basis of 100% of required debt service.

Fiscal Year Ended June 30	Adjusted Revenues (B)	Adjusted Current Expenses (A)	Income Available for Debt Service	Long-Term Debt Service Requirement	120% of Long-Term Debt Service Requirement	Excess of Income Available for Debt over Debt Service	Coverage Ratio
2010	26,268,075	13,233,881	13,034,194	7,855,989	9,427,187	5,178,205	1.66
2011	27,654,768	13,967,900	13,686,868	8,565,201	10,278,241	5,121,667	1.60
2012	28,510,573	14,398,228	14,112,345	7,274,680	8,729,616	6,837,665	1.94
2013	29,075,493	14,013,024	15,062,469	8,114,665	9,737,598	6,947,804	1.86
2014	31,096,483	14,302,479	16,794,004	8,408,166	10,089,799	8,385,838	2.00
2015	33,428,669	15,179,802	18,248,867	10,184,460	12,221,352	8,064,407	1.79
2016	34,529,568	15,688,258	18,841,310	9,003,519	10,804,223	9,837,791	2.09
2017	36,402,135	16,280,644	20,121,491	7,918,557	9,502,268	12,202,934	2.54
2018	38,102,682	16,536,830	21,565,852	9,423,689	11,308,427	12,142,163	2.29
2019	39,379,533	16,315,760	23,063,773	9,412,540	11,295,048	13,651,233	2.45

(A) Includes all operation and maintenance expenses, except depreciation.

(B) Does not include tap and connection fees, grants, contributions, investment income allocated to non-operating funds.

## Demographic &amp; Economic Statistics

FY 2010 to FY 2019

Fiscal Year Ended June 30	Population Estimates <sup>1</sup>	Per Capita Income <sup>2</sup>	Median Age <sup>1</sup>	Civilian Labor Force <sup>3</sup>		
				Employed	Unemployed	Unemployment Rate
2010	238,733	34,603	40.7	113,978	10,716	8.6%
2011	241,148	36,040	41.0	115,209	10,337	8.2%
2012	243,657	38,205	41.2	117,764	9,628	7.6%
2013	246,823	37,995	41.4	120,887	8,218	6.4%
2014	249,122	40,634	41.7	121,859	6,086	4.8%
2015	251,973	43,164	41.8	125,149	6,190	4.7%
2016	254,988	44,412	41.9	129,385	5,312	3.9%
2017	257,185	46,143	42.1	132,132	4,644	3.4%
2018	259,103	48,592	Unavailable	135,589	4,427	3.2%
2019	Unavailable	Unavailable	Unavailable	141,813	5,022	3.4%

Note: The information above is for Buncombe County, North Carolina. The District believes that the above information is representative of the service area, which extends over approximately 80% of the county.

## Sources:

<sup>1</sup>U.S. Census Bureau, Population Division; Estimates for 2010-2018 reflect county population estimates available as of March 2019.

<sup>2</sup>Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce; Last updated: November 14, 2019-- new statistics for 2018; revised statistics for 2010-2017.

<sup>3</sup>U.S. Department of Labor - Bureau of Labor Statistics; Local Area Unemployment Statistics

## Personal Income by Industry

CY 2010 to CY 2019

	Calendar Year										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Total Personal Income	5,931,959	6,058,405	6,451,367	6,665,801	7,185,478	7,641,880	8,044,207	8,365,639	8,829,330	Unavailable	
Farm earnings	19,666	22,055	20,837	28,374	36,375	43,442	36,735	39,727	34,449	-	
Nonfarm earnings	5,912,293	6,036,350	6,430,530	6,637,427	7,149,103	7,598,438	8,007,472	8,325,912	8,794,881	-	
Private earnings	4,871,220	4,995,530	5,374,909	5,580,792	6,093,426	6,526,190	6,917,713	7,201,368	7,613,062	-	
Agricultural services, forestry, fishing	4,932	4,259	5,170	5,757	5,924	5,932	6,579	7,183	7,844	-	
Mining	7,221	6,556	6,942	5,828	6,370	6,599	4,969	6,140	6,981	-	
Construction	365,330	357,367	377,429	348,820	392,983	448,998	476,936	525,454	615,641	-	
Manufacturing	680,798	667,420	703,599	705,620	757,644	822,694	832,225	862,188	920,426	-	
Durable goods	532,674	484,673	505,819	507,469	536,048	541,824	527,735	554,106	599,534	-	
Nondurable goods	190,726	182,747	197,780	198,151	221,596	280,870	304,490	308,082	320,892	-	
Wholesale trade	213,739	222,502	217,822	214,617	236,067	248,956	253,513	263,535	270,453	-	
Retail Trade	461,789	474,214	505,721	526,884	557,906	594,046	628,647	650,953	671,903	-	
Transportation and public utilities	220,695	232,268	248,420	254,273	265,192	302,198	267,007	295,830	290,272	-	
Services	2,918,745	3,030,271	3,310,717	3,519,580	3,871,507	4,096,785	4,448,584	4,590,689	4,829,542	-	
Government and government enterprises	1,041,073	1,040,820	1,055,621	1,056,635	1,055,677	1,072,248	1,089,759	1,124,544	1,181,819	-	
Federal, civilian	308,666	321,027	331,563	321,224	315,026	318,022	324,997	338,202	363,405	-	
Military	26,064	26,148	26,654	25,501	24,683	23,749	24,721	24,553	26,454	-	
State and local	706,343	693,645	697,404	709,910	715,968	730,477	740,041	761,789	791,960	-	
	5,931,959	6,058,405	6,451,367	6,665,801	7,185,478	7,641,880	8,044,207	8,365,639	8,829,669	-	

Note: The above data is for Buncombe County, North Carolina. MSD believes the data is representative of the entire service area. Growth in personal income over time may be compared to average monthly billing to evaluate the affordability of sewer rates for customers.

Source: Regional Economic Accounts, Bureau of Economic Analysis, US Department of Commerce; Last updated: November 14, 2019 new statistics for 2018; revised statistics for 2010-2017.

## Principal Employers

FY 2010 to FY 2019

Employer	FY 2010			FY 2019		
	Employees	Rank	% of Total County Employment	Employees*	Rank	% of Total County Employment
Mission Health System & Hospitals	6,994	1	6.33%	3,000+	1	2.12%+
Buncombe County Public Schools	4,000	2	3.62%	3,000+	2	2.12%+
Asheville-Buncombe Technical Community College	-----			1,000-2,999	3	0.71% - 2.11%
The Biltmore Company	1,583	4	1.43%	1,000-2,999	4	0.71% - 2.11%
Buncombe County Government	1,673	3	1.51%	1,000-2,999	5	0.71% - 2.11%
City of Asheville	1,000	9	0.91%	1,000-2,999	6	0.71% - 2.11%
Ingles Markets, Inc.	1,137	6	1.03%	1,000-2,999	7	0.71% - 2.11%
Omni Grove Park Inn	1,100	7	1.00%	1,000-2,999	8	0.71% - 2.11%
VA Medical Center - Asheville	1,139	5	1.03%	1,000-2,999	9	0.71% - 2.11%
Eaton Corporation - Electrical Division	1,010	8	0.91%	750-999	10	0.53% - 0.71%
CarePartners	917	10	0.83%	-----		-----
Total for Principal Employers	20,553		<u>18.61%</u>	13,750 - 21,992		<u>9.70% - 15.51%</u>

\* Employee range is the only public information available

Note: The information above is for Buncombe County, North Carolina. The District believes that the above information is representative of the entire service area, which extends over approximately 80% of the County.

Source: Asheville Area Chamber of Commerce, Economic Development Department & NC Employment Security Commission

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# Appendix



## Classification of Accounts

**51100-Salaries & Wages**—This includes salaries & wages for 152 department personnel. Also includes a Cost of Living increase of 0.0%.

**51150-Overtime**—This includes compensation as necessary for non-exempt personnel.

**51200-NC Retirement**—The District contributes 10.15% of gross salaries and wages to the North Carolina Local Government Employees' Retirement System. The employees contribute an additional 6.00% through payroll deduction, but the employee portion is not budgeted, as it is not an expense of the District.

**51250-Payroll Taxes**—The District contributes 6.20% of gross salaries and wages to Social Security and 1.45% for Medicare as the employer share. The employees contribute equal amounts through payroll deduction, but this is not included in the budgeted amount.

**51300-Medical, Dental & Life**—This includes the employer allocation of the self-funded employee medical and dental program.

**51325-Post-Employment Insurance**—The District implemented GASB Statement No. 45: Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions. Included are postretirement benefits other than pension, for example, medical, dental, and vision.

**51350-Worker's Compensation**—This includes the allocation of worker's compensation premiums and deductible costs.

## Classification of Accounts (continued)

**51360-State Unemployment Benefits**—Beginning FY14, the District was required to maintain a reserve equaling 1% of unemployment insurance taxable wages. In August of 2014, and every August subsequent, the Division of Employment Security (DES) calculates the amount that each employer should have in its reserve. Unemployment claims will be deducted from the reserve in the fall of that year. Employers will then receive a bill from the DES indicating the amount they must pay to replenish their reserve to the 1% level. This payment will cover both the costs of unemployment claims and increases in the employer's total number of employees or total taxable wages.

**51500-401(k)**—The District contributes up to 5.0% of matching contributions based upon the level of employee participation in the 401(k)-retirement plan. A professional investment institution administers this as contracted with the North Carolina Retirement System.

**52010-Advertising**—This includes newspaper ads for vacant positions, quarterly informational reports, and mandatory public SSO notices. In addition, the advertising account covers Annual Report and System Performance Annual Report distribution, door hangers and any other miscellaneous communications from the District to the public.

**52050-Dues & Subscriptions**—This includes memberships to professional organizations and subscriptions to water utility periodicals, local newspapers, etc.

**52100-Postage**—This includes the charges for mailing of all official correspondence.

**52150-Travel, Meetings & Training**—This includes attendance at regional, state, and national professional associations and various continuing education requirements including supervisory training, skill-based pay training, operator's seminar, etc.

**52160-Tuition Assistance**—This includes pre-authorized monetary assistance to employees who take educational courses that directly relate to their positions at the District.

## Classification of Accounts (continued)

**52170-Director's Fees & Expenses**—This includes all costs pertaining to the Board of Directors such as stipends, meeting expenses, and travel to national water and wastewater conferences.

**52180-Insurance**—This represents allocation of general liability insurance premium and deductible costs.

**52210-Communications** (other than landline telephone)—This includes charges for cellular telephones, mobile radios, and pagers.

**52240-Uniforms**—This includes charges for the purchase of work shirts, pants, outerwear, safety boots and other related items, as well as the rental and cleaning of certain uniforms.

**52250-Office Supplies**—This includes paper, printing charges, and other miscellaneous office-related supplies.

**52260-Special Departmental Supplies**—This includes specialty paper, bindery supplies, and printing services for employee manual, index tabs, ID badges, film, film developing, business cards, and vellum.

**52270-Safety Equipment/Supplies**—This includes goggles, vests, trench-shoring equipment, gas monitors, and related items to prevent work-related injuries.

**52280-Supplies/Small Tools**—This includes chainsaw blades, drill bits, gloves, miscellaneous hand tools, axes, shovels, batteries, sewer tape, paint, and paint brushes, etc.

**52290-Chemicals**—This includes all chemicals used in the treatment of wastewater.

**52300-Line Cleaning & Supplies**—This includes chemicals, rat bait, nozzles, hose, root cutters & replacement rods, root killer, degreaser, etc.

## Classification of Accounts (continued)

**52330-Legal Fees**—This includes professional services of the District’s attorney for various matters not related to capital projects.

**52340-Debt Administration Fees**—This includes trustee fees, liquidity facility fees for variable debt, arbitrage calculation fees, and incidental expenditures incurred by the Bond Trustee.

**52350-Professional & Contractual Services**—This includes external audit fees, building security, emissions testing, effluent analysis, testing of samples, service contract on pumps, lab instrumentation, emergency line repairs, plumbing repairs, tree service, fence service, software annual support fees, and other outsourced services.

**52400-Repairs (Office Equipment)**—This includes charges for repairs of various office equipment not under a maintenance agreement.

**52410-Maintenance (Bldgs. & Grounds)**—This includes janitorial fees, outsourced repairs, mowing services, landscaping supplies, and elevator inspections.

**52420-Maintenance (Equipment)**—This includes maintenance expense on the forklift and pallet jack for the Purchasing/Warehouse Division, maintenance, and repair of various equipment items, such as gas detectors, chlorinators, parts and repairs for the camera equipment, cable, pumps, and various other maintenance of non-vehicular equipment.

**52430-Landscape Restoration**—This includes manholes, rims & lids, blacktop patch and concrete materials, asphalt & concrete work, pipe, couplings, adapters, straw, grass seed, mulch, pine needles and plants required to recover excavated areas, etc.

**52440-Pump Maintenance**—This includes all parts and supplies necessary to maintain all MSD pumps.

## Classification of Accounts (continued)

**52450-Equipment Rental**—This includes the rental of equipment used occasionally like chippers and bulldozers.

**52460-Motor Fuel and Lubricants**—This includes gasoline, diesel fuel, motor oil, brake fluid, and similar supplies to operate and maintain the District fleet of trucks, vans, and heavy equipment.

**52470-Outside Vehicle Maintenance**—This includes expenditures paid to factory-authorized dealer service departments or similar enterprises to perform needed repairs to vehicles beyond the capabilities of the District's in-house fleet maintenance employees.

**52500-Rents & Leases**—This includes the rental of any equipment for the treatment plant, and operating leases for copiers and other office equipment.

**52510-Permits, Fees, & Software Licenses**—This includes charges for annual radiation license, stormwater permit, lab certification renewal, state operating permits, air permit, City of Asheville pavement cutting permits, and MSD manholes raised by the City during their paving programs and water usage by preventative maintenance trucks.

**52650-Utilities**—This includes charges for electricity, gas, water, and trash collection.

**52690-Freight**—This includes freight charges ONLY for items that are not clearly and easily defined as pertaining to a certain division and/or line item(s).

**52715-Safety Incentive Program**—Rewards to employees for compliance with safety rules and procedures are distributed by the Safety Officer based upon observations during routine and surprise inspections.

## Classification of Accounts (continued)

**52725-Wellness Program**—One of the ways the District attempts to manage costs for self-funded health insurance plan is to encourage employees to achieve and maintain healthy lifestyles. Wellness program costs include education, fitness equipment, and auxiliary supplies.

**52730-Employee Assistance Program**—The District contracts with an agency to provide resources for dealing with employee performance issues to assist management.

**52910-Non-Capital Equipment**—This includes any item under \$1,000 consisting of various tools and assorted information technology components such as computers or monitors.

**52915-Copiers, Printers and Faxes**—This includes routine supplies and purchase of any machines under \$1,000.

**52920-Billing & Collections**—This represents the billing and collection of sewer charges by the member agencies.

**53040-Fleet Equipment Replacement Fund**—This includes the proposed annual funding for the future acquisition of vehicles, trucks, and trailers. Current acquisition of replacement vehicles is budgeted in the replacement fund itself.

**54010-Capital Equipment (New)**—This includes requests for new equipment over \$1,000 or more and having a useful life of three years or longer.

**54020-Capital Equipment (Software)**—This includes license and other nonrecurring software charges of at least \$1,000 and having a useful life of three years or longer.

**54030-Capital Equipment (Replacement)**—This includes requests for replacement equipment over \$1,000 or more and having a useful life of three years or longer.

## Classification of Accounts (continued)

**59200-Chargebacks to Construction Fund**—Direct labor and materials costs incurred to acquire rights-of-way, design, plan, and monitor construction projects budgeted in the Systems Services and Engineering Services departments are transferred to the capital projects fund to be included in the capitalized cost of self-constructed assets.





## Job Classification by Grade Order (effective July 1, 2020)

Grade	Annual Salary Range - July 1, 2019			Title
	Minimum	Mid-Point	Maximum	
5	\$ 27,758	\$ 35,774	\$ 43,789	Construction Worker I
				Technical Services Worker I
9	30,638	39,487	48,335	Construction Crew Worker II
				Technical Services Worker II
11	32,674	41,728	50,782	Construction Worker III
				Technical Services Worker III
				Office Assistant I – Human Resources
				Office Assistant I – System Services Division
12	35,873	43,963	52,053	Construction Operator I
				Dispatcher II
				Heavy Equipment Excavator I
				Office Assistant II
13	36,769	45,061	53,353	Technical Services Operator I
14	37,688	46,188	54,688	Electrician I
				Pump Station Technician I
15	38,631	47,343	56,055	Construction Administrative Assistant
				Construction Operator II
				Technical Services Operator II
15	38,631	47,343	56,055	Accounting Technician I
				Heavy Equipment Excavator II

## Job Classification by Grade Order (effective July 1, 2020) (continued)

Grade	Annual Salary Range - July 1, 2019			Title
	Minimum	Mid-Point	Maximum	
15	38,631	47,343	56,055	Purchasing Agent I
16	39,597	48,526	57,454	Accounting Technician II
				Construction Operator III
				Electrician II
				Maintenance Mechanic II
				System Coordinator III
				Technical Services Operator III
17	40,587	49,739	58,890	ROW Admin Assistant/Board Support
18	41,603	50,984	60,364	Heavy Equipment Excavator III
19	42,643	52,258	61,872	Construction Inspector I
				GIS Data Mapping Technician
				Grease Program Inspector
				Senior Electrician
				Senior Maintenance Mechanic
20	43,708	53,565	63,421	Environmental, Health & Safety Technician
				Fleet Mechanic III
				WWTP Office Manager
				WWTP Operator
21	44,799	54,904	65,008	First Responder
22	45,919	56,276	66,633	Construction Crew Leader
				Electrician IV/Specialist
				Engineering Technician II
				Planning & Development Technician
23	47,072	57,686	68,300	Budget Analyst I

## Job Classification by Grade Order (effective July 1, 2020) (continued)

Grade	Annual Salary Range - July 1, 2019			Title
	Minimum	Mid-Point	Maximum	
24	48,245	59,126	70,007	Construction Inspector III
				Lead Operator
25	49,453	60,605	71,757	Construction & Repair Supervisor
				Electrical Maintenance Crew Leader
				IT Technician II
				Mechanical Maintenance Crew Leader
				Night Supervisor
				Payroll/Benefits Manager
				Purchasing Supervisor
				Pump Station Maintenance Crew Leader
				Senior Crew Leader
				SSD Administrator
				SS Maintenance Supervisor
26	50,690	62,122	73,553	GIS Specialist
27	51,958	63,674	75,389	Maintenance Coordinator
28	53,255	65,266	77,276	HR Programs Manager
				Industrial Pretreatment Coordinator
				Lead Construction Inspector
				Right of Way Agent
29	54,585	66,896	79,207	Database Analyst
				Environmental, Health & Safety Manager
				GIS Analyst
				SCADA/PLC Technician
30	55,950	68,570	81,190	Design/Drafting Manager

## Job Classification by Grade Order (effective July 1, 2020) (continued)

Grade	Annual Salary Range - July 1, 2019			Title
	Minimum	Mid-Point	Maximum	
32	58,785	72,042	85,299	Senior Field Representative
34	61,760	75,688	89,616	Database Applications/Developer Engineer I
35	63,307	77,582	91,856	Manager of SS Construction
36	64,886	79,519	94,151	Accounting Manager Engineer II Facilities Maintenance Manager Field Operations Manager Fleet Maintenance Manager Maintenance Manager Right-of-Way Manager
38	68,176	83,548	98,920	GIS Manager IT Network Manager Planning & Development Manager
43	77,132	94,525	111,917	Operations Manager
45	81,039	99,312	117,584	Assistant Director of Engineering
47	85,141	104,339	129,789	Director of Construction Director of Finance Director of Human Resources Director of Information Technology Director of SS Maintenance
49	89,451	109,620	129,789	Director of Waste Treatment & Maintenance Facility

## Job Classification by Grade Order (effective July 1, 2020) (continued)

Grade	Annual Salary Range - July 1, 2019			Title
	Minimum	Mid-Point	Maximum	
53	98,734	120,999	143,263	Director of Engineering
		contract		General Manager
		Skill-Based		
	36,769	49,321	61,872	Facilities Maintenance Technician



## Staffing History (FTE's)

Division & Position	14-15	15-16	16-17	17-18	18-19	19-20	20-21
Management							
Division Heads:							
Director of Engineering	1	1	1	1	1	1	1
Director of Financial Services	1	1	1	1	1	1	1
Director of Human Resources	1	1	1	1	1	1	1
Director of Information Technology	1	1	1	1	1	1	1
Director of System Services – Construction	1	1	1	1	1	1	1
Director of System Services – Maintenance	1	1	1	1	1	1	1
Director of Water Reclamation Facility	1	1	1	1	1	1	1
Total Division Heads	7	7	7	7	7	7	7
Department of Office of the General Manager							
General Manager	1	1	1	1	1	1	1
Total General Manager	1	1	1	1	1	1	1
Office Support:							
Executive Secretary	1	1	1	0	0	0	0
Total Office Support	1	1	1	0	0	0	0
Department of Human Resources							
Floater	0	0	0	0	0	1	1
Public Relations Representative	1	1	1	1	1	1	1
HR Programs Manager	1	1	1	1	1	1	1
Payroll/Benefits Manager	1	1	1	1	1	1	1
Total Human Resources	3	3	3	3	3	4	4
Environmental, Health & Safety:							
EHS Administrative Assistant	1	1	1	1	1	1	1
Environmental, Health & Safety Manager	1	1	1	1	1	1	1
Total Environmental, Health & Safety	2	2	2	2	2	2	2

## Staffing History (FTE's) (continued)

Division & Position	14-15	15-16	16-17	17-18	18-19	19-20	20-21
Department of Information Technology							
Information Systems (IT):							
IT Technician I	1	1	1	1	1	1	1
IT Technician II	1	1	1	1	1	1	1
IT Network Manager	1	1	1	1	1	1	1
Total IT	3	3	3	3	3	3	3
Management Information Systems (MIS):							
Database Analyst	1	1	1	1	1	1	1
Database Administrator/Developer	1	1	1	1	1	1	1
Total MIS	2	2	2	2	2	2	2
Geographic Information Systems (GIS):							
Technical Services Data Manager	1	1	1	1	1	1	1
GIS Analyst	1	1	1	1	1	1	1
GIS Technician I	1	1	1	1	1	1	1
GIS Manager	1	1	1	1	1	1	1
Total GIS	4	4	4	4	4	4	4
Department of Financial Services							
Finance & Budget:							
Budget Analyst	1	1	1	1	1	1	1
Total Finance & Budget	1	1	1	1	1	1	1
Accounting/Investments/Cash Flow							
Accounting Technician I	2	2	2	1	1	1	1
Accounting Technician II	1	1	1	1	1	1	1
Accounting Manager	1	1	1	1	1	1	1
Total Acct., Investments & Cash Flow	4	4	4	3	3	3	3
Purchasing & Warehouse:							
Purchasing Agent I	1	1	1	1	1	1	1
Purchasing Agent II	1	1	1	1	1	0	0
Purchasing Supervisor	1	1	1	1	1	1	1
Total Purchasing & Warehouse	3	3	3	3	3	2	2

## Staffing History (FTE's) (continued)

Division & Position	14-15	15-16	16-17	17-18	18-19	19-20	20-21
Department of Engineering							
Office Support:							
Office Manager	1	1	0	0	0	0	0
Total Office Support	1	1	0	0	0	0	0
Engineers:							
Engineer I	2	2	2	2	2	2	1
Engineer II	1	1	1	1	1	1	1
Senior Engineer/Construction Manager	1	1	1	1	1	1	2
Total Engineers	4	4	4	4	4	4	4
Design and Drafting:							
Engineering Technician I	1	1	1	1	1	1	1
Engineering Technician II	1	1	1	1	1	1	1
Design and Drafting Manager	1	1	1	1	1	1	1
Total Design and Drafting	3	3	3	3	3	3	3
Right of Way:							
Administrative Assistant – Right of Way	1	1	1	1	1	1	1
Right of Way Agent	1	1	1	1	1	1	1
Right of Way Manager	1	1	1	1	1	1	1
Total Right of Way	3	3	3	3	3	3	3
Planning & Development							
Systems Coordinator III	2	2	2	2	2	2	2
Private Development Inspector	1	1	0	0	0	0	0
Private Development Project Manager	1	1	1	1	1	0	0
Assistant Manager of Planning & Development	0	0	0	0	0	1	1
Private Development Coordinator/Plan Review	1	1	1	1	1	1	1
Total Planning and Development	5	5	4	4	4	4	4
Construction Administration:							
Administrative Assistant – Construction	1	1	1	1	1	1	1
Construction Inspector I	0	0	0	0	1	1	1
Construction Inspector II	1	1	1	1	1	1	1
Construction Inspector III	2	2	2	2	2	2	2
Construction Inspector IV	1	1	1	1	1	1	1
Total Construction Administration	5	5	5	5	6	6	6



## Staffing History (FTE's) (continued)

Division & Position	14-15	15-16	16-17	17-18	18-19	19-20	20-21
Department of Water Reclamation Facility							
Plant Operations:							
Operator in Training	0	0	0	0	0	0	2
Lead Operator	2	2	2	2	3	3	4
Operations Manager	1	1	1	1	1	1	1
WWTP Office/Administrative Manager	0	0	1	1	1	1	1
WWTP Operator	8	8	8	8	8	8	8
Total Plant Operations	11	11	12	12	13	13	16
Industrial Waste:							
Industrial Waste Chemist	1	1	1	1	1	0	0
Pretreatment FOG Technician	0	0	0	0	0	1	1
Industrial Pretreatment Coordinator	1	1	1	1	1	1	1
Pump Station Maintenance Technician	1	1	1	1	4	4	4
Pump Station Maintenance Crew Leader	1	1	1	1	1	1	1
SCADA/PLC Technician	2	2	2	2	2	2	2
Field Operations Manager	1	1	1	1	1	1	1
Total Industrial Waste	7	7	7	7	10	10	10
Mechanical/Electrical Maintenance:							
Electrician II	1	1	1	1	0	0	0
Electrical Maintenance Crew Leader	1	1	1	1	1	1	1
Electrical Specialist	1	1	0	0	0	0	0
Instrumentation Specialist	1	1	1	1	0	0	0
Mechanic II	2	2	3	3	4	4	3
Mechanical Maintenance Crew Leader	1	1	1	1	1	1	1
Mechanical Specialist	1	1	1	1	0	0	0
Senior Electrician	2	2	2	2	2	2	2
Senior Mechanic	2	2	2	2	2	2	2
Electrical Maintenance Manager	1	1	1	1	1	1	1
Total Mechanical/Electrical Maintenance	13	13	13	13	11	11	10
Fleet Maintenance:							
Fleet Mechanic III	3	3	3	3	3	3	3
Fleet/Mechanical Maintenance Supervisor	1	1	1	1	1	1	1
Total Fleet Maintenance	4	4	4	4	4	4	4

## Staffing History (FTE's) (continued)

Division & Position	14-15	15-16	16-17	17-18	18-19	19-20	20-21
Department of Water Reclamation Facility							
Facilities Maintenance:							
Facility Maintenance Technician	5	5	5	5	5	5	5
Facilities Maintenance Manager	1	1	1	1	1	1	1
Total Facilities Maintenance	6	6	6	6	6	6	6
Department of System Services – Construction							
Construction:							
Construction Worker I	1	1	2	2	1	1	1
Construction Worker II	6	6	6	6	6	6	2
Construction Worker III	4	4	4	4	4	4	3
Construction Operator I	1	1	1	1	1	1	7
Construction Operator II	2	2	2	2	1	1	2
Construction Crew Leader	4	4	4	4	4	4	4
Construction & Repair Supervisor	2	2	2	2	1	1	1
Heavy Equipment Excavator I	5	5	5	5	2	2	2
Heavy Equipment Excavator II	1	1	1	1	4	5	3
Heavy Equipment Excavator III	0	0	0	0	1	1	1
Assistant Director of SS Construction	0	0	0	0	1	1	1
Total System Services Construction	26	26	27	27	26	27	27
Department of System Services – Maintenance							
Office Support:							
Dispatcher	1	1	1	1	1	1	1
Office Assistant II	2	2	2	2	2	2	2
SSD Administrator	1	1	1	1	1	1	1
Total Office Support	4	4	4	4	4	4	4
Maintenance:							
First Responder	2	2	2	2	2	2	2
Technical Services Worker I	2	2	2	2	0	0	0
Technical Services Worker II	4	4	4	5	6	6	6
Technical Services Worker III	2	2	2	6	6	7	7
Technical Services Operator I	1	1	1	1	1	1	1
Technical Services Operator II	3	3	3	2	2	2	2
Technical Services Operator III	7	7	7	5	5	5	5
Assistant Supervisor - SS Maintenance	2	2	2	2	2	2	2

## Staffing History (FTE's) (continued)

Division & Position	14-15	15-16	16-17	17-18	18-19	19-20	20-21
Department of System Services – Maintenance							
Maintenance:							
Collection System Maintenance Supervisor	2	2	2	2	2	2	2
Total System Services - Maintenance	25	25	25	25	27	27	27
Total:	148	148	148	148	149	151	152

## Budget Resolution

RESOLUTION ADOPTING FINAL BUDGET AND SEWER USE CHARGES  
FOR THE  
METROPOLITAN SEWERAGE DISTRICT  
OF BUNCOMBE COUNTY, NORTH CAROLINA  
FOR THE FISCAL YEAR July 1, 2020 THRU June 30, 2021

WHEREAS, the Board of Directors has reviewed the Operations and Maintenance, Bond, Reserves, Construction Expenditures of the District, and the sources of revenue and allocations (uses) of expenditures for the 2020-2021 fiscal year; and

NOW, THEREFORE, BE IT RESOLVED:

- 1 The following amounts are hereby appropriated in the Revenue Fund for the Operations and Maintenance of the District and for transfers to the Debt Service, General Fund, and Insurance Funds for the fiscal year beginning July 1, 2020 and ending June 30, 2021:

Operating and Maintenance Expenses	\$ 13,718,039
Transfer to Insurance Accounts	\$ 3,582,187
Transfer to Fleet & Heavy Equipment Fund	\$ 500,000
Transfer to Wastewater Treatment Plant Reserve	\$ 200,000
Transfer to Pump Station Maintenance	<u>\$ 50,000</u>
Subtotal O&M	\$ 18,050,226
Transfer to the General Fund	\$ 25,897,375
Transfer to Debt Service Fund	<u>\$ 9,837,382</u>
	<u><u>\$ 53,784,983</u></u>

It is estimated that the following revenues will be available in the Revenue Fund for the fiscal year beginning July 1, 2020 and ending June 30, 2021:

Domestic User Fees	\$ 32,234,286
Industrial User Fees	\$ 2,881,690
Billing and Collection Fees	\$ 934,101
Investment Interest	\$ 403,919
Reimbursement for Debt Service from COA	\$ 35,000
Rental Income	\$ 71,641
Appropriated from Net Position	<u>\$ 17,224,346</u>
	<u><u>\$ 53,784,983</u></u>

2. The following amounts are hereby appropriated in the General Fund for the transfers to the Construction Fund for the fiscal year beginning July 1, 2020 and ending June 30, 2021:

Transfer into Construction	\$ <u>28,000,000</u>
----------------------------	----------------------

It is estimated that the following revenues will be available in the General Fund for the fiscal year beginning July 1, 2020 and ending June 30, 2021:

Facility and Tap Fees	\$ 2,175,000
Investment Income	\$ 2,625
Transfer in from Revenue Fund	\$ 25,897,375
Contribution to Net Position	\$ <u>(75,000)</u>
	\$ <u>28,000,000</u>

3. The following amounts are hereby appropriated in the Construction Fund for Capital Improvement Plan expenditures for the fiscal year beginning July 1, 2020 and ending June 30, 2021.

Capital Improvements Projects	\$ <u>28,131,316</u>
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It is estimated that the following revenues will be available to the Construction Fund for the fiscal year beginning July 1, 2020 and ending June 30, 2021.

Investment Income	\$ 2,500
Transfer in from General Fund	\$ 28,000,000
Appropriated from Net Position	\$ <u>128,816</u>
	\$ <u>28,131,316</u>

4. The following amounts are presented as the financial plan of the Insurance Funds that are used to provide insurance services. Estimated operating expenditures for the fiscal year beginning July 1, 2020 and ending June 30, 2021 are:

Operating Expenditures	\$ <u>3,633,862</u>
------------------------	---------------------

It is estimated that the following revenues will be available in the Insurance Funds for the fiscal year beginning July 1, 2020 and ending June 30, 2021:

Transfer in from the Revenue Fund	\$ 3,582,187
Investment Income	\$ 12,500
Employee/Retirees Medical Contributions	\$ 389,048
Contribution to Net Position	\$ <u>(349,873)</u>
	\$ <u>3,633,862</u>

5. The following amounts are presented as the financial plan of the Fleet & Heavy Equipment Fund designated for capital equipment expenditures for the fiscal year beginning July 1, 2020 and ending June 30, 2021 estimated as follows:

Capital Equipment	\$ <u>896,000</u>
-------------------	-------------------

It is estimated that the following revenues will be available in the Fleet & Heavy Equipment Fund for the fiscal year beginning July 1, 2020 and ending June 30, 2021:

Transfer in from the Revenue Fund	\$ 500,000
Sale of Surplus Property	\$ 71,680
Investment Income	\$ 3,886
Appropriated from Net Position	\$ <u>320,434</u>
	\$ <u>896,000</u>

6. The following amounts are presented as the financial plan of the Wastewater Treatment Plant Replacement Fund designated for wastewater treatment plant capital expenditures for the fiscal year beginning July 1, 2020 and ending June 30, 2021 estimated as follows:

Capital Equipment	\$ <u>319,227</u>
-------------------	-------------------

It is estimated that the following revenues will be available in the Wastewater Treatment Plant Replacement Fund for the fiscal year beginning July 1, 2020 and ending June 30, 2021:

Transfer in from the Revenue Fund	\$ 200,000
Investment Income	\$ 1,024
Appropriated from Net Position	\$ <u>118,203</u>
	\$ <u>319,227</u>

7. The following amounts are presented as the financial plan in the Pump Station Replacement Fund designated for pump capital expenditures for the fiscal year beginning July 1, 2020 and ending June 30, 2021 estimated as follows:

Capital Equipment	\$ 65,000
Transfer in Capital Reserve	\$ <u>16,500</u>
	\$ <u>81,500</u>

It is estimated that the following revenues will be available in the Pump Station Replacement Fund for the fiscal year beginning July 1, 2020 and ending June 30, 2021:

Transfer in from the Revenue Fund	\$ 50,000
Investment Income	\$ 883
Appropriated from Net Position	\$ <u>30,617</u>
	\$ <u>81,500</u>

8. The following amounts are hereby appropriated in the Debt Service Fund for principal and interest payments for the fiscal year beginning July 1, 2020 and ending June 30, 2021:

Debt Service	\$	<u>9,837,382</u>
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It is estimated that the following revenues will be available in the Debt Service Fund for the fiscal year beginning July 1, 2020 and ending June 30, 2021:

Transfer in from the Revenue Fund	\$	9,837,382
Investment Income	\$	1,500
Contributions to Net Position	\$	<u>(1,500)</u>
	\$	<u>9,837,382</u>

9. That the Board of the Metropolitan Sewerage District does hereby approve an increase in the Budgets to the amount necessary to reflect any contributions to the Debt Service Reserve Fund or Capital Reserve Fund as determined by the Bond Trustee to be necessary to comply with covenants in the Bond Order.
10. The General Manager is hereby authorized to transfer appropriations as contained herein under the following conditions:
- a. He may transfer amounts without limitation between departments in a fund.  
He may transfer any amounts within Debt Service and Reserve Funds designated as excess by the
  - b. Trustee into another fund.  
He may transfer up to 10% of Insurance Fund reserves to meet current year expenditures in excess
  - c. of budget.
11. That the attached Schedule of Fees and Charges be adopted as effective July 1, 2020.
12. That this resolution shall be entered in the minutes of the District and within five (5) days after its adoption, copies thereof are ordered to be filed with the Finance and Budget Officer and Secretary of the Board as required by G.S. 159-13 (d).

Adopted this 10th day of June 2020

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M. Jerry VeHaun, Chairman  
Metropolitan Sewerage District of  
Buncombe County, North Carolina

Attest:

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Jackie W. Bryson  
Secretary/Treasurer

## Schedule of Rates, Fees, and Charges – FY2021

Effective July 1, 2020

	ADOPTED FY20 RATE	PROPOSED FY21 RATE
<b>Collection Treatment Charge</b>		
Residential & Commercial Volume Charges (per CCF) Inside	\$ 4.73	\$ 4.73
Industrial Volume Charges (per CCF) Inside	\$ 4.73	\$ 4.73
Industrial Surcharge for BOD (per lb., BOD >250 mg/l) Inside	\$ 0.300	\$ 0.300
Industrial Surcharge for TSS (per lb., TSS >250 mg/l) Inside	\$ 0.250	\$ 0.250
Residential & Commercial Volume Charges (per CCF) Outside	\$ 4.74	\$ 4.74
Industrial Volume Charges (per CCF) Outside	\$ 4.74	\$ 4.74
Industrial Surcharge for BOD (per lb., BOD >250 mg/l) Outside	\$ 0.300	\$ 0.300
Industrial Surcharge for TSS (per lb., TSS >250 mg/l) Outside	\$ 0.250	\$ 0.250
<b>Base Meter/Maintenance Charge &amp; Billing Fee</b>		
5/8"	\$ 7.29	\$ 7.29
3/4"	\$ 10.61	\$ 10.61
1"	\$ 18.83	\$ 18.83
1 1/2"	\$ 43.09	\$ 43.09
2"	\$ 76.20	\$ 76.20
3"	\$ 168.99	\$ 168.99
4"	\$ 301.57	\$ 301.57
6"	\$ 679.34	\$ 679.34
8"	\$ 1,206.24	\$ 1,206.24
10"	\$ 1,888.91	\$ 1,888.91
Billing Fee (per bill)	\$ 2.45	\$ 2.45
<b>Sewer System Development Fees</b>		
This impact fee is for allotted capacity in the treatment and transmission system. A differential fee will be charged for increases to an existing meter size.		
<i>Residential</i>		
Per Unit	\$ 2,836.00	\$ 2,836.00
Multifamily Unit	\$ 1,900.00	\$ 1,900.00
Affordable Housing	\$ 670.00	\$ 670.00



## Schedule of Rates, Fees, and Charges – FY2021

	ADOPTED FY20 RATE	PROPOSED FY21 RATE
<b>Sewer System Development Fees</b> (continued)		
<i>Nonresidential</i>		
5/8"	\$ 2,836.00	\$ 2,836.00
3/4"	\$ 4,254.00	\$ 4,254.00
1"	\$ 7,090.00	\$ 7,090.00
1 1/2"	\$ 14,180.00	\$ 14,180.00
2"	\$ 22,688.00	\$ 22,688.00
3"	\$ 45,376.00	\$ 45,376.00
4"	\$ 70,900.00	\$ 70,900.00
6"	\$ 141,800.00	\$ 141,800.00
8"	\$ 226,800.00	\$ 226,800.00
10"	\$ 595,560.00	\$ 595,560.00
12"	\$ 751,540.00	\$ 751,540.00
<b>Sewer Connection Fees**</b>		
This fee is to provide new or re-establish existing service connections to the MSD system.		
Sewer Connection by MSD	\$ 1,300.00	\$ 1,300.00
Pavement Disturbance and Boring Fee	\$ 2,300.00	\$ 2,300.00
Inspection Fee for Developer (or Utility Contractor) Installed Sewer Connection	\$ 140.00	\$ 140.00
<p>**The Sewer Connection Fee will apply to all new construction, as well as existing structures which have been demolished/rebuilt and sewer service is reinstated under new property ownership. MSD reserves the right to require that a licensed utility contractor install any sewer connection/service line. Sewer service lines within public rights-of-way between 75 and 300 feet shall be constructed by a licensed utility contractor to MSD Standards. All work will be subject to MSD inspection.</p>		
<b>Manhole Installation/Replacement</b>		
Cost per foot	\$ 250.00	\$ 250.00
Pavement replacement (if required)	\$ 1,800.00	\$ 1,800.00

## Schedule of Rates, Fees, and Charges – FY2021

	ADOPTED FY20 RATE	PROPOSED FY21 RATE
<b>Other Fees</b>		
Allocation Fee	\$ 170.00	\$ 170.00
Non-Discharge Permit	\$ 200.00	\$ 200.00
Plan Review Fee	\$ 450.00	\$ 450.00
Plan re-review Fee	\$ 350.00	\$ 350.00
Pump Station Acceptance Fee	Note 1	Note 1
Note 1--See policy for details of computation of O&M and equipment replacement costs for upcoming 20 years; 50% discount for affordable housing		
<b>Bulk Charges</b>		
Volume Charge for Septic Haulers (per 1,000 Gal.)	\$ 45.00	\$ 45.00
Biochemical Oxygen Demand >250 mg/l (per lb.)	\$ 0.300	\$ 0.300
Total Suspended Solids >250 mg/l (per lb.)	\$ 0.250	\$ 0.250
<b>Returned Check Charge</b>		
Returned Check (per event)	\$ 25.00	\$ 25.00
Dishonored Draft (per event)	\$ 25.00	\$ 25.00
<b>Copy/Printing Fees/Miscellaneous (each)</b>		
8x11 first print of standard GIS inquiry	\$ 1.00	\$ 1.00
8x14 first print of standard GIS inquiry	\$ 1.00	\$ 1.00
11x17 first print of standard GIS inquiry	\$ 2.00	\$ 2.00
24x36 first print of standard GIS inquiry	\$ 7.00	\$ 7.00
34x44 first print of standard GIS inquiry	\$ 12.00	\$ 12.00
36x48 first print of standard GIS inquiry	\$ 14.00	\$ 14.00
8x11 or 8x14 copies after first print	\$ 0.11	\$ 0.11
11x17 copies after first print	\$ 0.20	\$ 0.20
24x36 copies after first print	\$ 0.94	\$ 0.94
34x44 copies after first print	\$ 1.76	\$ 1.76
36x48 copies after first print	\$ 2.03	\$ 2.03
Foam Core mounting per sq. foot	\$ 3.00	\$ 3.00
Data CD	\$ 30.00	\$ 30.00
Shipping for CD	\$ 5.00	\$ 5.00
Permit Decals for Septic Haulers	\$ 50.00	\$ 50.00

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# Glossary



## Glossary of Terms

**Accrual Basis of Accounting**—Method of accounting where revenues are recognized as soon as they are earned and expenses as soon as the liability is incurred. Used most often with business-type governmental funds.

**Actuary**—A professional trained in mathematics, statistics and economic techniques that allow them to put a financial value on future events. The District retains a consulting actuarial firm to perform the regular annual actuarial valuations of the post retirement plan.

**Actuarial Report**—A report performed annually by the actuary to examine whether the contributions made to a post-retirement plan is adequate.

**Adopted Budget**—The budget approved by District Board of Directors and enacted via a budget resolution, on or before June 15 of each year.

**AMSA (American Metropolitan Sewerage Association)**—Nationwide organization established to help improve operations.

**Annual Budget**—The District's adopted budget for a fiscal year.

**Basis of Accounting**—The criteria governing the timing of the recognition of financial transactions and events. There are three major methods of accounting—cash, accrual, and modified accrual.

**Billing Fee**—Charge assessed by member agencies that collect sewer user fees from ratepayers to recover the administrative cost of collection.

## Glossary of Terms (continued)

**BOD (Biochemical Oxygen Demand)**—A measure of the amount of oxygen used up in the anaerobic decomposition of organic matter. The BOD test uses the oxygen from air dissolved in water and reflects treatability or stage of decomposition. It gives a direct measurement of the strength of wastewater, usually expressed in mg/l (milligrams per liter).

**Bond**—A written promise to pay a specific sum of money (the principal) at a date or dates in the future (the maturity) together with periodic interest at a specified rate.

**Bond Rating**—Rating for bonds to be issued that primarily reflects the ability of the issuer to repay the bonds. Better bond ratings result in lower interest rates for the bonds issued. Current bond rates for the District are Aaa by Moody's, AA+ by Standard & Poor's, and Fitch Ratings.

**Budget**—A plan of financial operation comprised of an estimate of proposed expenditures for a fiscal year and the proposed means of financing those expenditures (revenue estimates).

**Budget Calendar**—The schedule of key dates or milestones, which the District follows in the preparation and adoption of the budget.

**Budget Document**—The official written statement prepared by the District's Director of Finance, which presents the proposed budget to the District Board of Directors.

**Budget Resolution**—The official statement by the District Board of Directors establishing the legal authority for the District Budget administrative staff to obligate and expend funds.

**Budget Transmittal**—A general discussion of the proposed budget presented to the Board by the General Manager and the Director of Finance as a part of the budget document. The budget message explains principal budget issues against the background of financial experience in recent years and presents recommendations made by the General Manager.

## Glossary of Terms (continued)

**Capital Budget**—The capital budget is responsible for all infrastructure projects in excess of the \$15,000 infrastructure capitalization threshold. Projects include replacing and rehabbing structurally defective sewer lines, handling wet-weather flow conditions, improving the performance at the wastewater treatment plant, and preparing the system to handle expected future wastewater flows over the upcoming decade. A capital budget appropriation is limited to the cost of a project and may be spent over a long period until the project is completed.

**Capital Expenditure**—An amount paid out that creates a benefit in more than one year, usually costs that are incurred in the acquisition or improvement of real or personal property. Capital expenditure includes both the cost of the asset itself as well as expenditures necessary to put it in place. Capital expenditure for equipment, for example, means the net invoice price of the equipment including the cost of any modifications, attachments and accessories or auxiliary apparatus necessary to make it usable for the purposes for which it is acquired. Ancillary charges such as taxes, duty, and protective in transit insurance, freight, and installation are also included in the total purchase price.

**Capital Improvement Program (CIP)**—Projects established to account for the cost of capital improvements. Typically, the District's capital projects include a purchase of land and/or the construction or rehabilitation of infrastructure such as major interceptors and pump stations as well as major renovations and additions to the hydroelectric and wastewater treatment plant facilities.

**Capital Reserve Fund**—The Metropolitan Sewerage District of Buncombe County Capital Reserve Fund, a special fund created by the provisions the District's Bond Order established to provide funding for unusual and extraordinary expenditures and debt service in the event of insufficient revenues.

**Cash Basis of Accounting**—Under cash basis, all transactions is recognized when cash is received or spent. This method is not acceptable for use by governmental entities.

**Collector Sewers**—That portion of the collection and transportation system, which gathers wastewater from individual buildings and transports it through a network of sanitary sewers to interceptor sewers.

## Glossary of Terms (continued)

**Coverage Ratio**—The excess of current revenues over current expenses divided by required debt service expressed as a ratio. This ratio is used to gauge the adequacy of utility rates to provide cash required for current operations and debt payments.

**Current Expenses**—The Districts' reasonable and necessary annual expenses of maintenance, repair, and operation of the Sewerage System.

**Debt Service**—Payment of interest and repayment of principal on bonded indebtedness.

**Department**—A management unit.

**District**—The Metropolitan Sewerage District of Buncombe County, North Carolina, a public body, and body politic and corporate in the County of Buncombe, State of North Carolina exercising public and essential governmental functions to provide for the preservation and promotion of the public health and welfare.

**District Board**—The sewerage district board established under the provisions of the Enabling Act as the governing body of the District.

**Division**—A term used to describe a cost center with distinct objectives and activities within a Department.

**Domestic User**—Users whose sewer charges are based upon flow and meter size, predominately residences and small businesses.

**Enabling Act**—The North Carolina Metropolitan Sewerage Districts Act (Article 5, Chapter 162A, General Statutes of North Carolina, 1982 Replacement Volume, as amended) and, pursuant to the provisions thereof, The State and Local Government Revenue Bond Act (Article 5, Chapter 159, General Statutes of North Carolina, 1982 Replacement)

**Encumbrance**—Commitment of money to meet an obligation that is expected to be incurred to pay for goods or services received by the District.



## Glossary of Terms (continued)

**Encumbrance**—Commitment of money to meet an obligation that is expected to be incurred to pay for goods or services received by the District.

**Enterprise Fund**—A type of proprietary fund set up to account for the financing of services to the general public where all or most of the operating expenses involved are recovered in the form of user charges.

**Environmental Protection Agency (EPA)**—The federal agency responsible for regulating water quality and the Federal Clean Water Act.

**Expansion**—Expenditures to enlarge capacity of facilities or extend system to new areas.

**Expenditures**—The cost of goods received or services rendered whether payment for such goods and services has been made or not.

**Federal Energy Regulatory Commission (FERC)**—An independent government agency, officially organized as part of the Department of Energy, and is responsible for regulating the interstate transmission of natural gas, oil, and electricity.

**Fiscal Year**—The calendar on which the District operates for financial and budget purposes. The District's fiscal year begins on July 1 and ends on June 30. The current fiscal year, 2020, begins on July 1, 2019, and will continue until June 30, 2020.

**Flow**—Volume of domestic or industrial wastewater.

**Full-time equivalent (FTE)**—A method of calculating employment and enrollment to adjust for part-time or part-year participation. One FTE is equivalent to one full-time employee who works 40 per week for 52 weeks, for a total of 2,080 work hours.

## Glossary of Terms (continued)

**Fund**—A fiscal entity with a self-balancing set of accounts used to account for an activity(s) with common objectives.

**Fund Equity**—The excess of revenues over expenditures accumulated from prior years within a fund that are present in the form of cash at the beginning of the fiscal year.

**GAAP (Generally Accepted Accounting Principles)**—These are standards for measuring and reporting financial data promulgated by an authoritative body.

**GIS (Geographical Information System)**—An organized collection of computer hardware, software, geographic data, and personnel designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced information.

**Goal**—The underlying reason(s) for the provision of essential District services.

**Improvements**—Betterments or upgrades to increase value, quality, or usefulness.

**Industrial User**—Any user of the Sewerage System who discharges industrial waste (the liquid and waterborne pollutants resulting from processes or operations employed in industrial establishments). Charges based on flow, BOD and TSS.

**I/I (Inflow/Infiltration)**—Water entering the collection system from rain, water table, streams, and other non-user sources, unnecessarily driving up cost of treatment and likelihood of SSOs.

**Influent**—The wastewater entering the reclamation facility.

**Infrastructure Rehabilitation System (IRS)**—A method of lining existing deteriorating sewer pipes in the ground to save the cost of having to dig them up and replace them. This procedure is performed by in-house staff, at a lower cost than hiring contractors.

## Glossary of Terms (continued)

**Interceptor**—A sewer that carries sanitary waste that is built by the District. These are large sewers that collect wastewater from local trunk sewers and convey it to the water reclamation facility.

**Laterals**—Privately owned building sewer lines and smaller collection system lines (4-6 inch in diameter) which connect to larger public main sewer lines.

**Lift Station**—A facility in a sewer system consisting of a receiving chamber, pumping equipment, and associated drive and control devices which collect and lift wastewater to a higher elevation when the continuance of the sewer at reasonable slopes would involve excessive trench depths; or that collects and raises wastewater through the use of force mains from areas too low to drain into available sewers.

**Line-item Budget**—A budget detailing categories of expenditure for goods and services that the District intends to purchase during the fiscal year.

**Local Government Budget & Fiscal Control Act**—The legal guidelines of the State of North Carolina, which govern budgetary and fiscal affairs of local governments, found in Chapter 159 of the North Carolina General Statutes.

**Local Government Commission (LGC)**—The nine-member body established as a division of the Department of the State Treasurer to serve the citizens of North Carolina by issuing debt for units of local government and public authorities, monitoring the repayment of their debt, and overseeing the fiscal activities and financial soundness of all local governments and public authorities.

**Modified Accrual Basis of Accounting**—Under modified accrual, revenue is recognized when earned provided it is collected in time to pay liabilities of the current period. Similarly, liabilities are recognized as expenditures when payment is due because it is only at that time that they normally are liquidated with expendable available financial resources.

**Net Assets**—The difference of total assets and total liabilities for any period.

**Net Revenues**—The excess of revenues over current expenses for any period.

## Glossary of Terms (continued)

**NPDES (National Pollutant Discharge Elimination System)**—Permit to operate wastewater treatment issued by the EPA.

**Objective**—A measurable statement of the actual service(s), which the District expects to achieve.

**Operations and Maintenance (O&M) Budget**—The annual budget for activities related to controlling, operating, managing, and maintaining the sewerage system. Operating costs include such expenses as personal services (salaries and benefits for classified employees and hourly workers), contractual services, and supplies.

**Order**—The Amended and Restated 1999 Bond Order. To request a copy, contact the Director of Finance at the address on the cover of this document.

**OSHA (Occupational Safety and Health Administration)**—Federal agency responsible for issuing and monitoring standards to minimize workplace deaths, injuries, and illnesses.

**PER**—Preliminary Engineering Report.

**PLC (Programmable Logic Controller)**—Instrumentation hardware used for automated control of equipment.

**Preliminary Budget**—Budget that Board approves prior to adoption of final budget.

**Pretreatment**—Any process used by local industries to reduce pollution load before wastewater is introduced into a main sewer system or delivered to a reclamation facility.

**Proprietary Fund**—A type of fund that accounts for governmental operations that are financed and operated in a manner similar to private business enterprises. It is financed primarily from charges to users of services provided.

## Glossary of Terms (continued)

**Pumping Station**—A relatively large sewage pumping installation designed not only to lift sewage to a higher elevation but also to convey it through force mains to gravity flow points located relatively long distances from the pumping station.

**Recommended Budget**—The budget proposed by the General Manager and Director of Finance to District Board for adoption.

**Rehabilitation**—Expenditures for repair due to damage, wear, or decay to restore facilities to normal or optimum condition.

**Replacements**—Expenditures for components replacing existing units.

**Revenue** (for purposes of Bond Order coverage)—All payments, proceeds, fees, charges, and all other income derived by or for the account of the District from its ownership and operation of the Sewerage System, excluding all acreage, connection, front-footage, tap-on, assessment and similar fees and charges and grants derived by the District in connection with the provision of or payment for capital improvements constituting a part of the Sewerage System and excluding the proceeds of any taxes levied by the District.

**Rotating Biological Contactor (RBC)**—Large rotating plates housing bacteria, which consume dissolved solids in wastewater.

**Satellite System**—Any sewer system maintained by another entity without a state-issued discharge permit, but which is connected to an MSD line for wastewater treatment and discharge by MSD. The State requires reporting for all satellite systems with a flow over 200,000 gallons per day. MSD has one reportable satellite system.

**Sewage**—Sewage refers to the wastewater flow from residential, commercial, and industrial establishments, which flows through the pipes to a reclamation facility.

**Sewerage**—Sewerage refers to the system of sewers and physical facilities employed to transport, treat, and discharge sewage.

## Glossary of Terms (continued)

**SCADA (Supervisory control and data acquisition)**—A computer system for gathering and analyzing real time data. SCADA systems are used to monitor and control a plant or equipment in industries such as telecommunications, water and waste control, energy, oil and gas refining and transportation.

**Sludge**—The accumulated settled solids deposited from sewage or industrial wastes, raw or treated, in tanks and basins, and containing more or less water forming a semi-liquid mass.

**SS (Suspended Solids)**—Solid matter that either floats on the surface of or is suspended in wastewater and which is removable by laboratory filtration.

**SSO (Sanitary System Overflow)**—Untreated wastewater escapes from the collection system.

**Treatment System**—Wastewater Treatment Plant of the District.

**User Charge**—Fees levied upon residential, commercial, and industrial users of a wastewater treatment system based upon the volume and characteristics of the waste.

**Water Reclamation Facility**—Wastewater Treatment Plant of the District.

**WNCRAQA Western North Carolina Regional Air Quality Agency**—A self-supporting, local air quality regulatory agency formed by an interlocal agreement between Buncombe County and the City of Asheville.