

Metropolitan Sewerage District of
Buncombe County, North Carolina

2020



Budget Document

2019-2020 Budget Document

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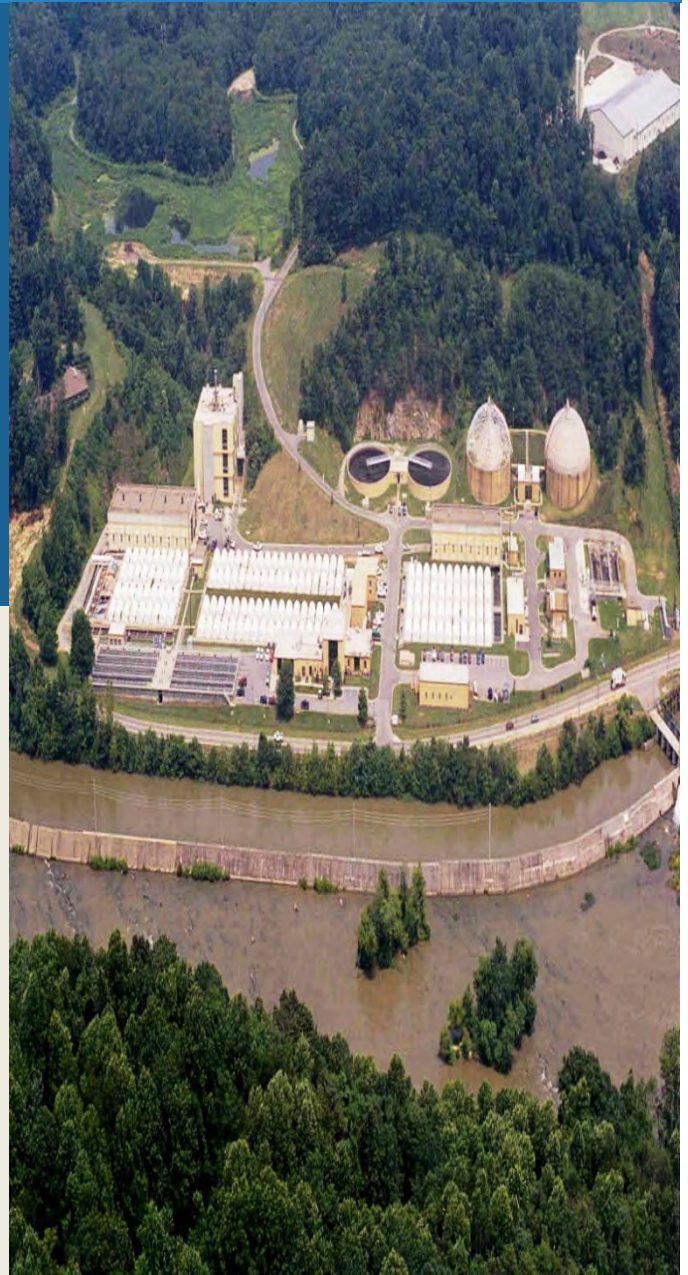
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Certificate of Achievement

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, 2018. This is the twentieth-second 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 FY2020 budget continues to conform to the program requirements, and we are submitting it to the GFOA to determine its eligibility for another award.



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Introduction



METROPOLITAN SEWERAGE DISTRICT

OF BUNCOMBE COUNTY, NORTH CAROLINA



June 12, 2019

Members of the Board
Metropolitan Sewerage District of Buncombe County, North Carolina
W. H. Mull Building
2028 Riverside Drive
Asheville, North Carolina 28804

Subject: FY20 Budget and Proposed Sewer Rates

Dear Members of the Board,

We respectfully present the FY20 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, 2019, the Personnel Committee, which met on April 30, 2019, and the Finance Committee, which met on May 2, 2019.

We have developed the FY20 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 FY19, the District's domestic and industrial revenue are expected to meet budgeted projections. The District continues to achieve growth in the number of residential customers.

By effectively controlling the increase in operating expenditures and strategically planning the timing of CIP projects, the District has been able to limit the proposed rate increase to 2.5% for the upcoming year. Additionally, the District's

long-range business plan incorporates these changes and projects that future rate increases will be between approximately 2.5% to 2.75% 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 FY20 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 FY17, the District began 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 and is in the punch list phase.

Operating Budget

The proposed \$17.5 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 2.5% salary adjustment**—CPI increased 1.9% for the last twelve-month period; Division Directors in conjunction with Employee Advisory Committee have requested a cost of living increase to keep pace with industry salary increases as well as to encourage retention of valued employees. The Personnel Committee has recommended a wage increase, which has an approximate \$283,000 net impact on current year expenditures.

- **A 15.5% 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 \$112,000 impact on current year expenditures.
 - **A 6.5% increase in funding for Self-Insured Medical Plan**—During FY16, staff worked with its consultant and initiated a top to bottom review of our medical insurance plan. The effort was to insure 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 \$142,000 impact on current year expenditures.
 - **Funding for Post-Employment Health Benefit**—Starting in FY09, GASB 45/75 required recognition of cost for Post-Employment Health Benefits. An actuarial study was done in the current year, which stated that FY20 funding should be approximately \$283,000. Current funding has been implemented into the proposed FY20 budget, in addition to the current business plan, and represents 1.6% of total operations.
-  **Materials, Supplies, and Service expenditures increased 1.9% 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 \$125,000 impact on current 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 FY20 is \$29.9 million, which is comprised of an estimated \$28.2 million in construction, \$736,000 of reimbursement, and \$1 million in contingency. The total 10-year CIP budget is \$332.4 million.

A detailed list of individual projects and planned expenditures by year was presented at the April 23, 2019 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, 2019, the District will have \$105.6 million in outstanding revenue bond debt, with total debt service of \$9.4 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 \$226.4 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 FY20 include the Christian Creek Interceptor with 3,668 linear feet \$1,950,000, South French Broad Lining Project with 3,976 linear feet \$833,000, Weaverville Force Main at Plant with 2,370 linear feet \$2,430,000, Walnut Street at Rankin Avenue with 2,495 linear feet \$1,341,000. In FY20, Carrier Bridge Pump Station Replacement is scheduled to cost \$1.6 million and Plant High Rate Primary Treatment are scheduled to cost \$9.2 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 FY15, 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 and in the close-out phase of construction.
- **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. Design began in FY17 and construction began in January 2019 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.

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 2.5% increase in domestic sewer rates and meter fees for FY20, including a previously approved plan to achieve flow rate parity between industrial and domestic users. This amount is in line with past increases.

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 and Dental Plan

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 FY20 are shown below:

	FY15	FY16	FY17	FY18	FY19	FY20
Rate Increase %	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Meter, Maintenance & Billing Fees	\$8.73	\$8.90	\$9.08	\$9.30	\$9.51	\$9.74
Flow Rate (per ccf)	\$4.18	\$4.28	\$4.39	\$4.50	\$4.61	\$4.73
Avg. Monthly Bill (5ccf)	\$28.49	\$29.15	\$29.88	\$30.62	\$31.36	\$32.17

Distinguished Budget Award

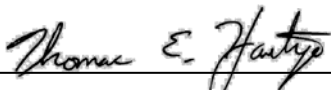
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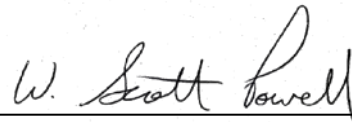
In Closing

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, Jim Hemphill/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	Fairview Sanitary Sewer District	Beaverdam Water & Sewer District
Town of Montreat	Skyland Sanitary Sewer District	Crescent Hill Sanitary Sewer District
Town of Biltmore Forest	Busbee Sanitary Sewer District	Enka-Candler Water & Sewer District
Town of Black Mountain	Swannanoa Water & Sewer District	Venable Sanitary District
Town of Weaverville	Caney Valley Sanitary Sewer District	
Town of Woodfin	Woodfin Sanitary 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



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, and 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

About MSD, City of Asheville & Buncombe County

Employment and Major Industries

business. Downtown redevelopment efforts by the City of Asheville have also provided additional office, retail shop, and parking space.

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.

About MSD, City of Asheville & Buncombe County

Education

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 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.
- ✱ **Operation & Maintenance Fund**—Provides detail of departmental expenditure budgets including underlying goals and objectives, as well as accomplishments and performance measures.

Financial Plan (continued)

Guide to the Budget Document (continued)

- ✿ **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 55,000 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 1,027 miles of collector sewers, 30,000 manholes, and 30 pump stations. The District is responsible for current operation and maintenance of this infrastructure, as well as for planning for future operations and capacity.

Financial Plan (continued)

Mission Statement and Goals

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.

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)

Financial Plan (continued)

Mission Statement and Goals (continued)

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.

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

Financial Plan (continued)

Mission Statement and Goals (continued)

“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.

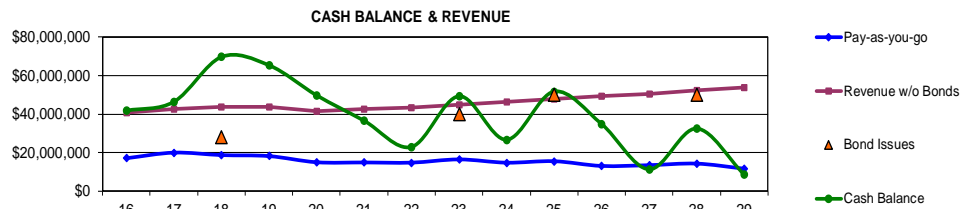
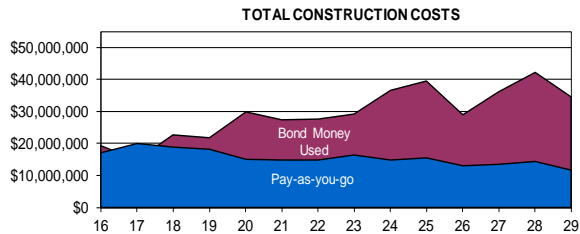
Using consumption data projected from the recent historical population growth statistics within the Asheville-Buncombe County area, the District anticipates annual rate increases of 2.5% for the next ten years. Construction costs are fairly level reflecting the District's Master Plan to consistently rehabilitate approximately 50,000 linear feet of pipe per year. The CIP expenditure forecast for FY18 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

Business Plan FY20	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.50%	2.50%	2.75%	2.75%	2.75%	2.75%	2.75%	Sewer Rate Increase
	\$29.15	\$29.88	\$30.62	\$31.36	\$32.17	\$32.97	\$33.80	\$34.64	\$35.51	\$36.49	\$37.49	\$38.52	\$39.58	\$40.67	Average Monthly Bill
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Assumptions
July 1- Available for Construction	44,585,099	41,819,146	46,455,838	69,792,374	65,459,390	49,825,911	36,601,452	22,955,916	49,354,762	26,666,485	51,773,588	34,892,240	11,280,151	32,504,757	Minimum of 365 Days Cash on Hands
REVENUE:															Consumption and Account Growth
Domestic Users	29,581,170	30,842,462	31,935,658	32,531,584	33,623,113	34,732,618	35,860,421	37,006,848	38,233,303	39,557,512	41,241,300	42,674,046	44,194,128	45,740,039	
Industrial Users (No growth)	3,344,074	3,909,925	4,159,767	3,745,625	3,464,402	3,544,137	3,625,866	3,709,637	3,795,503	3,892,317	3,716,793	3,819,005	3,924,028	4,031,939	
Billing and Collections (User Fee)	754,317	768,833	795,574	811,883	832,994	861,327	887,167	913,782	941,195	969,431	998,514	1,028,470	1,059,324	1,091,104	
Tap Fees	526,415	571,126	604,047	500,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	
Facility Fees	5,798,181	6,405,971	4,752,960	4,500,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	
Interest & Non-operating Revenues	207,246	306,110	885,718	1,500,000	1,296,960	972,308	670,020	813,495	950,266	980,501	1,083,323	692,586	656,774	617,036	
City of Asheville (annex.-Enka)	37,146	35,834	34,522	35,000	35,000	35,000	35,000	35,000	35,000	0	0	0	0	0	
Rental Income	78,925	71,399	81,826	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	
Transfer from Reserves (to / from)	430,058	(214,395)	298,619	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous	170,897	138,469	171,097	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	
Total Revenues	40,928,429	42,835,734	43,719,788	43,835,733	41,639,110	42,532,031	43,465,115	44,865,404	46,341,908	47,786,402	49,426,571	50,600,748	52,220,895	53,866,759	Bond Issues figured at: 4.0% yield FY23 4.5% yield FY25 5.0% yield FY28
State and Federal (EPA) Grants															
Revenue Bonds/Stimulus			28,003,632					40,000,000		50,000,000			50,000,000		
Total Funds Available	85,513,528	84,654,881	118,179,258	113,628,107	107,098,500	92,357,942	80,066,567	107,821,320	95,696,670	124,452,887	101,200,160	85,492,988	113,501,046	86,371,516	
EXPENSES:															3% inflation in O & M, Replacement Funds and Engineering Force Account
Operations & Maintenance	14,804,769	14,874,149	15,538,788	16,163,063	16,793,404	17,793,395	18,828,983	19,475,331	20,161,257	20,875,778	21,620,299	22,396,257	23,205,244	23,948,859	
Replacement Funds (WRF & Fleet)	625,000	625,000	660,000	730,000	750,000	830,000	830,000	860,000	865,000	865,000	865,000	865,000	865,000	865,000	ENR 10-year Construction Index @ 2.90%
Debt Service	9,003,519	7,918,557	9,423,689	9,448,115	9,834,367	9,837,382	9,823,943	8,899,361	11,394,314	11,366,407	14,737,511	14,731,468	14,730,209	18,269,556	
CIP (including Bond Projects)	19,261,094	14,781,337	22,764,407	21,827,539	29,894,818	27,295,713	27,627,726	29,231,865	36,609,614	39,572,114	29,085,110	36,220,112	42,195,835	34,657,129	General Sewer Rehab to cover approx. 45,000 lineal ft / year
Total Expenses	43,694,382	38,199,043	48,386,884	48,168,717	57,272,589	55,756,490	57,110,652	58,466,557	69,030,185	72,679,299	66,307,920	74,212,837	80,996,288	77,740,544	
Pay-as-you-go (Current Revenue only)	17,120,141	20,043,028	18,757,311	18,224,555	15,011,339	14,901,254	14,812,190	16,490,711	14,786,337	15,544,217	13,068,762	13,473,023	14,285,441	11,648,344	
Debt Coverage (User Fees only)	2.1	2.6	2.3	2.2	2.2	2.2	2.2	2.5	2.0	2.1	1.7	1.7	1.8	1.5	
Debt Coverage with Total Revenue	2.9	3.5	3.0	2.9	2.5	2.5	2.5	2.8	2.3	2.4	1.9	1.9	2.0	1.6	
April 4, 2019															No growth in Industries - Rate Parity for Flow in 2020
10-Year Capital Improvement Program															
Active Plan CIP	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
Interceptor/Wet Weather Rehabilitation	618,050	760,970	1,726,500	1,366,293	5,514,370	3,753,278	746,748	2,113,722	18,902,492	23,191,399	12,939,537	9,387,533	50,907	1,606,294	
General Sewer Rehabilitation	9,104,792	8,859,631	13,213,448	10,377,703	8,085,700	10,618,946	12,918,178	12,632,866	7,770,707	9,847,432	9,444,616	10,797,557	15,611,101	13,530,041	
Private Sewer Rehabilitation	2,000	646,000	51,200	0	6,500	84,275	294,834	20,700	2,179,841	0	0	0	0	0	
Treatment Plant / Pump Stations	7,181,959	1,868,250	5,291,691	7,112,321	11,756,250	9,874,284	10,628,646	11,348,726	4,561,936	3,193,324	3,285,930	12,542,771	22,962,227	15,867,633	
Engineering Force Account	2,254,293	2,546,486	2,481,568	2,705,222	2,795,998	2,864,930	2,939,320	3,015,851	3,094,638	3,239,959	3,315,027	3,392,251	3,471,600	3,553,161	
Reimbursements	100,000	100,000	0	266,000	736,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	
Contingency	0	0	0	0	1,000,000										
Capital Improvement Program Totals	19,261,094	14,781,337	22,764,407	21,827,539	29,894,818	27,295,713	27,627,726	29,231,865	36,609,614	39,572,114	29,085,110	36,220,112	42,195,835	34,657,129	





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

Fiscal Policies (continued)

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.
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.

Fiscal Policies (continued)

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.

Budget Administration

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.

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.

Budget Process (continued)

Budget Administration (continued)

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

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.	CIP Committee Meeting
		<ul style="list-style-type: none"> Update of Ten-Year Capital Improvement Program
		<ul style="list-style-type: none"> Update Construction Program Financing
		<ul style="list-style-type: none"> 2019-2020 Construction Fund Budget
April 30	9:00 a.m.	Personnel Committee Meeting
		<ul style="list-style-type: none"> Cost of Living & Merit Pay
		<ul style="list-style-type: none"> Benefit Allocations
May 2	9:00 a.m.	Finance Committee Meeting
		<ul style="list-style-type: none"> Nine Month Revenue/Expenditure Report
		<ul style="list-style-type: none"> Self-Funded Medical & Dental Program
		<ul style="list-style-type: none"> Proposed FY20 Construction Fund Budget
		<ul style="list-style-type: none"> Proposed FY20 Operating Budget & Sewer Rates
May 15	2:00 p.m.	Board Meeting
		<ul style="list-style-type: none"> Preliminary FY20 Budgets & Sewer Rates
June 12	2:00 p.m.	Board Meeting
		<ul style="list-style-type: none"> Public Hearing
		<ul style="list-style-type: none"> Adoption of FY20 Budgets & Sewer Rates
July 1		Start of Fiscal Year 2019-2020

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.

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.

Budgetary Basis of Accounting (continued)

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
- ✓ **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.
- ▲ **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,

Fund Structure (continued)

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.

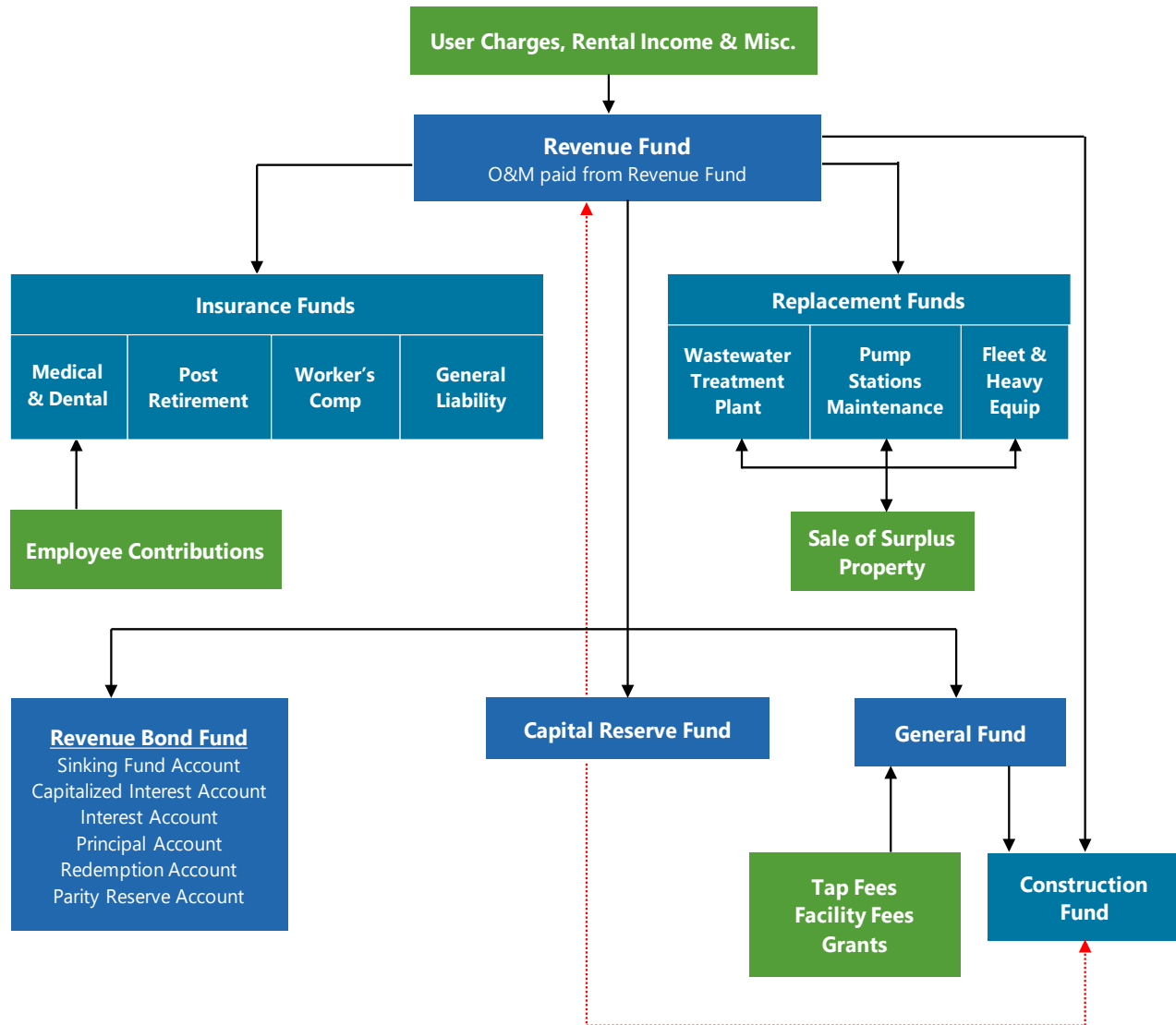
Any excess of revenues over expenditures are retained in fund equity to provide for large future capital expenditures, and for replacement or repair of any mission-critical equipment resulting from an accident, natural disaster, or other unforeseeable event.

- ▲ **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)

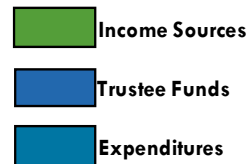
- ▲ **Pump Maintenance**—Various large pumps require replacement from time to time, usually at costs well in excess of what may be budgeted as routine maintenance. The SS Maintenance Director prepares a schedule by year of anticipated major projects needed to refurbish or replace obsolete equipment.
- ✓ **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

METROPOLITAN SEWERAGE DISTRICT

OF BUNCOMBE COUNTY, NORTH CAROLINA



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 2018 Actual Total	FY 2019 Budget	FY 2020 Proposed Budget	Increase (Decrease)	% Change
REVENUES & FINANCING SOURCES					
Domestic User Fees	\$ 32,036,793	\$ 32,431,584	\$ 33,623,113	\$ 1,191,529	3.67%
Industrial User Fees	4,159,767	3,422,373	3,464,402	42,029	1.23%
Billing and Collection	795,574	816,660	832,994	16,334	2.00%
Facility and Tap Fees	5,357,008	2,175,000	2,175,000	-	0.00%
Interest and Misc. Income	1,206,317	1,164,716	1,596,624	431,908	37.08%
Rental Income	81,826	71,641	71,641	-	0.00%
City of Asheville (Enka Bonds)	34,522	35,000	35,000	-	0.00%
Employee Contributions to Health Fund	382,579	421,467	374,907	(46,560)	-11.05%
Proceeds from Revenue Bonds	28,003,632	-	-	-	N/A
Use of (Contributions to) Available Funds	(23,268,961)	10,243,546	15,529,165	5,285,619	51.60%
Total Revenues & Financing Sources	\$ 48,789,057	\$ 50,781,987	\$ 57,702,846	\$ 6,920,859	13.63%
EXPENDITURES					
Operations and Maintenance	\$ 16,198,788	\$ 16,747,044	\$ 16,920,101	\$ 173,057	1.03%
Construction	22,522,870	23,492,718	29,894,818	6,402,100	27.25%
Capital Equipment	663,909	1,094,110	1,053,560	(40,550)	-3.71%
Bond Principal and Interest	9,403,490	9,448,115	9,834,367	386,252	4.09%
Total Expenditures	\$ 48,789,057	\$ 50,781,987	\$ 57,702,846	\$ 6,920,859	13.63%

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 6/30/19	60,507,628	4,400,000	500,000	602,487	262,633	175,784	5,185,000	71,633,532
Revenues and Other Financing Sources:								
Domestic User Charges	33,623,113	-	-	-	-	-	-	33,623,113
Industrial User Charges	3,464,402	-	-	-	-	-	-	3,464,402
Billing and Collection Fees	832,994	-	-	-	-	-	-	832,994
Facility and tap fees	-	2,175,000	-	-	-	-	-	2,175,000
Proceeds from Revenue Bonds	-	-	-	-	-	-	-	-
Stimulus Loan/Grant	-	-	-	-	-	-	-	-
Sale of Surplus Property	-	-	-	66,840	-	-	-	66,840
Non-governmental Grants	-	-	-	-	-	-	-	-
Capital Contributions	-	-	-	-	-	-	-	-
Investment interest & misc.	1,166,960	240,000	30,000	12,050	5,258	3,516	1,500	1,459,284
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	39,194,110	2,415,000	30,000	78,890	5,258	3,516	1,500	41,728,274
Expenditures and Other Financing Uses								
Operating Expenses	(13,223,923)	-	-	-	-	-	-	(13,223,923)
Debt--Principal	-	-	-	-	-	-	(5,855,825)	(5,855,825)
Debt--Interest	-	-	-	-	-	-	(3,978,542)	(3,978,542)
Construction	-	-	(29,894,818)	-	-	-	-	(29,894,818)
Capitalized Equipment Expenditures	(138,560)	-	-	(557,000)	(298,000)	(60,000)	-	(1,053,560)
Total Expenditures and Other Financing Uses	(13,362,483)	-	(29,894,818)	(557,000)	(298,000)	(60,000)	(9,834,367)	(54,006,668)
Interfund/account transfers	(36,707,288)	(6,674,000)	29,366,000	500,000	200,000	50,000	9,834,367	(3,430,921)
Excess (Deficit) of Revenues over Expenditures	(10,875,661)	(4,259,000)	(498,818)	21,890	(92,742)	(6,484)	1,500	(15,709,315)
Projected Net Position at 06/30/19	49,631,967	141,000	1,182	624,377	169,891	169,300	5,186,500	55,924,217

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 6/30/19	1,194,088	(1,309,668)	374,802	311,934	1,005,338	1,576,494	73,210,026
Revenues and Other Financing Sources:							
Domestic User Charges	-	-	-	-	-	-	33,623,113
Industrial User Charges	-	-	-	-	-	-	3,464,402
Billing and Collection Fees	-	-	-	-	-	-	832,994
Facility and tap fees	-	-	-	-	-	-	2,175,000
Proceeds from Revenue Bonds	-	-	-	-	-	-	-
Stimulus Loan/Grant	-	-	-	-	-	-	-
Sale of Surplus Property	-	-	-	-	-	-	66,840
Non-governmental Grants	-	-	-	-	-	-	-
Capital Contributions	-	-	-	-	-	-	-
Investment interest & misc.	30,500	20,000	2,500	2,500	15,000	70,500	1,529,784
City of Asheville for Enka Bond	-	-	-	-	-	-	35,000
Rental Income	-	-	-	-	-	-	71,641
Employee/Retirees Medical Contributions	344,907	30,000	-	-	-	374,907	374,907
Total Revenues and Fin. Sources	375,407	50,000	2,500	2,500	15,000	445,407	42,173,681
Expenditures and Other Financing Uses							
Operating Expenses	(2,890,636)	-	(605,542)	(200,000)	-	(3,696,178)	(16,920,101)
Debt--Principal	-	-	-	-	-	-	(5,855,825)
Debt--Interest	-	-	-	-	-	-	(3,978,542)
Construction	-	-	-	-	-	-	(29,894,818)
Capitalized Equipment Expenditures	-	-	-	-	-	-	(1,053,560)
Total Expenditures and Other Financing Uses	(2,890,636)	-	(605,542)	(200,000)	-	(3,696,178)	(57,702,846)
Interfund/account transfers	2,477,175	133,000	597,746	223,000	-	3,430,921	-
Excess (Deficit) of Revenues over Expenditures	(38,054)	183,000	(5,296)	25,500	15,000	180,150	(15,529,165)
Projected Net Position at 06/30/19	1,156,034	(1,126,668)	369,506	337,434	1,020,338	1,756,644	57,680,861

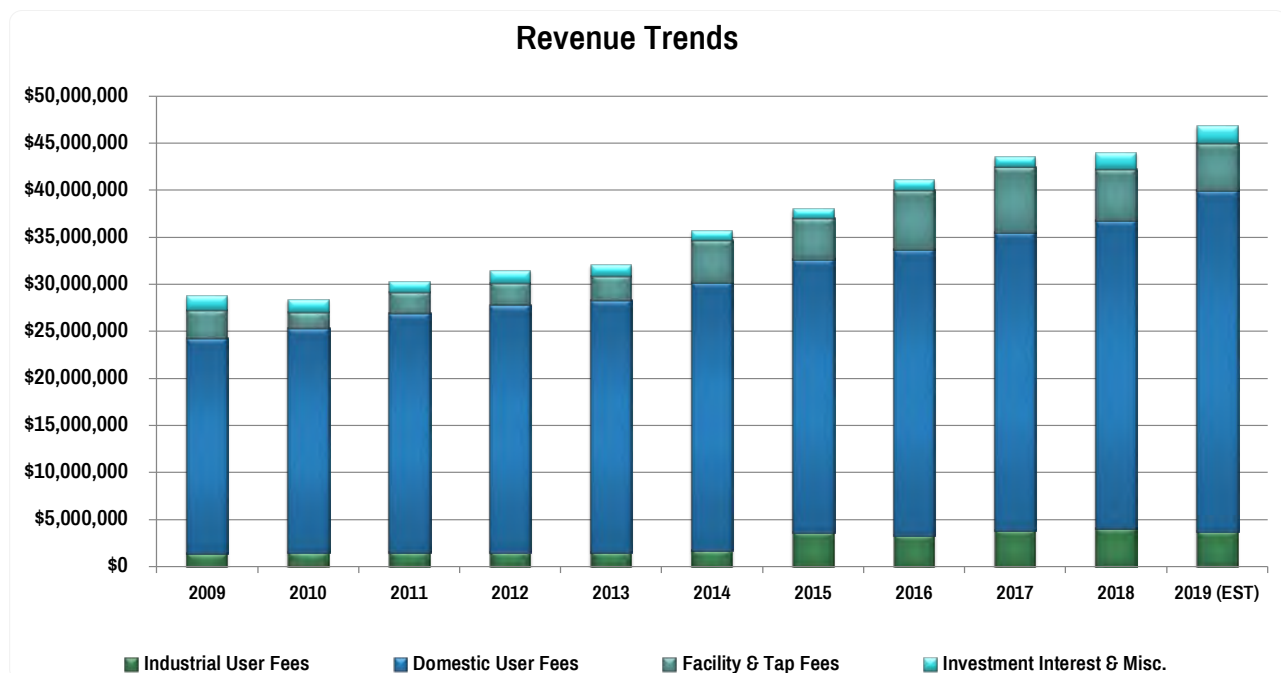
Now that the Districts' financial overview has been presented, we will examine revenues and various expenditures in detail.



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 page.

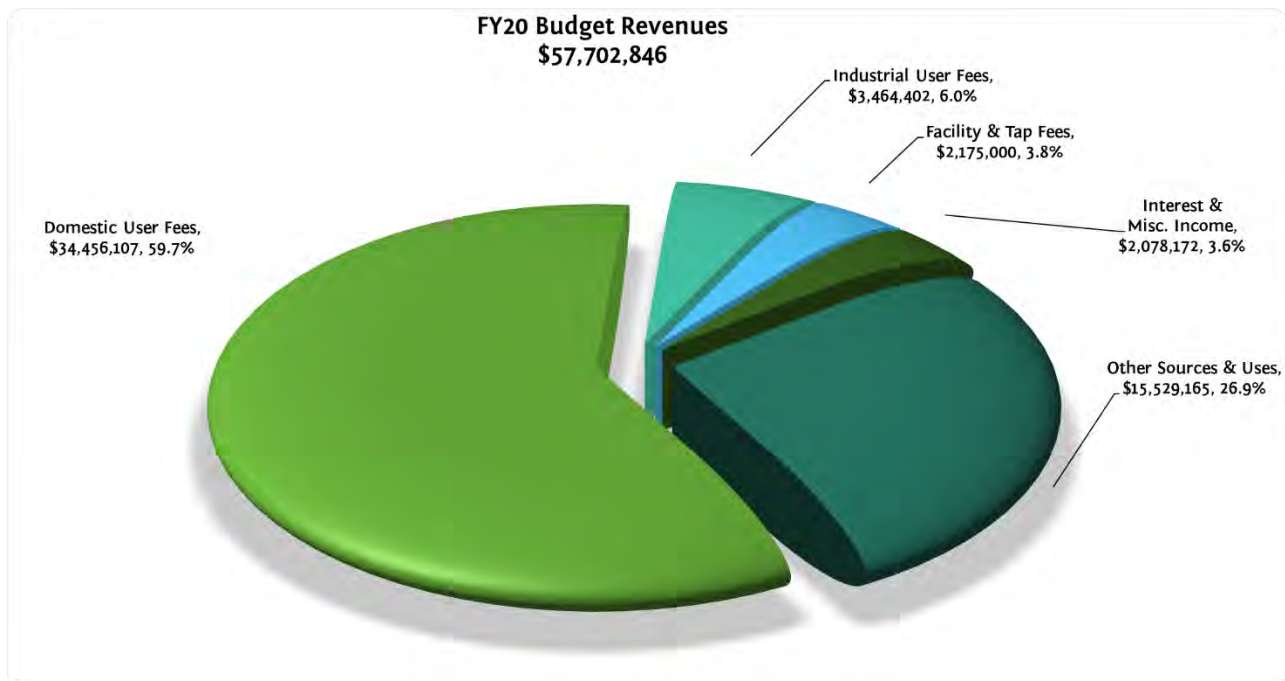


A graph of historical revenues by type reveals the overwhelming percentage of the District's income derives from domestic (residential & commercial) customers and has increased for the past ten consecutive years. Industrial user fees clearly show the effect of the shrinking textile industry in Buncombe 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 FY19 is estimated to be slightly higher than in FY18.

Revenue (continued)

Revenue Summary

When projecting FY19 revenues, a 2.5% 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 55,000 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
2.5%	2.5%	2.5%	2.5%	2.5%	2.5%

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 2.25%.

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



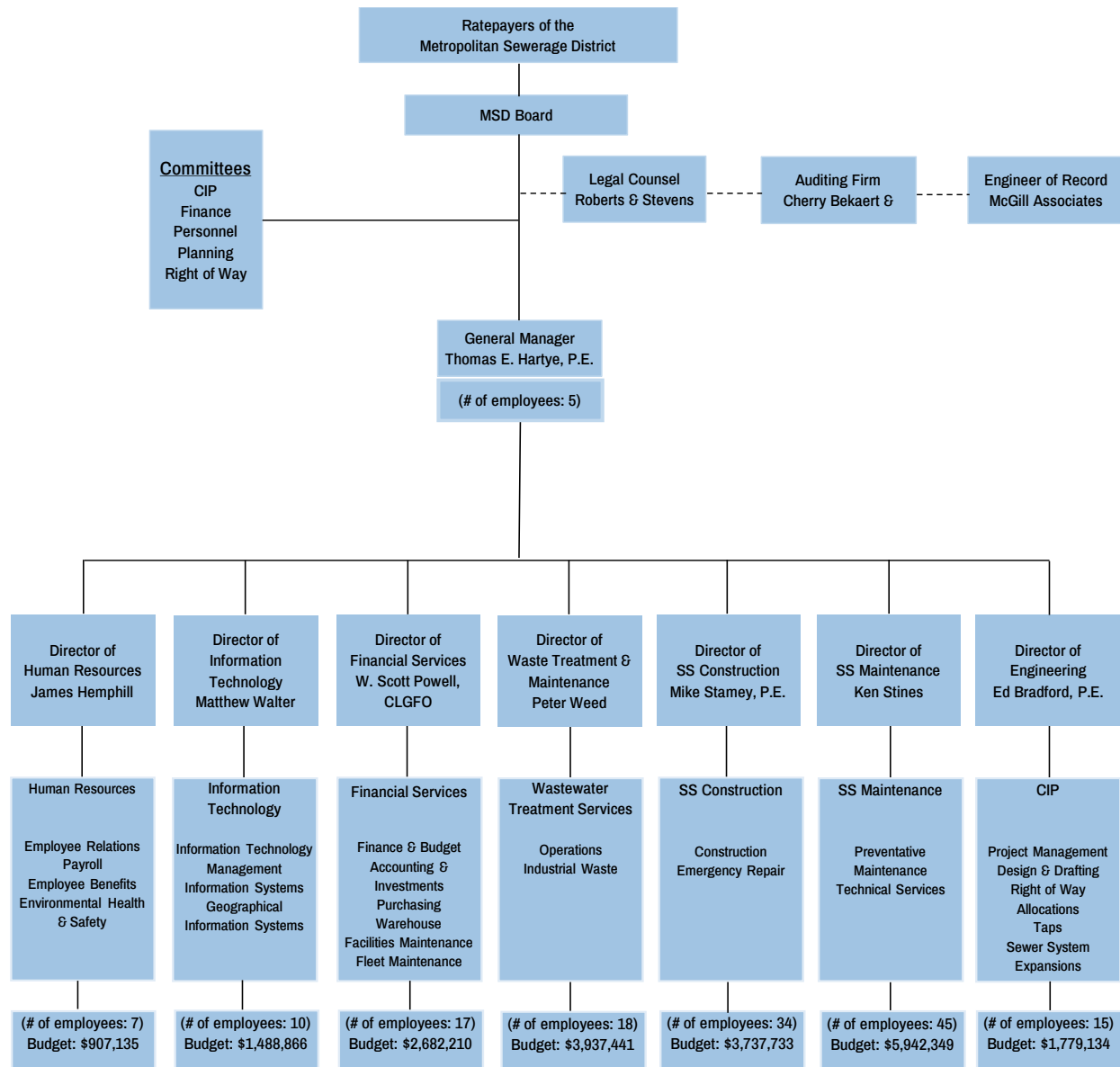
METROPOLITAN SEWERAGE DISTRICT

OF BUNCOMBE COUNTY, NORTH CAROLINA



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 FY20 Operation & Maintenance Fund budget totals \$17,543,404. This represents a 3.24% increase over the previous year. The District budgets to the Departmental level and are as follows:

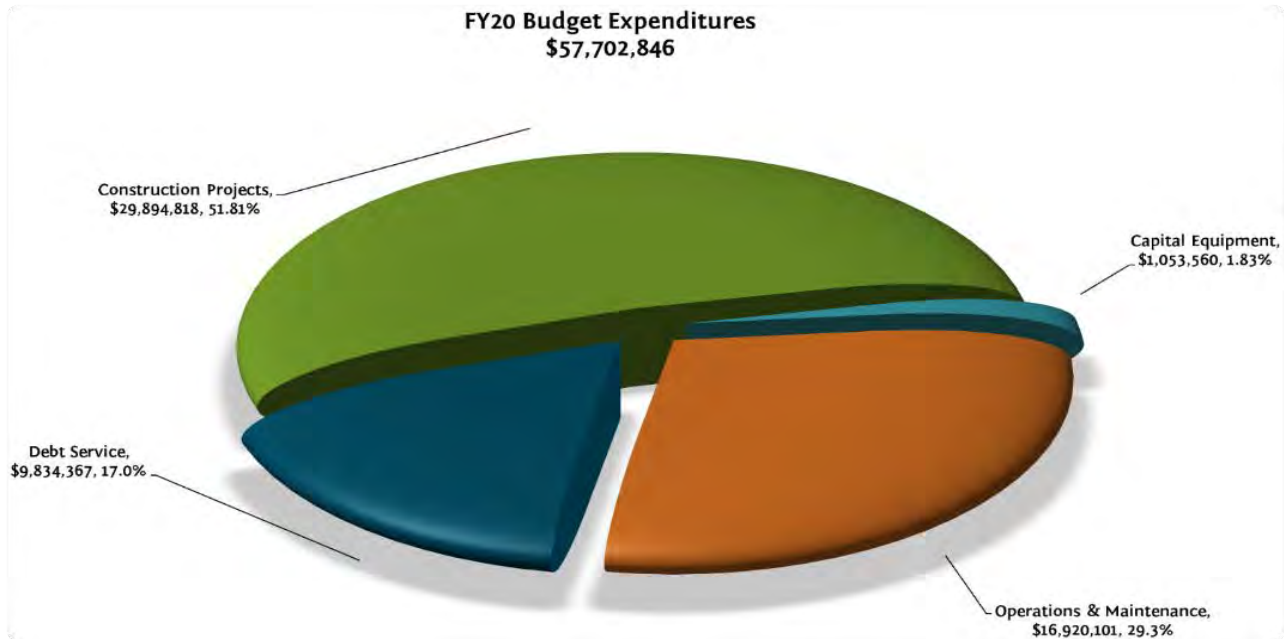
Office of the General Manager	\$ 1,607,215
Human Resources	\$ 907,135
Information Technology	\$ 1,488,866
Financial Services	\$ 2,682,210
Wastewater Treatment Plant	\$ 3,937,441
SS Maintenance	\$ 5,942,349
SS Construction	\$ 3,737,733
Engineering	\$ 1,779,134
Total Expenditures	\$ 22,082,083
Less: Capitalized in Construction Funds	\$ (4,538,679)
Net Operation & Maintenance Fund	\$ 17,543,404

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 2.5% salary adjustment as well as a 6.5% increase for the Self-Funded Health Insurance Plan. Personnel costs represent over 64.7% of the Operating and Maintenance budget.
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.

Operation & Maintenance Fund (continued)

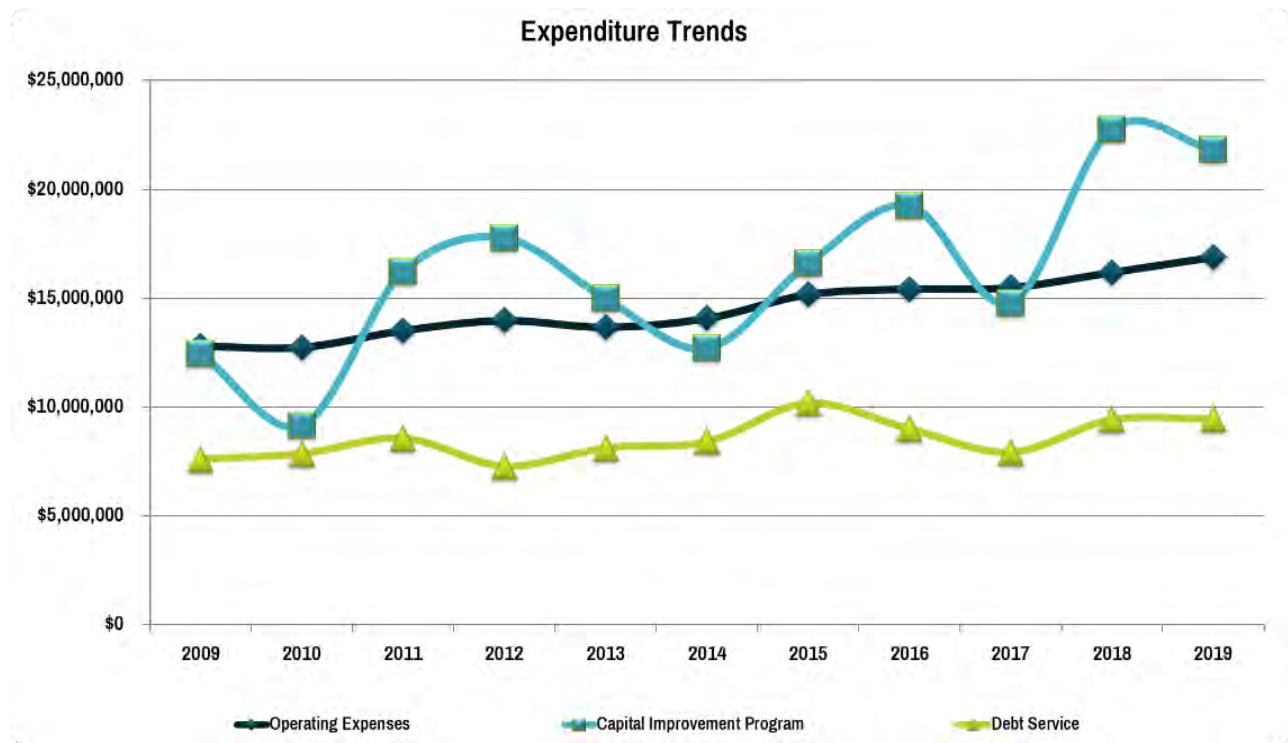
Overview (continued)



	ACTUAL 2017-2018	APPROVED 2018-2019 BUDGET	ESTIMATED 2018-2019 ACTUAL	PROPOSED 2019-2020 BUDGET	INC(DEC) OVER PRIOR YR BUDGET
SALARIES & WAGES	\$ 8,753,418	\$ 9,125,699	\$ 9,125,699	\$ 9,364,530	2.62%
BENEFITS	\$ 4,264,095	\$ 4,649,393	\$ 4,649,392	\$ 4,926,948	5.97%
MATERIALS, SUPPLIES & SERVICES	\$ 5,882,315	\$ 6,608,829	\$ 6,499,913	\$ 6,733,365	1.88%
REPLACEMENT FUNDS & TRANSFERS	\$ 830,478	\$ 900,610	\$ 900,610	\$ 918,680	2.01%
CAPITAL EQUIPMENT	\$ 195,150	\$ 119,627	\$ 119,627	\$ 138,560	15.83%
SUB-TOTAL O&M FUND	\$ 19,925,456	\$ 21,404,158	\$ 21,295,241	\$ 22,082,083	3.17%
LESS:					
Capitalized Construction Expenses	\$ (4,019,995)	\$ (4,411,095)	\$ (4,409,897)	\$ (4,538,679)	2.89%
NET OPERATION & MAINTENANCE FUND	\$ 15,905,461	\$ 16,993,063	\$ 16,885,344	\$ 17,543,404	3.24%

Operation & Maintenance Fund (continued)

Overview (continued)



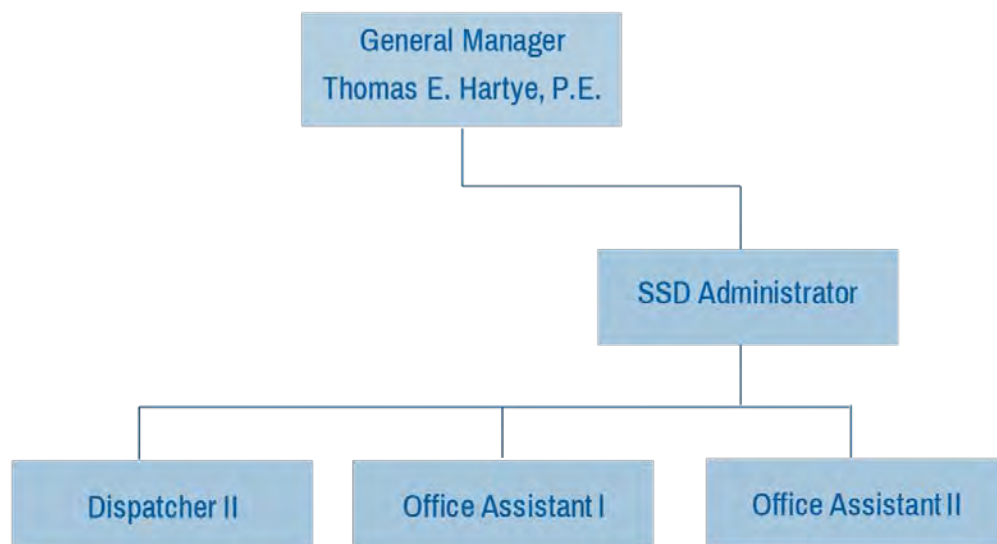
FY20 Budget – All Departments Summary

No.	Name	ACTUAL 2015-2016	ACTUAL 2016-2017	ACTUAL 2017-2018	Adopted 2018-2019 Budget	Estimated Actual 6/30/2019	Percent Expended To Total Budget	Proposed 2019-2020 Budget	Inc (Dec) Over Prior Year
Salaries & Wages									
51100	Salaries & Wages	\$ 8,114,221.40	\$ 8,256,868.46	\$ 8,470,591.31	\$ 8,804,199.00	\$ 8,804,199.00	100.00%	\$ 9,039,530.00	2.67%
51150	Overtime	281,072.44	256,322.95	282,826.59	321,500.00	321,500.00	100.00%	325,000.00	1.09%
Total Salaries & Wages		8,395,293.84	8,513,191.41	8,753,417.90	9,125,699.00	9,125,699.00	100.00%	9,364,530.00	2.62%
Benefits									
51200	North Carolina Retirement	564,384.10	630,362.92	665,374.99	714,543.00	714,542.00	100.00%	844,680.00	18.21%
51250	Payroll Taxes	607,735.77	690,654.00	638,911.88	698,117.00	698,117.00	100.00%	716,387.00	2.62%
51300	Medical, Dental & Life	1,805,519.85	1,908,628.00	2,051,775.00	2,185,141.00	2,185,141.00	100.00%	2,327,175.00	6.50%
51325	Post Retirement Insurance	191,096.15	270,000.00	249,500.00	307,560.00	307,560.00	100.00%	283,000.00	-7.99%
51350	Worker's Compensation	215,312.00	273,000.00	273,000.00	273,000.00	273,000.00	100.00%	273,000.00	0.00%
51360	State Unemployment Benefits	6,220.43	1,065.51	4,169.82	32,560.00	32,560.00	100.00%	32,465.00	-0.29%
51500	401-K/457 Plan	359,097.20	369,243.99	381,363.05	438,472.00	438,472.00	100.00%	450,241.00	2.68%
Total Benefits		3,749,365.50	4,142,954.42	4,264,094.74	4,649,393.00	4,649,392.00	100.00%	4,926,948.00	5.97%
Total Salaries, Wages & Benefits		12,144,659.34	12,656,145.83	13,017,512.64	13,775,092.00	13,775,091.00	100.00%	14,291,478.00	3.75%
Materials, Supplies & Services									
52010	Advertising	23,047.57	29,872.28	27,073.65	35,500.00	33,650.00	94.79%	37,000.00	4.23%
52050	Dues & Subscriptions	44,742.89	47,248.57	55,087.28	58,260.00	57,745.00	99.12%	60,710.00	4.21%
52100	Postage	8,348.72	9,607.87	14,793.94	12,000.00	12,000.00	100.00%	14,000.00	16.67%
52150	Travel, Mtgs & Training	132,443.65	135,708.68	123,715.00	172,219.00	153,707.00	89.25%	187,670.00	8.97%
52160	Tuition Assistance	3,407.16	1,499.70	2,153.15	7,000.00	5,000.00	71.43%	7,000.00	0.00%
52170	Directors Fees & Expenses	21,412.12	22,040.26	19,944.57	20,000.00	20,000.00	100.00%	22,000.00	10.00%
52180	Liability Insurance	605,434.00	547,746.00	547,746.00	547,746.00	547,746.00	100.00%	547,746.00	0.00%
52200	Telephone/Telefax	29,427.21	31,559.30	34,442.61	38,000.00	37,500.00	98.68%	38,000.00	0.00%
52210	Communications	89,900.00	93,540.25	106,119.70	137,855.00	137,049.00	99.42%	148,260.00	7.55%
52240	Uniforms	58,905.42	75,502.00	77,392.80	87,250.00	86,775.00	99.46%	88,650.00	1.80%
52250	Office Supplies	20,633.94	17,757.72	16,942.06	27,210.04	26,585.00	97.70%	27,200.00	-0.04%
52260	Special Dept Supplies	402,558.34	405,698.77	429,723.05	466,140.00	461,980.00	99.11%	473,495.00	1.58%
52270	Safety Equip/Supplies	66,747.80	71,485.85	83,212.80	80,550.00	80,390.00	99.80%	80,800.00	0.31%
52280	Maint Supp/Small Tools	103,879.67	113,327.73	134,273.28	137,950.00	137,825.00	99.91%	145,900.00	5.76%
52290	Chemical Supplies	429,656.28	421,562.83	423,362.80	509,950.00	504,050.00	98.84%	553,500.00	8.54%
52300	Line Cleaning Supplies	56,533.42	64,384.72	45,654.89	53,750.00	53,750.00	100.00%	53,750.00	0.00%
52330	Legal Fees	46,971.49	39,384.31	19,166.15	46,655.00	28,475.00	61.03%	42,000.00	-9.98%
52350	Prof/Contractual Svcs	404,790.52	583,379.74	518,403.85	627,275.00	604,975.00	96.44%	584,500.00	-8.82%
52410	Maint-Buildings & Grounds	121,118.94	141,341.47	139,012.01	151,500.00	151,500.00	100.00%	204,200.00	34.79%
52420	Maintenance-Equipment	548,283.83	525,057.38	444,035.12	478,270.00	477,770.00	99.90%	508,270.00	6.27%
52430	Landscape Restoration	13,513.62	9,189.87	12,928.86	17,000.00	17,000.00	100.00%	17,000.00	0.00%
52440	Pump Maintenance	63,764.14	80,410.24	105,799.01	102,500.00	102,500.00	100.00%	102,500.00	0.00%
52450	Equipment Rental	7,451.30	9,647.84	9,802.65	26,200.00	26,200.00	100.00%	30,500.00	16.41%
52460	Motor Fuel & Lubricants	128,263.06	128,800.36	156,214.88	210,000.00	210,000.00	100.00%	215,000.00	2.38%
52470	Outside Vehicle Maint	12,483.16	11,375.26	11,585.14	15,000.00	15,000.00	100.00%	15,000.00	0.00%
52500	Rents/Leases	38,994.18	41,020.59	42,848.85	50,300.00	46,800.00	93.04%	49,300.00	-1.99%
52510	Permits/Fees/Software Licenses	232,009.87	231,756.42	233,710.24	267,502.00	259,766.00	97.11%	262,550.00	-1.85%
52650	Utilities	943,331.54	1,113,988.48	1,161,805.54	1,285,377.00	1,270,000.00	98.80%	1,275,000.00	-0.81%
52690	Freight	4,861.58	4,390.63	3,745.54	5,000.00	4,500.00	90.00%	5,000.00	0.00%
52715	Safety Incentive Program	1,846.44	841.60	689.59	2,500.00	2,500.00	100.00%	2,500.00	0.00%
52725	Wellness Program	6,730.67	6,222.83	5,828.50	8,000.00	6,000.00	75.00%	8,000.00	0.00%
52730	Employee Asst Program	4,355.00	4,355.00	4,355.00	4,500.00	4,355.00	96.78%	4,500.00	0.00%
52900	Other Operating Expenses	1,222.53	1,866.34	1,002.49	3,370.00	3,370.00	100.00%	4,000.00	18.69%
52910	Non-Capital Equipment	62,258.25	74,655.70	74,170.54	95,839.96	92,839.96	96.87%	80,870.00	-15.62%
52915	Copiers Printers & Faxes	-	-	-	4,000.00	3,950.00	98.75%	4,000.00	0.00%
52920	Billing & Collections	754,316.76	768,832.93	795,574.21	816,660.00	816,660.00	100.00%	832,994.00	2.00%
Total Materials, Supplies & Services		5,493,645.07	5,865,039.52	5,882,315.35	6,608,829.00	6,499,912.96	98.35%	6,733,365.00	1.88%
Interfund Transfers									
52340	Debt Administration Expenses	188,362.16	178,880.66	170,478.25	170,610.00	170,610.00	100.00%	168,680.00	-1.13%
53040	Fleet Replacement Charges	425,000.00	425,000.00	460,000.00	500,000.00	500,000.00	100.00%	500,000.00	0.00%
53050	WWTP Replacement Charges	200,000.00	200,000.00	200,000.00	180,000.00	180,000.00	100.00%	200,000.00	11.11%
53070	Pump Replacement Charges	-	-	-	50,000.00	50,000.00	100.00%	50,000.00	0.00%
Total Interfund Transfers		813,362.16	803,880.66	830,478.25	900,610.00	900,610.00	100.00%	918,680.00	2.01%
Capital Outlay									
54010	Capital Equipment - New	79,321.14	49,288.10	91,705.92	58,167.00	58,167.00	100.00%	52,070.00	-10.48%
54020	Capital Equip-Software	18,353.88	354.22	9,830.37	3,200.00	3,200.00	100.00%	-	-100.00%
54030	Capital Equip - Replacement	74,888.05	84,379.26	93,613.76	58,260.00	58,260.00	100.00%	86,490.00	48.46%
Total Capital Outlay		172,563.07	134,021.58	195,150.05	119,627.00	119,627.00	100.00%	138,560.00	15.83%
Sub-Total O&M Fund		\$ 18,624,229.64	\$ 19,459,087.59	\$ 19,925,456.29	\$ 21,404,158.00	\$ 21,295,240.96	99.49%	\$ 22,082,083.00	3.17%
59200 LESS:									
	Chargebacks to General Fund for CIP	(2,295,944.89)	(2,288,880.74)	(2,353,594.99)	(2,705,222.00)	(2,704,024.00)	99.96%	(2,797,848.00)	3.42%
	Chargebacks to General Fund for SSD	(1,388,104.00)	(1,565,955.82)	(1,666,399.82)	(1,705,873.00)	(1,705,873.00)	100.00%	(1,740,831.00)	2.05%
Net Operation & Maintenance Fund		\$ 14,940,180.75	\$ 15,604,251.03	\$ 15,905,461.48	\$ 16,993,063.00	\$ 16,885,343.96	99.37%	\$ 17,543,404.00	3.24%



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 FY17-18	Approved Positions FY18-19	Budgeted Positions FY19-20
Department of Office of the General Manager			
<i>Management:</i>			
General Manager	1	1	1
Total General Manager	1	1	1
<i>Office Support:</i>			
Executive Secretary GM/Board	1	0	0
Total Office Support	1	0	0
Total – Office of the General Manager Department	2	1	1

Office of the General Manager (continued)

Accomplishments for FY 2018-2019

- ★ Completed 98% construction on the Plant Headworks Project
- ★ Started construction for High Rate Primary Treatment (HRPT) Project
- ★ Incorporated \$100 million of Treatment Plant improvements within 10-year CIP for MSD to meet future regulations and growth for next 50 years
- ★ 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 36 minutes
- ★ Awarded 2018 Academy of Environmental, Engineers, & Scientists Award
- ★ ISO Recertification for entire organization

Budget Highlights/Changes for FY 2019-2020

- 🏆 Keep rate increases low and consistent based on long-term financial model
- 🏆 Includes completing Capital Improvements of approximately \$29.9 Million
- 🏆 Reflects 6.5% increase in medical plan contributions
- 🏆 A 2.5% salary adjustment
- 🏆 Increase GASB75 requirements
- 🏆 Includes 15.5% 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)

Office of the General Manager (continued)

Goals & Objectives (continued)

- ⦿ **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

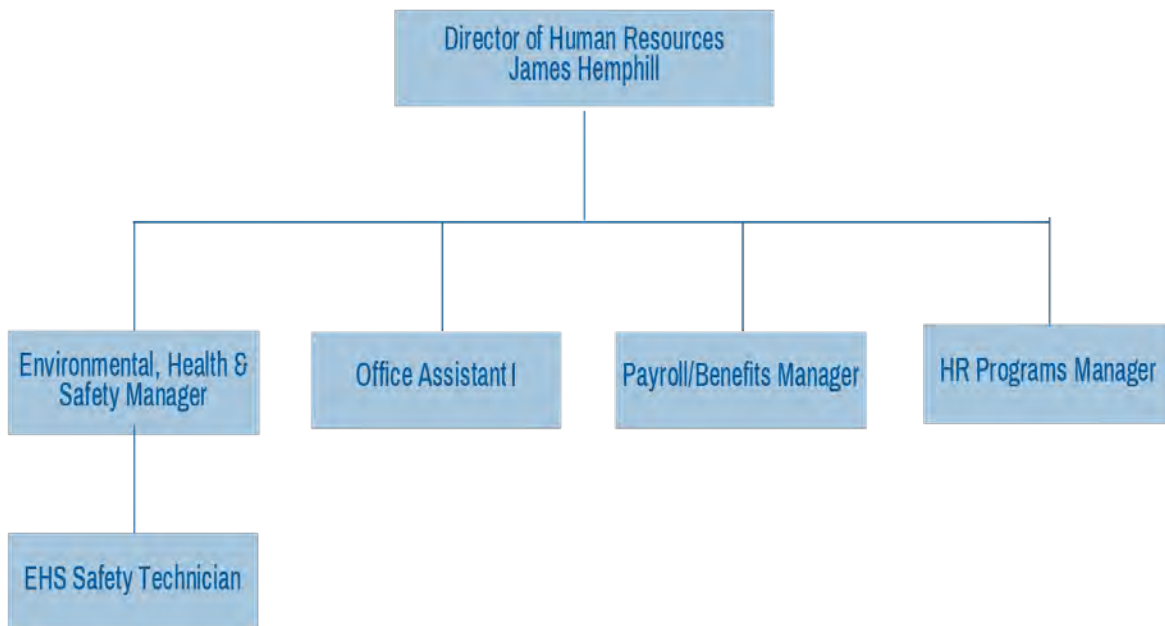
FY20 Budget-Office of the General Manager

No.	Name	Actual 2015-2016	Actual 2016-2017	Actual 2017-2018	Adopted 2018-2019 Budget	Estimated Actual 6/30/2019	Percent Expended To Total Budget	Proposed 2019-2020 Budget	Inc (Dec) Over Prior Year
Salaries & Wages									
51100	Salaries & Wages	\$ 247,838.46	\$ 179,355.97	\$ 200,113.57	\$ 196,691.00	\$ 196,691.00	100.00%	\$ 201,609.00	2.50%
51150	Overtime	-	-	-	-	-	-	-	-
Total Salaries & Wages		247,838.46	179,355.97	200,113.57	196,691.00	196,691.00	100.00%	201,609.00	2.50%
Benefits									
51200	North Carolina Retirement	16,738.95	13,312.61	15,191.62	15,401.00	15,401.00	100.00%	18,185.00	18.08%
51250	Payroll Taxes	17,095.96	76,972.12	11,281.50	15,047.00	15,047.00	100.00%	15,423.00	2.50%
51300	Medical, Dental & Life	24,564.87	25,792.00	27,727.00	14,665.00	14,665.00	100.00%	15,412.00	5.09%
51325	Post Retirement Insurance	2,600.13	3,649.00	3,372.00	2,064.00	2,064.00	100.00%	1,874.00	-9.21%
51350	Worker's Compensation	2,929.00	3,689.00	3,689.00	1,833.00	1,833.00	100.00%	1,808.00	-1.36%
51360	State Unemployment Benefits	84.63	-	56.73	220.00	220.00	100.00%	215.00	-2.27%
51500	401-K/457 Plan	9,019.22	9,315.03	9,548.00	9,835.00	9,835.00	100.00%	10,081.00	2.50%
Total Benefits		73,032.76	132,729.76	70,865.85	59,065.00	59,065.00	100.00%	62,998.00	6.66%
Total Salaries, Wages & Benefits		320,871.22	312,085.73	270,979.42	255,756.00	255,756.00	100.00%	264,607.00	3.46%
Materials, Supplies & Services									
52010	Advertising	12,831.24	10,625.42	7,305.64	12,500.00	12,500.00	100.00%	14,000.00	12.00%
52050	Dues & Subscriptions	11,525.07	12,523.25	14,475.17	12,000.00	12,000.00	100.00%	12,000.00	0.00%
52100	Postage	8,348.72	9,607.87	14,793.94	12,000.00	12,000.00	100.00%	14,000.00	16.67%
52150	Travel, Mtgs & Training	5,152.50	6,629.93	3,104.85	8,000.00	8,000.00	100.00%	8,400.00	5.00%
52170	Directors Fees & Expenses	21,412.12	22,040.26	19,944.57	20,000.00	20,000.00	100.00%	22,000.00	10.00%
52180	Liability Insurance	116,167.00	105,099.00	105,099.00	105,099.00	105,099.00	100.00%	105,099.00	0.00%
52210	Communications	1,750.59	1,662.11	1,928.31	3,000.00	2,500.00	83.33%	3,000.00	0.00%
52250	Office Supplies	587.17	299.76	421.41	600.00	600.00	100.00%	600.00	0.00%
52260	Special Dept Supplies	497.31	501.48	339.44	700.00	700.00	100.00%	700.00	0.00%
52330	Legal Fees	44,577.15	34,259.65	16,142.36	40,000.00	25,000.00	62.50%	35,000.00	-12.50%
52350	Prof/Contractual Svcs	12,938.63	55,977.29	27,139.29	30,000.00	28,000.00	93.33%	30,000.00	0.00%
52410	Maint-Buildings & Grounds	113,535.39	127,735.10	131,707.82	135,000.00	135,000.00	100.00%	137,000.00	1.48%
52420	Maintenance-Equipment	-	377.50	-	400.00	400.00	100.00%	400.00	0.00%
52500	Rents/Leases	3,711.62	3,698.41	3,687.92	5,500.00	5,000.00	90.91%	4,500.00	-18.18%
52510	Permits/Fees/Software Licenses	148.00	144.00	78.00	200.00	200.00	100.00%	200.00	0.00%
52650	Utilities	88,535.34	97,453.18	96,773.52	120,000.00	120,000.00	100.00%	105,000.00	-12.50%
52690	Freight	4,861.58	4,390.63	3,745.54	5,000.00	4,500.00	90.00%	5,000.00	0.00%
52900	Other Operating Expenses	1,222.53	1,866.34	1,002.49	3,370.00	3,370.00	100.00%	4,000.00	18.69%
52910	Non-Capital Equipment	-	-	-	600.00	600.00	100.00%	-	-100.00%
52920	Billing & Collections	754,316.76	768,832.93	795,574.21	816,660.00	816,660.00	100.00%	832,994.00	2.00%
Total Materials, Supplies & Services		1,202,118.72	1,263,724.11	1,243,263.48	1,330,629.00	1,312,129.00	98.61%	1,333,893.00	0.25%
Interfund Transfers									
52340	Debt Administration Expenses	-	-	-	-	-	-	-	-
53040	Fleet Replacement Charges	8,018.00	8,018.00	8,018.00	8,715.00	8,715.00	100.00%	8,715.00	0.00%
53050	WWTP Replacement Charges	-	-	-	-	-	-	-	-
53070	Pump Replacement Charges	-	-	-	-	-	-	-	-
Total Interfund Transfers		8,018.00	8,018.00	8,018.00	8,715.00	8,715.00	100.00%	8,715.00	0.00%
Capital Outlay									
54010	Capital Equipment - New	-	-	6,636.10	-	-	-	-	-
54020	Capital Equip-Software	-	-	-	-	-	-	-	-
54030	Capital Equip - Replacement	-	-	-	-	-	-	-	-
Total Capital Outlay		-	-	6,636.10	-	-	-	-	-
Sub-Total O&M Fund		\$ 1,531,007.94	\$ 1,583,827.84	\$ 1,528,897.00	\$ 1,595,100.00	\$ 1,576,600.00	98.84%	\$ 1,607,215.00	0.76%
LESS:									
59200	Chargebacks to General Fund for CIP	-	-	-	-	-	-	-	-
	Chargebacks to General Fund for SSD	-	-	-	-	-	-	-	-
Net Operation & Maintenance Fund		\$ 1,531,007.94	\$ 1,583,827.84	\$ 1,528,897.00	\$ 1,595,100.00	\$ 1,576,600.00	98.84%	\$ 1,607,215.00	0.76%



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 FY17-18	Approved Positions FY18-19	Budgeted Positions FY19-20
Department of Human Resources			
<i>Management:</i>			
Director of Human Resources	1	1	1
Total Management	1	1	1
<i>Human Resources:</i>			
Floater	0	0	1
Public Relations Representative	1	0	0
Office Assistant I	0	1	1
HR Programs Manager	1	1	1
Payroll/Benefits Manager	1	1	1
Total Human Resources	3	3	4
<i>Environmental, Health & Safety:</i>			
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	6	7

Accomplishments for FY 2018-2019

- ★ Continued discount contract with Park Ridge Hospital, resulting in zero costs for employees
- ★ Changed to MEDCOST medical insurance network
- ★ Using new Pharmacy Benefits Manager has resulted in reduction of drug “trend” costs
- ★ Achieved lowest “Total Accident Case Rate” of 1.97 in 5 years
- ★ Coordinated effort to replace leaking “Off Road Diesel” tank
- ★ Continued Wellness activities and monthly newsletter
- ★ Maintained employee medical insurance premium amounts at last years’ levels
- ★ Coordinated retirement and replacements activities

Human Resources (continued)

Accomplishments for FY 2018-2019 (continued)

- ★ Increased use of GIS for road closures
- ★ Extended AED units on trucks used by electrical workers
- ★ Replaced four outdated fire panels
- ★ Received Safety Award from the NC Dept of Labor
- ★ 95/150 MSD employees trained in CPR/ AED
- ★ Continued monitoring of Arc Flash procedures for all affected employees and supervisors
- ★ Replaced NFPA clothing and Arc Flash PPE on schedule
- ★ Completed Plant staff training for fall protection hazards
- ★ Completed defensive driving program for Construction Division

Budget Highlights for FY 2019-2020

- 🏆 Funds allocated for Tripod replacement & gas monitors
- 🏆 Increased Advertising budget

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)
- 🎯 **Goal:** Maintain consistency throughout District on disciplinary actions (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:** Promote safety by focusing on training and compliance inspections
 - ↪ **Objective:** Maintain health focus including disease prevention and workers compensation
 - ↪ **Objective:** Continuously evaluate current safety practices and improve/change as needed.
 - ↪ **Objective:** Manage safety related contractual efforts including Drug Testing, Hoist Testing, Fire Protection, and Hearing Conservation
- ⦿ **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	FY16-17	FY17-18	FY18-19
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	6	9	14
4. Avg. # of days to fill vacancies	30	45	40
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	8	5	8
9. Percentage of employee payroll and benefit concerns resolved within two business days	99%	99%	100%
10. Number of Injuries <small>(calendar year)</small>	5	3	3
11. Number of Lost Time Injuries <small>(calendar year)</small>	1	1	1
12. Incident Rate NAICS <small>(calendar year)</small>	3.48	2.0	1.97
13. Inspections/Audits <small>(calendar year)</small>	33/100+	47	25/75+
14. Random Alcohol and Drug Tests for CDL drivers <small>(calendar year)</small>	33	22	32
15. EHS Training classes conducted <small>(calendar year)</small>	53	57	97

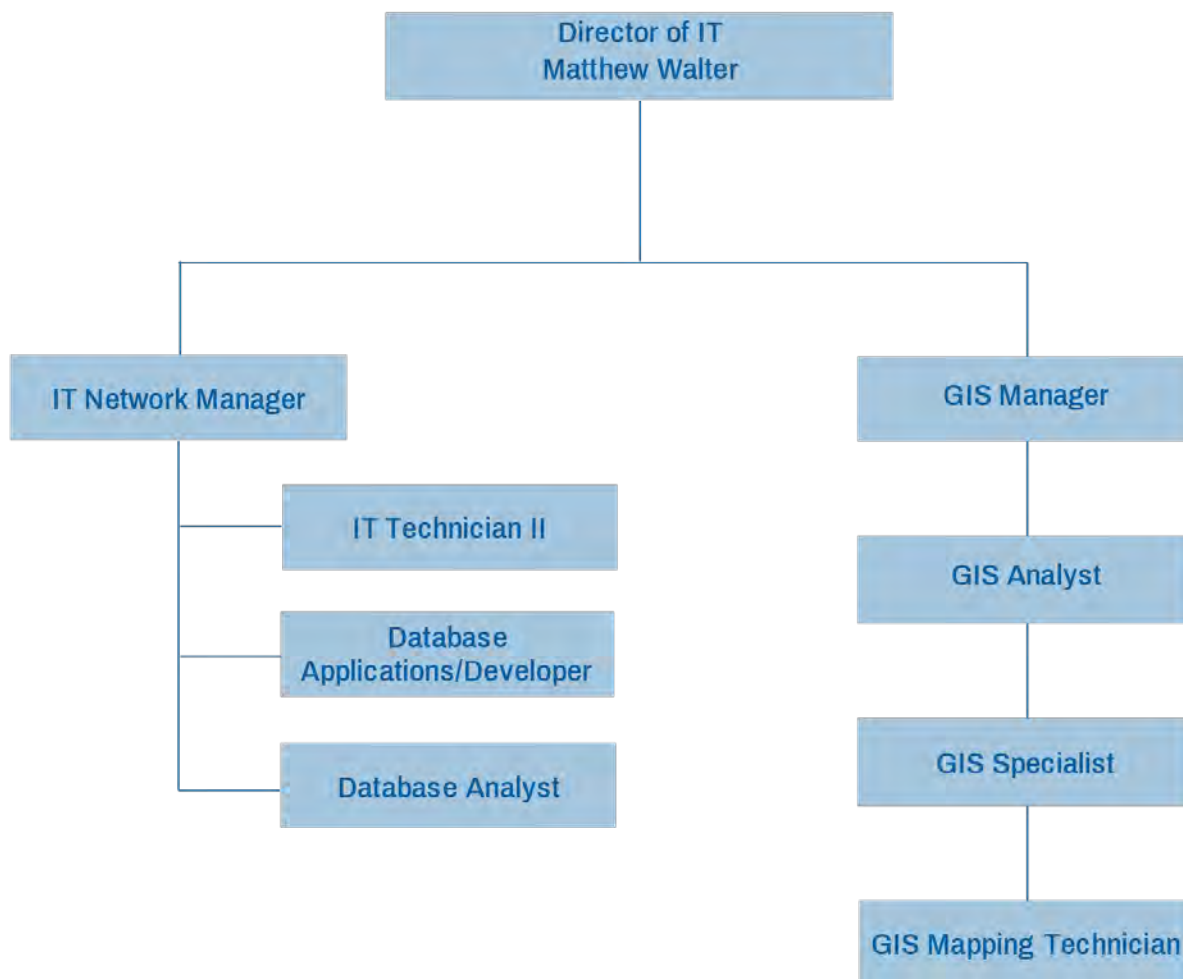
FY20 Budget-Human Resources

No.	Name	Actual 2015-2016	Actual 2016-2017	Actual 2017-2018	Adopted 2018-2019 Budget	Estimated Actual 6/30/2019	Percent Expended To Total Budget	Proposed 2019-2020 Budget	Inc (Dec) Over Prior Year
Salaries & Wages									
51100	Salaries & Wages	\$ 380,165.24	\$ 383,903.42	\$ 398,670.11	\$ 436,916.00	\$ 436,916.00	100.00%	\$ 493,727.00	13.00%
51150	Overtime	-	-	-	-	-	-	-	-
Total Salaries & Wages		380,165.24	383,903.42	398,670.11	436,916.00	436,916.00	100.00%	493,727.00	13.00%
Benefits									
51200	North Carolina Retirement	25,615.38	28,416.16	29,707.81	34,211.00	34,211.00	100.00%	44,534.00	30.17%
51250	Payroll Taxes	27,688.23	30,030.82	31,418.92	33,424.00	33,424.00	100.00%	37,770.00	13.00%
51300	Medical, Dental & Life	73,694.62	77,377.00	83,180.00	87,993.00	87,993.00	100.00%	107,883.00	22.60%
51325	Post Retirement Insurance	7,800.38	10,946.00	10,115.00	12,385.00	12,385.00	100.00%	13,119.00	5.93%
51350	Worker's Compensation	8,788.00	11,067.00	11,067.00	10,993.00	10,993.00	100.00%	12,656.00	15.13%
51360	State Unemployment Benefits	253.90	18.47	170.19	1,320.00	1,320.00	100.00%	1,505.00	14.02%
51500	401-K/457 Plan	18,955.14	18,615.59	18,162.23	20,097.00	20,097.00	100.00%	22,937.00	14.13%
Total Benefits		162,795.65	176,471.04	183,821.15	200,423.00	200,423.00	100.00%	240,404.00	19.95%
Total Salaries, Wages & Benefits		542,960.89	560,374.46	582,491.26	637,339.00	637,339.00	100.00%	734,131.00	15.19%
Materials, Supplies & Services									
52010	Advertising	4,200.82	7,530.19	5,360.33	6,000.00	4,800.00	80.00%	6,000.00	0.00%
52050	Dues & Subscriptions	5,261.89	3,148.00	6,080.93	5,700.00	5,700.00	100.00%	6,505.00	14.12%
52150	Travel, Mtgs & Training	22,252.80	31,790.13	26,871.20	34,500.00	26,000.00	75.36%	27,290.00	-20.90%
52160	Tuition Assistance	3,407.16	1,499.70	2,153.15	7,000.00	5,000.00	71.43%	7,000.00	0.00%
52180	Liability Insurance	1,873.00	1,695.00	1,695.00	1,695.00	1,695.00	100.00%	1,695.00	0.00%
52210	Communications	3,383.80	5,320.80	5,355.79	5,460.00	5,460.00	100.00%	5,460.00	0.00%
52240	Uniforms	696.92	855.72	954.18	1,300.00	1,275.00	98.08%	1,300.00	0.00%
52250	Office Supplies	3,947.80	2,780.47	2,199.00	2,900.00	2,650.00	91.38%	2,900.00	0.00%
52260	Special Dept Supplies	3,186.32	6,800.95	1,802.66	5,300.00	3,500.00	66.04%	4,800.00	-9.43%
52270	Safety Equip/Supplies	16,675.08	15,509.81	18,500.26	18,000.00	18,000.00	100.00%	18,000.00	0.00%
52280	Maint Supp/Small Tools	-	-	8.29	-	-	-	-	-
52330	Legal Fees	2,394.34	2,515.16	1,943.79	4,000.00	1,000.00	25.00%	4,000.00	0.00%
52350	Prof/Contractual Svcs	47,509.34	55,968.14	69,011.65	71,000.00	57,000.00	80.28%	66,000.00	-7.04%
52410	Maint-Buildings & Grounds	-	715.74	-	500.00	500.00	100.00%	500.00	0.00%
52420	Maintenance-Equipment	-	859.92	10.00	2,000.00	1,500.00	75.00%	2,000.00	0.00%
52510	Permits/Fees/Software Licenses	2,166.54	1,836.19	2,153.93	150.00	100.00	66.67%	100.00	-33.33%
52715	Safety Incentive Program	1,846.44	841.60	689.59	2,500.00	2,500.00	100.00%	2,500.00	0.00%
52725	Wellness Program	6,730.67	6,222.83	5,828.50	8,000.00	6,000.00	75.00%	8,000.00	0.00%
52730	Employee Asst Program	4,355.00	4,355.00	4,355.00	4,500.00	4,355.00	96.78%	4,500.00	0.00%
52910	Non-Capital Equipment	16,816.04	8,269.43	6,946.00	13,000.00	10,000.00	76.92%	-	-100.00%
52920	Billing & Collections	-	-	-	-	-	-	-	-
Total Materials, Supplies & Services		146,703.96	158,514.78	161,919.25	193,505.00	157,035.00	81.15%	168,550.00	-12.90%
Interfund Transfers									
52340	Debt Administration Expenses	-	-	-	-	-	-	-	-
53040	Fleet Replacement Charges	2,074.00	2,074.00	2,074.00	2,254.00	2,254.00	100.00%	2,254.00	0.00%
53050	WWTP Replacement Charges	-	-	-	-	-	-	-	-
53070	Pump Replacement Charges	-	-	-	-	-	-	-	-
Total Interfund Transfers		2,074.00	2,074.00	2,074.00	2,254.00	2,254.00	100.00%	2,254.00	0.00%
Capital Outlay									
54010	Capital Equipment - New	-	20,442.94	17,733.87	-	-	-	2,200.00	-
54020	Capital Equip-Software	-	-	-	-	-	-	-	-
54030	Capital Equip - Replacement	-	-	-	-	-	-	-	-
Total Capital Outlay		-	20,442.94	17,733.87	-	-	-	2,200.00	-
Sub-Total O&M Fund		\$ 691,738.85	\$ 741,406.18	\$ 764,218.38	\$ 833,098.00	\$ 796,628.00	95.62%	\$ 907,135.00	8.89%
LESS:									
59200	Chargebacks to General Fund for CIP	-	-	-	-	-	-	-	-
	Chargebacks to General Fund for SSD	-	-	-	-	-	-	-	-
Net Operation & Maintenance Fund		\$ 691,738.85	\$ 741,406.18	\$ 764,218.38	\$ 833,098.00	\$ 796,628.00	95.62%	\$ 907,135.00	8.89%



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			
<i>Management:</i>			
Director of IT	1	1	1
Total Management	1	1	1

Information Technology (continued)

Staffing History (continued)

Division & Position	Approved Positions FY17-18	Approved Positions FY18-19	Budgeted Positions FY19-20
<i>Information Systems (IT):</i>			
IT Technician I	1	0	0
IT Systems Administrator II	1	0	0
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
<i>Geographic Information Systems (GIS):</i>			
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	10	10	10

Accomplishments for FY 2018-2019

- ★ Expanded Cityworks report library for multiple divisions, increased SQL automation processes, and numerous software customizations for MSD.
- ★ Cityworks implementation expanded to include IWC Grease Trap inspections, Safety Site inspections, Plant Operator maintenance requests and Flow Monitoring work orders/inspections.
- ★ Replaced/upgraded the MSD Phone and Voicemail Systems.
- ★ Replaced Server Room Rack Uninterruptable Power Supplies that provide consistent power to MSD's servers and data storage.
- ★ New Server hardware/operating system for MSD's Domain Controllers and Cityworks.
- ★ New Domain Controllers bring increased domain functionality from version 2003 to 2016.

Information Technology (continued)

Accomplishments for FY 2018-2019 (continued)

- ★ New server for ESET antivirus and WSUS Windows update services.
- ★ Upgraded the MSD Finance/Payroll/Timesheet Navision software, including a new web interface.
- ★ Security and CCTV camera data moved to a separate network, isolating it from primary LAN traffic.
- ★ Pump Station wireless communications VPN redundancy for improved uptime and data reporting.
- ★ Rolled out over 30+ laptop/desktop replacements/installations for MSD users.
- ★ MSD users are being upgraded to the latest versions of Microsoft Windows, Office, and Adobe Acrobat Pro.
- ★ Improved GIS web map access speed and reliability with the new servers and dedicated mapping storage.
- ★ Contributed to the establishment of grease business inspection configuration in Cityworks
- ★ Contributed to the establishment of plant structures mapping and configuration in Cityworks
- ★ Made high accuracy GPS map improvements to nearly 700 features, with visits to over 1200 locations
- ★ Conducted field visits to find and record missing data for network infrastructure, such as rim elevations, pipe diameters, and materials
- ★ Generated work orders for maintenance if GPS inspections show sewerage is in poor or dangerous condition
- ★ Used high accuracy GPS map to provide benchmarks for use by MSD's drafting team
- ★ All field locates are now verified by high-accuracy GPS inspection
- ★ Photographed and documented all manholes where GPS inspection has been performed
- ★ Worked with System Services Division to identify, locate, and inspect specialized system infrastructure that had previously been unmapped
- ★ Checked that mapped infrastructure physically exists
- ★ Written an application to combine record drawing PDF documents and make them available on web, mobile, and desktop GIS applications
- ★ Improved mapping of fiber optics in and around the MSD campus, including known AT&T fiber locations
- ★ Replaced aging web and GIS database servers

Information Technology (continued)

Accomplishments for FY 2018-2019 (continued)

- ★ Updated MSD GIS data to current North Carolina coordinate system
- ★ Introduced a Web-based parcel drafter widget to check correctness of plat maps
- ★ Improved MSD's regional street maintenance layer
- ★ Introduced streamlined mobile viewer
- ★ Deployed backup GIS for mobile users that will work if Mull Building loses power or internet connection
- ★ Used MSD-supplied drone aeriels to produce maps of new construction at the WRF
- ★ Created ArcGIS relationship classes to facilitate advanced Cityworks asset management functionality
- ★ Georeferenced I-240 and I-26 project data so that it can be viewed over MSD GIS data on web and desktop applications
- ★ Produced flow monitor maps from Cityworks data to alert field crews of temporary flow monitor locations
- ★ Improved streams layer to ensure all SSO's are reported as required
- ★ Automated production of basin addresses that are suitable for USPS bulk mailing
- ★ Performed training on all GIS applications, data products, and services
- ★ Gave presentations in MSD wastewater certification classes

Goals & Objectives

- ⦿ Goal: Provide all MSD staff with outstanding customer service
- ⦿ Goal: Begin 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

Information Technology (continued)

Goals & Objectives (continued)

- ⦿ Goal: Implement tighter quality control measures on existing data as well as research and correct any error found through these tighter controls
- ⦿ 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
- ⦿ 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

Information Technology (continued)

Goals & Objectives (continued)

- ⦿ 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
- ⦿ 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.
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Information Technology (continued)

Goals & Objectives (continued)

- ⦿ 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.
- ⦿ 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.

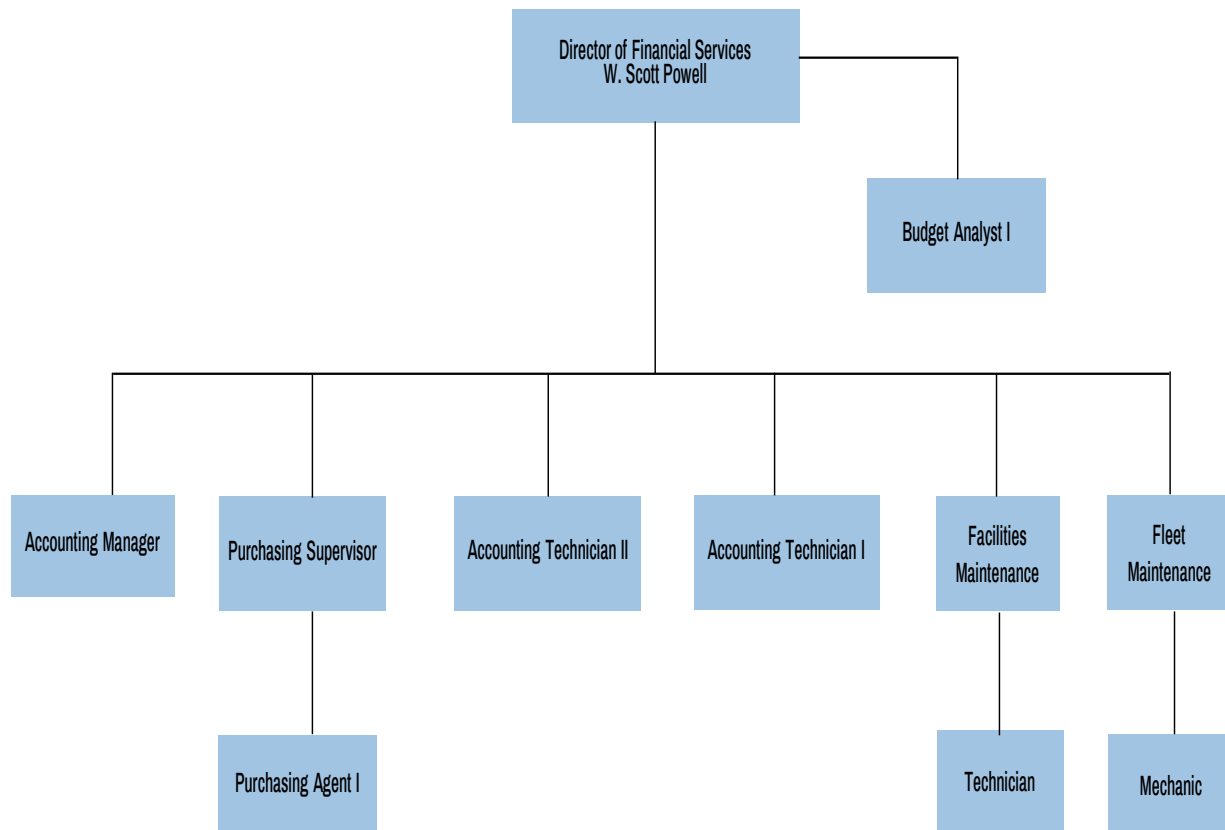
FY20 Budget - Information Technology

No.	Name	ACTUAL 2015-2016	ACTUAL 2016-2017	ACTUAL 2017-2018	Adopted 2018-2019 Budget	Estimated Actual 6/30/2019	Percent Expended To Total Budget	Proposed 2019-2020 Budget	Inc (Dec) Over Prior Year
Salaries & Wages									
51100	Salaries & Wages	\$ 645,005.83	\$ 665,934.72	\$ 687,663.31	\$ 709,176.00	\$ 709,176.00	100.00%	\$ 726,192.00	2.40%
51150	Overtime	-	-	-	-	-	-	-	-
Total Salaries & Wages		645,005.83	665,934.72	687,663.31	709,176.00	709,176.00	100.00%	726,192.00	2.40%
Benefits									
51200	North Carolina Retirement	43,467.58	49,275.71	52,289.12	55,529.00	55,529.00	100.00%	65,502.00	17.96%
51250	Payroll Taxes	46,845.70	51,925.32	50,467.23	54,252.00	54,252.00	100.00%	55,553.00	2.40%
51300	Medical, Dental & Life	122,824.37	128,962.00	138,633.00	146,654.00	146,654.00	100.00%	154,116.00	5.09%
51325	Post Retirement Insurance	13,000.63	18,243.00	16,858.00	20,642.00	20,642.00	100.00%	18,742.00	-9.20%
51350	Worker's Compensation	14,647.00	18,445.00	18,445.00	18,322.00	18,322.00	100.00%	18,078.00	-1.33%
51360	State Unemployment Benefits	423.16	72.21	283.66	2,200.00	2,200.00	100.00%	2,150.00	-2.27%
51500	401-K/457 Plan	26,411.03	31,246.20	33,826.05	35,460.00	35,460.00	100.00%	36,311.00	2.40%
Total Benefits		267,619.47	298,169.44	310,802.06	333,059.00	333,059.00	100.00%	350,452.00	5.22%
Total Salaries, Wages & Benefits		912,625.30	964,104.16	998,465.37	1,042,235.00	1,042,235.00	100.00%	1,076,644.00	3.30%
Materials, Supplies & Services									
52050	Dues & Subscriptions	298.94	497.23	438.92	575.00	560.00	97.39%	870.00	51.30%
52150	Travel, Mtgs & Training	413.55	1,463.58	1,897.22	4,770.00	4,734.00	99.25%	4,800.00	0.63%
52180	Liability Insurance	11,670.00	10,557.00	10,557.00	10,557.00	10,557.00	100.00%	10,557.00	0.00%
52200	Telephone/Telefax	29,427.21	31,559.30	34,442.61	38,000.00	37,500.00	98.68%	38,000.00	0.00%
52210	Communications	3,967.35	3,090.73	3,982.60	4,766.00	4,766.00	100.00%	5,500.00	15.40%
52240	Uniforms	184.19	189.75	1,030.72	850.00	850.00	100.00%	850.00	0.00%
52250	Office Supplies	111.14	96.82	67.88	500.00	460.00	92.00%	500.00	0.00%
52260	Special Dept Supplies	462.58	249.63	1,336.75	1,995.00	1,900.00	95.24%	1,995.00	0.00%
52270	Safety Equip/Supplies	34.59	16.70	264.85	1,000.00	965.00	96.50%	1,000.00	0.00%
52280	Maint Supp/Small Tools	-	-	-	1,500.00	1,375.00	91.67%	1,500.00	0.00%
52350	Prof/Contractual Svcs	1,883.54	2,711.28	11,074.72	12,500.00	10,000.00	80.00%	10,000.00	-20.00%
52500	Rents/Leases	35,282.56	37,322.18	39,160.93	44,000.00	41,000.00	93.18%	44,000.00	0.00%
52510	Permits/Fees/Software Licenses	175,063.58	174,649.99	176,308.88	198,750.00	191,250.00	96.23%	192,350.00	-3.22%
52910	Non-Capital Equipment	13,868.52	42,104.13	44,846.05	55,650.00	55,650.00	100.00%	55,000.00	-1.17%
52915	Copiers Printers & Faxes	-	-	-	4,000.00	3,950.00	98.75%	4,000.00	0.00%
52920	Billing & Collections	-	-	-	-	-	-	-	-
Total Materials, Supplies & Services		272,667.75	304,508.32	325,409.13	379,413.00	365,517.00	96.34%	370,922.00	-2.24%
Interfund Transfers									
52340	Debt Administration Expenses	-	-	-	-	-	-	-	-
53040	Fleet Replacement Charges	-	-	-	-	-	-	-	-
53050	WWTP Replacement Charges	-	-	-	-	-	-	-	-
53070	Pump Replacement Charges	-	-	-	-	-	-	-	-
Total Interfund Transfers		-	-	-	-	-	-	-	-
Capital Outlay									
54010	Capital Equipment - New	45,958.49	11,299.51	8,370.68	20,200.00	20,200.00	100.00%	13,500.00	-33.17%
54020	Capital Equip-Software	18,353.88	354.22	9,830.37	3,200.00	3,200.00	100.00%	-	-100.00%
54030	Capital Equip - Replacement	31,455.25	40,992.98	25,684.68	23,500.00	23,500.00	100.00%	27,800.00	18.30%
Total Capital Outlay		95,767.62	52,646.71	43,885.73	46,900.00	46,900.00	100.00%	41,300.00	-11.94%
Sub-Total O&M Fund		\$ 1,281,060.67	\$ 1,321,259.19	\$ 1,367,760.23	\$ 1,468,548.00	\$ 1,454,652.00	99.05%	\$ 1,488,866.00	1.38%
59200	LESS:								
	Chargebacks to General Fund for CIP	(286,819.52)	(297,651.20)	(310,331.89)	(311,173.00)	(311,173.00)	100.00%	(329,976.00)	6.04%
	Chargebacks to General Fund for SSD	-	-	-	-	-	-	-	-
Net Operation & Maintenance Fund		\$ 994,241.15	\$ 1,023,607.99	\$ 1,057,428.34	\$ 1,157,375.00	\$ 1,143,479.00	98.80%	\$ 1,158,890.00	0.13%



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 the *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 FY17-18	Approved Positions FY18-19	Budgeted Positions FY19-20
Department of Financial Services			
<i>Management</i>			
Director of Financial Services	1	1	1
Total Management	1	1	1
<i>Finance & Budget:</i>			
Budget Analyst	1	1	1
Total Finance & Budget	1	1	1
<i>Accounting, Investments & Cash Flow Management:</i>			
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 FY17-18	Approved Positions FY18-19	Budgeted Positions FY19-20
<i>Purchasing & Warehouse:</i>			
Purchasing Agent I	1	1	1
Purchasing Agent II	1	0	0
Purchasing Supervisor	1	1	1
Total Purchasing & Warehouse	3	2	2
<i>Facilities Maintenance: (moved to Finance Division in FY20)</i>			
Facility Maintenance Technician	-	-	5
Facilities Maintenance Supervisor	-	-	1
Total Structural Maintenance	-	-	6
<i>Fleet Maintenance: (moved to Finance Division in FY20)</i>			
Fleet Mechanic III	-	-	3
Fleet Maintenance Supervisor	-	-	1
Total Fleet Maintenance	-	-	4
Total – Financial Services Department	7	7	21

Accomplishments for FY 2018-2019

- ★ Received the GFOA “Excellence in Financial Reporting” award for the Comprehensive Annual Financial Report (CAFR) for FY ending June 30, 2018.
- ★ 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 2018-2019 (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	FY16-17	FY17-18	FY18-19 (est.)
1. Receive the Distinguished Budget Presentation Award	yes	yes	yes
2. Receipt of GFOA Excellence in Financial Reporting Award for CAFR	yes	yes	yes
3. CAFR and budget document available on website	yes	yes	yes
4. District debt rating Moody's/Standard & Poor's/Fitch	Aa1/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	2.00%	1.89%	1.50%
8. MSD rate increase	2.50%	2.50%	2.50%
Comments: Assesses affordability of sewer rate increases when compared to overall regional price increases.			
9. Ratio of actual to budgeted sewer revenues	105.98%	104.74%	100.31%
10. Ratio of operating and maintenance total expenditures actual to budgeted	95.15%	96.02%	99.37%
Comments: These illustrate the accuracy of financial projections and adequacy of revenues to meet expenditures.			
11. Interest and debt management costs as a percentage of outstanding debt	3.83%	3.86%	3.93%
12. MSD Investment Yield	1.06%	1.17%	2.01%
13. NC Cash Management Trust (Money Market)	0.73%	1.18%	1.95%
14. 6-Month T-Bill Secondary Market (Calendar)	1.09%	1.55%	2.27%
Comments: Rates of return reflect overall declining interest rates in the fixed income market.			
15. Collection of internally billed residential accounts	95.05%	95.75%	96.00%
16. Collection of internally billed industrial accounts	100.00%	100.00%	100.00%
17. Percentage of voided accounts payable checks	0.01%	.02%	.01%
Comments: This ratio illustrates the effectiveness of the cash disbursement process.			
18. Percentage of total O&M costs expended on Finance function	5.06%	5.05%	5.10%
19. Purchase orders placed within 3 business days	98.5%	98.75%	99.00%
20. Requisitions for capital equipment to be bid within two (2) weeks from receipt of detailed specifications from division	99.0%	99.00%	99.00%
21. Maintain loss of inventory at Warehouse below 3% in value (Goal 2)	1.85%	1.38%	1.50%
22. Obtain the 12% goal for purchases with minority owned/operated businesses	11.00%	11.00%	11.00%

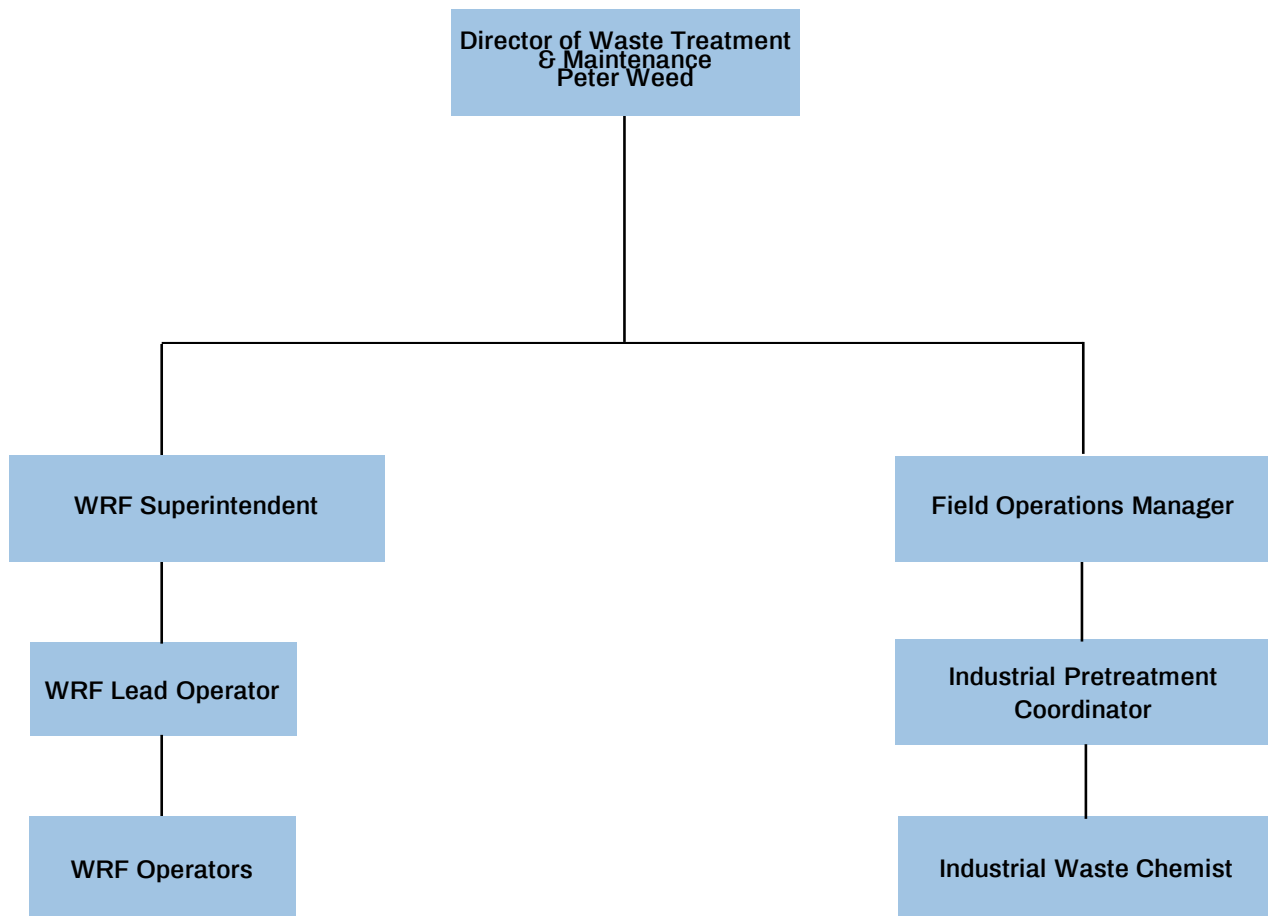
FY20 Budget - Financial Services

No.	Name	ACTUAL 2015-2016	ACTUAL 2016-2017	ACTUAL 2017-2018	Adopted 2018-2019 Budget	Estimated Actual 6/30/2019	Percent Expended To Total Budget	Proposed 2019-2020 Budget	Inc (Dec) Over Prior Year
Salaries & Wages									
51100	Salaries & Wages	\$ 1,053,397.04	\$ 1,087,860.75	\$ 1,095,693.59	\$ 1,088,358.00	\$ 1,088,358.00	100.00%	\$ 1,122,139.00	3.10%
51150	Overtime	24,426.32	15,312.64	20,464.83	20,000.00	20,000.00	100.00%	21,000.00	5.00%
Total Salaries & Wages		1,077,823.36	1,103,173.39	1,116,158.42	1,108,358.00	1,108,358.00	100.00%	1,143,139.00	3.14%
Benefits									
51200	North Carolina Retirement	72,515.90	81,888.92	85,000.00	86,785.00	86,785.00	100.00%	103,110.00	18.81%
51250	Payroll Taxes	77,600.85	80,412.01	81,564.12	84,789.00	84,789.00	100.00%	87,450.00	3.14%
51300	Medical, Dental & Life	233,365.79	232,131.00	249,540.00	249,312.00	249,312.00	100.00%	261,999.00	5.09%
51325	Post Retirement Insurance	24,699.21	32,837.00	30,344.00	35,090.00	35,090.00	100.00%	31,861.00	-9.20%
51350	Worker's Compensation	27,830.00	33,203.00	33,203.00	31,148.00	31,148.00	100.00%	30,735.00	-1.33%
51360	State Unemployment Benefits	804.00	166.08	510.59	3,740.00	3,740.00	100.00%	3,655.00	-2.27%
51500	401-K/457 Plan	46,577.69	47,970.71	50,008.52	54,419.00	54,419.00	100.00%	56,109.00	3.11%
Total Benefits		483,393.44	508,608.72	530,170.23	545,283.00	545,283.00	100.00%	574,919.00	5.43%
Total Salaries, Wages & Benefits		1,561,216.80	1,611,782.11	1,646,328.65	1,653,641.00	1,653,641.00	100.00%	1,718,058.00	3.90%
Materials, Supplies & Services									
52050	Dues & Subscriptions	2,149.00	1,485.00	2,126.33	2,000.00	1,800.00	90.00%	2,000.00	0.00%
52150	Travel, Mtgs & Training	4,334.56	6,099.85	4,916.87	16,433.00	8,400.00	51.12%	15,500.00	-5.68%
52180	Liability Insurance	146,061.00	132,144.00	132,144.00	132,144.00	132,144.00	100.00%	132,144.00	0.00%
52210	Communications	6,121.96	5,601.19	6,867.91	8,300.00	8,225.00	99.10%	8,300.00	0.00%
52240	Uniforms	6,119.34	4,713.81	5,969.25	7,700.00	7,675.00	99.68%	7,700.00	0.00%
52250	Office Supplies	1,982.90	3,052.86	2,404.23	3,750.00	3,600.00	96.00%	3,750.00	0.00%
52260	Special Dept Supplies	373,633.59	362,893.82	386,599.72	413,345.00	413,320.00	99.99%	423,600.00	2.48%
52270	Safety Equip/Supplies	634.91	1,073.23	1,603.98	1,250.00	1,250.00	100.00%	1,250.00	0.00%
52280	Maint Supp/Small Tools	3,712.53	2,943.01	21,643.82	18,500.00	18,500.00	100.00%	18,500.00	0.00%
52290	Chemical Supplies	1,487.80	2,273.90	2,243.00	4,000.00	4,000.00	100.00%	4,000.00	0.00%
52350	Prof/Contractual Svcs	114,604.95	141,294.56	122,875.01	141,675.00	141,675.00	100.00%	96,000.00	-32.24%
52410	Maint-Buildings & Grounds	7,583.55	9,392.09	7,304.19	10,000.00	10,000.00	100.00%	10,000.00	0.00%
52450	Equipment Rental	520.27	-	-	500.00	500.00	100.00%	500.00	0.00%
52460	Motor Fuel & Lubricants	128,263.06	128,800.36	156,214.88	210,000.00	210,000.00	100.00%	215,000.00	2.38%
52470	Outside Vehicle Maint	12,483.16	11,375.26	11,585.14	15,000.00	15,000.00	100.00%	15,000.00	0.00%
52510	Permits/Fees/Software Licenses	1,789.10	2,982.90	2,494.90	3,293.00	3,293.00	100.00%	3,200.00	-2.82%
52910	Non-Capital Equipment	1,211.84	2,191.65	549.44	1,200.00	1,200.00	100.00%	1,850.00	37.50%
52920	Billing & Collections	-	-	-	-	-	-	-	-
Total Materials, Supplies & Services		812,693.52	818,317.49	867,542.67	989,090.00	980,582.00	99.14%	958,094.00	-3.13%
Interfund Transfers									
53040	Fleet Replacement Charges	5,574.00	5,574.00	5,574.00	6,058.00	6,058.00	100.00%	6,058.00	0.00%
53070	Pump Replacement Charges	-	-	-	-	-	-	-	-
Total Interfund Transfers		5,574.00	5,574.00	5,574.00	6,058.00	6,058.00	100.00%	6,058.00	0.00%
Capital Outlay									
54010	Capital Equipment - New	10,642.65	447.79	4,902.46	-	-	-	-	-
54030	Capital Equip - Replacement	-	-	3,881.99	-	-	-	-	-
Total Capital Outlay		10,642.65	447.79	8,784.45	-	-	-	-	-
Sub-Total O&M Fund		\$ 2,390,126.97	\$ 2,436,121.39	\$ 2,528,229.77	\$ 2,648,789.00	\$ 2,640,281.00	99.68%	\$ 2,682,210.00	1.26%
LESS:									
59200	Chargebacks to General Fund for CIP	-	-	-	-	-	-	-	-
	Chargebacks to General Fund for SSD	-	-	-	-	-	-	-	-
Net Operation & Maintenance Fund		\$ 2,390,126.97	\$ 2,436,121.39	\$ 2,528,229.77	\$ 2,648,789.00	\$ 2,640,281.00	99.68%	\$ 2,682,210.00	1.26%



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 32 remote pump stations; maintain 24 hour shift operation and emergency response; assure that all treated wastewater meets all discharge requirements; maintain all mechanical, electrical, pneumatic equipment and instrumentation; maintain a preventive & proactive maintenance program; assure that residuals management program complies with Federal and State regulations; operate and maintain the Craggy Dam Hydro Electric Power Generation facility.

Staffing History

Division & Position	Approved Positions FY17-18	Approved Positions FY18-19	Budgeted Positions FY19-20
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	2	0	1
Lead Operator	3	3	4
WRF Operator	6	8	7
WRF Operations Manager	1	1	1
Total Plant Operations	12	12	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 FY17-18	Approved Positions FY18-19	Budgeted Positions FY19-20
<i>Field Operations:</i>			
Industrial Pretreatment Coordinator	1	1	1
Grease Trap Inspector/Chemist	1	1	1
SCADA/PLC Technician (moved to SS Division in 2019)	2	2	-
Field Operations Supervisor	1	1	1
Total Industrial Waste	5	5	3
<i>Mechanical/Electrical Maintenance: (moved to SS Division in 2019)</i>			
Electrical Maintenance Crew Leader	1	1	-
Electrical IV/Specialist	1	1	-
Senior Electrician	2	2	-
Mechanical Maintenance Crew Leader	1	1	-
Mechanical Specialist	1	0	-
Mechanic II	3	4	-
Senior Mechanic	2	1	-
Maintenance Manager	1	1	-
Total Mechanical/Electrical Maintenance	12	11	-
<i>Facilities Maintenance: (moved to Finance Division in FY20)</i>			
Facility Maintenance Technician	5	5	-
Facilities Maintenance Supervisor	1	1	-
Total Structural Maintenance	6	6	-
<i>Fleet Maintenance: (moved to Finance Division in FY20)</i>			
Fleet Mechanic III	3	3	-
Fleet Maintenance Supervisor	1	1	-
Total Fleet Maintenance	4	4	-
Total – Wastewater Treatment Plant Department	40	40	18

Wastewater Treatment Plant (continued)

Accomplishments for FY 2018-2019

- ★ Maintained compliance with all National Pollution Discharge Elimination Systems (with one exception for weekly fecal coliform limit exceedance) and WNC & EPA Air Quality permits and standards during FY19.
- ★ Recognized for a Peak Performance Award by the National Association of Clean Water Agencies (NACWA) at the Silver Level Award for calendar 2018.
- ★ Recovery of over \$595,000 in electric power savings from the Hydroelectric Power facility.
- ★ Completion of the Headworks Project; replacement of influent $\frac{3}{4}$ " spacing bar screens with narrower $\frac{1}{2}$ " multi-rake system, replacement of influent control slide gates, start of fine-screen and vortex grit removal system, and storm surge conversion of disabled anaerobic digesters.
- ★ Replace the four groundwater monitoring wells positioned around the treatment plant.
- ★ Reworked 5 RBC shaft journals on site saving at minimum \$15,000 per unit to restore operation.
- ★ Began the High-Rate Primary Treatment project; slated to be completed in winter of 2020-21.
- ★ Treatment plant staff conducted over 25 guided tours of the facility with approximately 500 student and adult individuals attending.

Budget Highlights/Changes for FY 2019-2020

- 🏆 Maintain full compliance with all National Pollution Discharge Elimination Systems (NPDES) and WNC & EPA Air Quality permits and standards during FY2019.
- 🏆 Complete construction of Headworks Project; replacement influent bar screens, $\frac{1}{4}$ -inch perforated mesh fine screens, vortex grit removal, and storm surge protection.
- 🏆 Centralize front-end electrical power hub for Headworks and High-rate Primaries.
- 🏆 Begin construction of High-rate Primaries (Actiflo system).
- 🏆 Replace positive displacement pumps used in delivery of sludge cake to Fluidized Bed Incinerator.
- 🏆 Bore four replacement groundwater monitoring wells.

Wastewater Treatment Plant (continued)

Budget Highlights/Changes for FY 2019-2020 (continued)

- 🏆 Continue with planned roof replacements & structural rehab projects at WRF, Mull Building, & remote Pump Stations.
- 🏆 Maintain adequate capital purchases of replacement vehicles assuring maximum efficiency and effectiveness of service.

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 (H₂S) 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 Maintenance

Wastewater Treatment Plant (continued)

Performance Measures

Task	FY16-17	FY17-18	FY18-19 (est.)
1. Average flow treated in million gallons per day (MGD)	19.5	21.0	26.1
2. Maximum daily flow treated in MGD	53.0	68.8	67.5
3. Bio-solids processed in dry tons	6,523	7,280	7,556
4. Cost per million gallons (MG) treated	\$768	\$718	\$739
5. Energy costs per MG treated	\$117	\$118	\$102
6. CBOD removal efficiency percentage	94%	94%	92%
7. TSS removal efficiency percentage	97%	97%	95%
8. Number of NPDES permit violations (non-compliance)	0	1	0

FY20 Budget - Wastewater Treatment Plant

No.	Name	ACTUAL 2015-2016	ACTUAL 2016-2017	ACTUAL 2017-2018	Adopted 2018-2019 Budget	Estimated Actual 6/30/2019	Percent Expended To Total Budget	Proposed 2019-2020 Budget	Inc (Dec) Over Prior Year
Salaries & Wages									
51100	Salaries & Wages	\$ 1,206,556.22	\$ 1,152,584.69	\$ 1,154,407.32	\$ 1,062,726.40	\$ 1,062,726.40	100.00%	\$ 1,044,951.00	-1.67%
51150	Overtime	84,096.26	66,206.47	62,463.07	65,500.00	65,500.00	100.00%	68,000.00	3.82%
Total Salaries & Wages		1,290,652.48	1,218,791.16	1,216,870.39	1,128,226.40	1,128,226.40	100.00%	1,112,951.00	-1.35%
Benefits									
51200	North Carolina Retirement	86,976.05	89,783.44	92,551.34	88,340.58	88,340.00	100.00%	100,388.00	13.64%
51250	Payroll Taxes	93,179.80	88,743.65	88,330.24	86,309.94	86,310.00	100.00%	85,141.00	-1.35%
51300	Medical, Dental & Life	245,649.78	232,130.00	263,404.00	249,311.20	249,311.20	100.00%	277,412.00	11.27%
51325	Post Retirement Insurance	25,999.22	32,838.00	32,031.00	35,090.60	35,090.60	100.00%	33,735.00	-3.86%
51350	Worker's Compensation	29,294.00	33,203.00	33,203.00	30,827.60	30,827.60	100.00%	32,543.00	5.56%
51360	State Unemployment Benefits	846.31	144.42	510.59	3,740.00	3,740.00	100.00%	3,870.00	3.48%
51500	401-K/457 Plan	57,235.01	54,781.35	52,639.04	53,137.72	53,137.72	100.00%	52,250.00	-1.67%
Total Benefits		539,180.17	531,623.86	562,669.21	546,757.64	546,757.12	100.00%	585,339.00	7.06%
Total Salaries, Wages & Benefits		1,829,832.65	1,750,415.02	1,779,539.60	1,674,984.04	1,674,983.52	100.00%	1,698,290.00	1.39%
Materials, Supplies & Services									
52010	Advertising	2,303.00	7,413.44	8,047.47	9,500.00	8,850.00	93.16%	9,500.00	0.00%
52050	Dues & Subscriptions	13,983.04	17,720.55	18,368.59	18,450.00	18,450.00	100.00%	20,000.00	8.40%
52150	Travel, Mtgs & Training	15,893.93	21,633.29	16,959.41	19,580.00	18,950.00	96.78%	20,705.00	5.75%
52180	Liability Insurance	112,139.00	101,454.00	101,454.00	101,454.00	101,454.00	100.00%	101,454.00	0.00%
52210	Communications	32,850.88	30,362.29	34,230.62	33,116.00	33,100.00	99.95%	33,000.00	-0.35%
52240	Uniforms	7,840.30	7,511.15	9,712.92	9,300.00	9,200.00	98.92%	9,300.00	0.00%
52250	Office Supplies	3,680.56	2,713.42	2,818.93	2,460.04	2,450.00	99.59%	2,450.00	-0.41%
52260	Special Dept Supplies	19,279.79	30,105.35	35,219.51	35,500.00	33,425.00	94.15%	33,100.00	-6.76%
52270	Safety Equip/Supplies	5,768.44	6,408.85	9,220.38	6,600.00	6,500.00	98.48%	6,850.00	3.79%
52280	Maint Supp/Small Tools	4,350.26	4,746.09	3,279.28	1,900.00	1,900.00	100.00%	2,900.00	52.63%
52290	Chemical Supplies	428,168.48	419,288.93	421,007.33	505,950.00	500,050.00	98.83%	549,500.00	8.61%
52350	Prof/Contractual Svcs	170,328.84	225,364.49	197,977.71	220,495.00	216,995.00	98.41%	216,000.00	-2.04%
52510	Permits/Fees/Software Licenses	18,818.94	14,464.07	14,892.85	18,986.00	18,800.00	99.02%	18,900.00	-0.45%
52650	Utilities	854,796.20	1,016,535.30	1,065,032.02	1,165,377.00	1,150,000.00	98.68%	1,170,000.00	0.40%
52910	Non-Capital Equipment	15,700.92	7,820.21	3,715.04	5,889.96	5,889.96	100.00%	3,800.00	-35.48%
52920	Billing & Collections	-	-	-	-	-	-	-	-
Total Materials, Supplies & Services		1,705,902.58	1,913,541.43	1,941,936.06	2,154,558.00	2,126,013.96	98.68%	2,197,459.00	1.99%
Interfund Transfers									
53040	Fleet Replacement Charges	25,945.00	25,945.00	25,945.00	28,202.00	28,202.00	100.00%	28,202.00	0.00%
53070	Pump Replacement Charges	-	-	-	-	-	-	-	-
Total Interfund Transfers		25,945.00	25,945.00	25,945.00	28,202.00	28,202.00	100.00%	28,202.00	0.00%
Capital Outlay									
54010	Capital Equipment - New	7,991.00	1,938.88	11,332.38	10,950.00	10,950.00	100.00%	8,350.00	-23.74%
54030	Capital Equip - Replacement	11,563.55	11,973.00	18,817.07	7,860.00	7,860.00	100.00%	5,140.00	-34.61%
Total Capital Outlay		19,554.55	13,911.88	30,149.45	18,810.00	18,810.00	100.00%	13,490.00	-28.28%
Sub-Total O&M Fund		\$ 3,581,234.78	\$ 3,703,813.33	\$ 3,777,570.11	\$ 3,876,554.04	\$ 3,848,009.48	99.26%	\$ 3,937,441.00	1.57%
LESS:									
59200	Chargebacks to General Fund for CIP	-	-	-	-	-	-	-	-
	Chargebacks to General Fund for SSD	-	-	-	-	-	-	-	-
Net Operation & Maintenance Fund		\$ 3,581,234.78	\$ 3,703,813.33	\$ 3,777,570.11	\$ 3,876,554.04	\$ 3,848,009.48	99.26%	\$ 3,937,441.00	1.57%

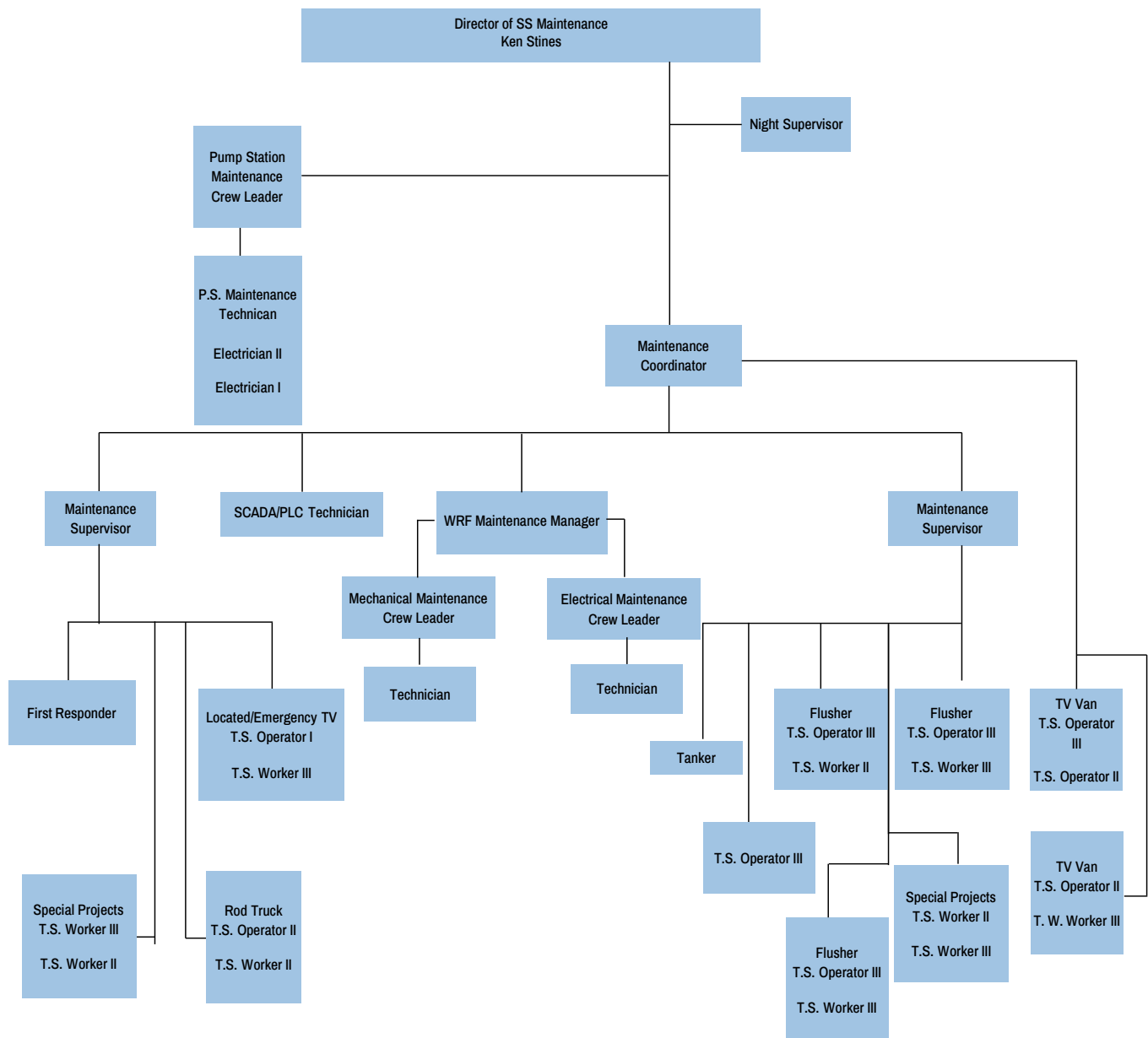
METROPOLITAN SEWERAGE DISTRICT

OF BUNCOMBE COUNTY, NORTH CAROLINA



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, 30 pump stations, and the treatment process until discharged into the French Broad River.

Key Responsibilities

Include maintenance and inspection of 1,037 miles of sanitary sewer line, operation, and maintenance of 30 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 17-18	Approved Positions 18-19	Budgeted Positions 19-20
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	0	1	1
Office Assistant II	2	1	1
SSD Administrator	1	1	1
Total Office Support	4	4	4

SS Maintenance (continued)

Staffing History (continued)

Division & Position	Approved Positions FY17-18	Approved Positions FY18-19	Budgeted Positions FY19-20
<i>Pump Station Maintenance:</i>			
Technicians	2	4	4
Crew Leader	1	1	1
Total Pump Station Maintenance	3	5	5
<i>Maintenance:</i>			
First Responder	2	2	2
Technical Services Worker I	2	0	0
Technical Services Worker II	5	6	6
Technical Services Worker III	6	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	1
Electrical IV/Specialist	1	1	1
Senior Electrician	2	2	2
Mechanical Maintenance Crew Leader	1	1	1
Mechanical Specialist	1	0	0
Mechanic II	3	3	3
Scada PLC Technician	0	2	2
Senior Mechanic	1	1	1
Maintenance Manager	1	1	1
Total Maintenance/Electrical Maintenance	11	12	12
Total - SS Maintenance Department	46	49	49

SS Maintenance (continued)

Accomplishments for FY 2018-2019

- ★ Cleaned over 899,000 LF of pipeline with in-house crews.
- ★ CCTV'd over 236,400 LF of sanitary sewer lines.
- ★ Mechanically rodded over 74,500 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 116,200 LF of acoustic inspection on the Collection System.
- ★ Smoke tested over 174,000 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.
- ★ Emergency by-pass performed at Biltmore twin 36" interceptors due to severe flooding of the Swannanoa River until repairs were made.
- ★ Assisted in by-passing plant flow during Water Reclamation Headworks project.
- ★ Removed tons of debris from influent of RBC Basin 1 and from Micro Screen Building to aid in Headworks project at the Water Reclamation Facility.
- ★ Recovery of over \$600,000 in electric power savings from the Hydro Electric Generation Facility.
- ★ Rebuilt north and south thickener at Plant including all three thickener pumps.
- ★ Installed three new clarifier pumps, check valves, rebuilt north and southwest drives.
- ★ Replaced filter fabric on one basin, replaced all check valves, plug valves, and rebuilt disk filter backwash system on quads 1, 3, and 4 at Aqua Disk Filter building.
- ★ Carrier Bridge water line and solenoid valve replacement for control valves.
- ★ Weaverville #1 Pump Station wet well rebuild, new base elbows, guide rails, hangers, and upgrade pumps from 75 HP to 100 HP.

SS Maintenance (continued)

Accomplishments for FY 2018-2019 (continued)

- ★ Installed new electric grinder at Weaverville #1 Pump Station
- ★ Raw pump #2 new pump install and rebuild old pump. Replaced packing on all three influent knife gates, replaced all three impellers and wear rings.
- ★ Installed by-pass system at Mountain View Pump Station
- ★ Installed new control panel at Black Mountain Pump Station
- ★ Installed new KSB pumps at Leicester Village Pump Station.
- ★ Inspected all three pump volutes and rotating assemblies at Carrier Bridge and replaced all wear rings on both the impellers and volutes. Installed new bearings in two of the rotating assemblies, resurfaced volute on pump #3.
- ★ Installed new Blue Star Generators and transfer switches at Weaverville #1, #2, Leicester Village, and Biltmore Lake #1.
- ★ Relocated generator at Waightstill Mountain to accommodate force main upgrade.
- ★ Installed mini-split heat pump at Avery Creek and Ferry Road.
- ★ Converted 28 pump and monitoring stations from radio communication to cell modem communication.
- ★ Upgraded 12 pump station and 11 monitor Scada RTU panels to Allen Bradley Micro Logix 1400 PLC.
- ★ Built and installed two Mobile Scada panels on the Godwin pump.
- ★ Upgrade of the pump control panels at Weaverville #1, #2, and Erwin Hills.

Budget Highlights/Changes for FY 2019-2020

- 🏆 Complete pump station Scada RTU and cell modem conversion on the remaining 15 stations.
- 🏆 Replace belt filter press control panel.
- 🏆 Upgrade the PLC and communication strategy for the Aqua Disk Filter and the intermediate pumps.
- 🏆 Replace 1 ½ quad filter fabric at Aqua Disk Filter building.
- 🏆 Install #3 turbine, rebuild #2 generator, and realignment of #2 and #3 generators/turbines.
- 🏆 Pump replacement at Waightstill Mountain pump station.

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

SS Maintenance (continued)

Goals & Objectives (continued)

- ◎ **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

- ◎ **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:* Develop equipment maintenance SOP on all equipment.
 - ✎ *Objective:* Development of electrical preventive maintenance program.

Performance Measures

Task	FY16-17	FY17-18	FY18-19 (est.)
1. Customer Service Response calls during normal working hours	1,307	1,364	1,315
2. Average Response Time	0.47	.45	.45
3. Customer Service Request calls (after hours & holidays)	760	796	766
4. Average Response Time (after hours & holidays)	0.59	.57	.58
5. Lines Washed (lineal feet)	885,687	1,052,024	899,000
6. Root Control chemical & rod (lineal feet)	115,213	72,196	74,500
7. TV Report (lineal feet)	237,581	295,754	236,400
8. Sanitary Sewer Overflow Totals	30	25	44
9. Smoke Testing	204,428	35,510	174,000
10. SL Rat Testing	177,040	107,946	116,200
11. WFR Preventive to Corrective Maintenance Ratio	30/70	30/70	40/60
12. Hydro Electric Generated KWH	6,745,596	5,906,769	10,569,052

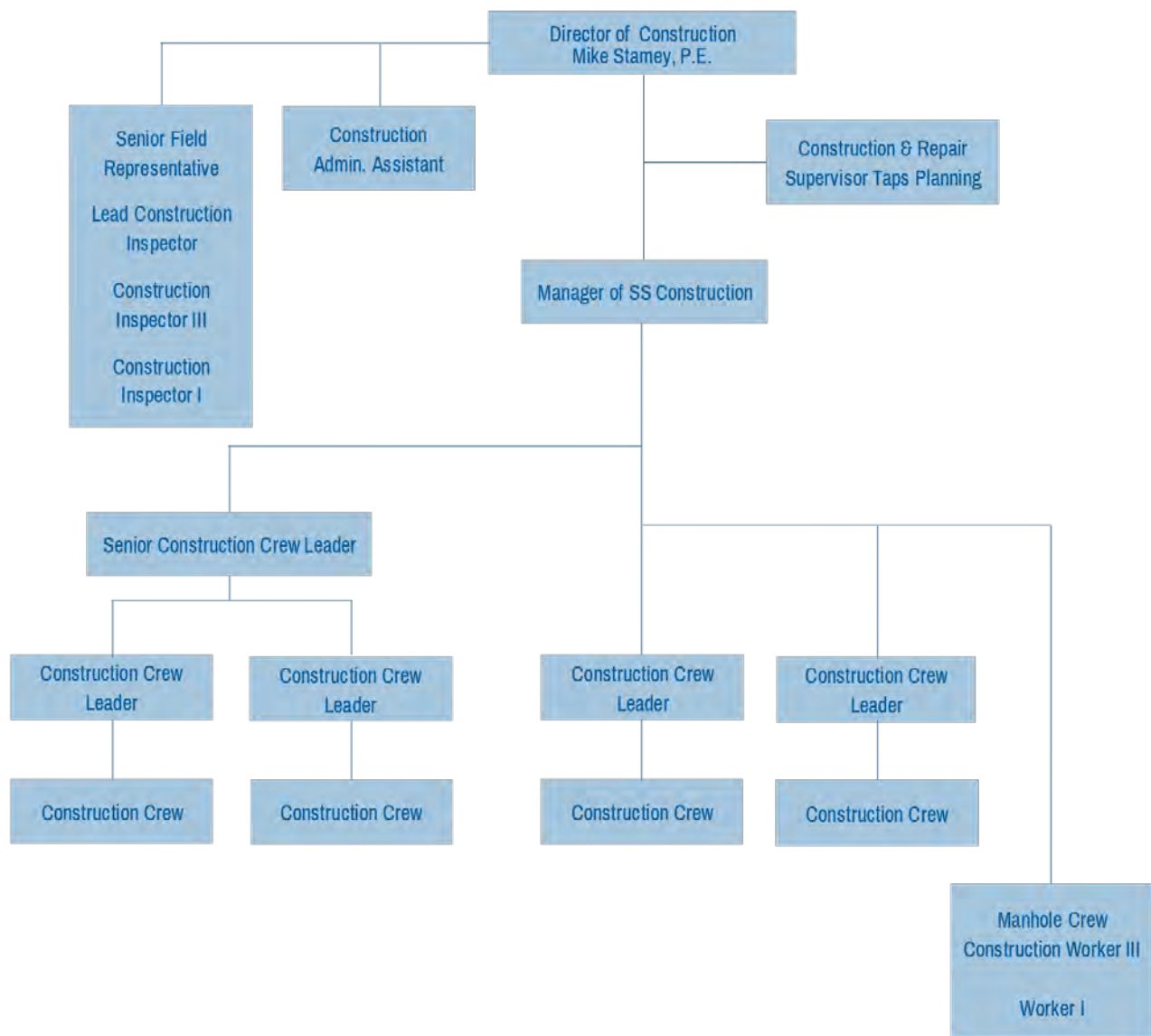
FY20 Budget - SS Maintenance

No.	Name	ACTUAL 2015-2016	ACTUAL 2016-2017	ACTUAL 2017-2018	Adopted 2018-2019 Budget	Estimated Actual 6/30/2019	Percent Expended To Total Budget	Proposed 2019-2020 Budget	Inc (Dec) Over Prior Year
Salaries & Wages									
51100	Salaries & Wages	\$ 1,999,439.48	\$ 2,186,838.28	\$ 2,197,031.74	\$ 2,422,558.60	\$ 2,422,558.60	100.00%	\$ 2,489,703.00	2.77%
51150	Overtime	121,131.06	136,439.87	164,659.54	165,000.00	165,000.00	100.00%	165,000.00	0.00%
Total Salaries & Wages		2,120,570.54	2,323,278.15	2,361,691.28	2,587,558.60	2,587,558.60	100.00%	2,654,703.00	2.59%
Benefits									
51200	North Carolina Retirement	140,220.12	170,858.67	178,214.87	202,605.42	202,605.00	100.00%	239,455.00	18.19%
51250	Payroll Taxes	151,788.95	169,013.60	172,201.30	197,949.06	197,949.00	100.00%	203,085.00	2.59%
51300	Medical, Dental & Life	491,298.56	567,429.00	609,987.00	689,272.80	689,272.80	100.00%	724,353.00	5.09%
51325	Post Retirement Insurance	51,998.44	80,270.00	74,176.00	97,016.40	97,016.40	100.00%	88,086.00	-9.21%
51350	Worker's Compensation	58,589.00	81,163.00	81,163.00	86,433.40	86,433.40	100.00%	84,974.00	-1.69%
51360	State Unemployment Benefits	1,692.63	288.84	1,219.75	10,120.00	10,120.00	100.00%	10,105.00	-0.15%
51500	401-K/457 Plan	84,197.20	93,544.50	96,292.99	121,130.28	121,130.28	100.00%	124,488.00	2.77%
Total Benefits		979,784.90	1,162,567.61	1,213,254.91	1,404,527.36	1,404,526.88	100.00%	1,474,546.00	4.99%
Total Salaries, Wages & Benefits		3,100,355.44	3,485,845.76	3,574,946.19	3,992,085.96	3,992,085.48	100.00%	4,129,249.00	3.44%
Materials, Supplies & Services									
52010	Advertising	3,329.18	3,990.67	6,054.19	7,000.00	7,000.00	100.00%	7,000.00	0.00%
52050	Dues & Subscriptions	4,188.25	4,061.50	4,881.67	8,850.00	8,850.00	100.00%	8,900.00	0.56%
52150	Travel, Mtgs & Training	34,128.98	32,998.14	33,962.76	42,058.00	42,058.00	100.00%	58,875.00	39.99%
52180	Liability Insurance	81,849.00	74,050.00	74,050.00	74,050.00	74,050.00	100.00%	74,050.00	0.00%
52210	Communications	24,525.78	29,442.82	30,803.17	56,378.00	56,378.00	100.00%	65,500.00	16.18%
52240	Uniforms	21,436.60	34,323.04	35,837.98	40,800.00	40,800.00	100.00%	42,200.00	3.43%
52250	Office Supplies	5,596.12	4,853.88	5,521.43	9,300.00	9,300.00	100.00%	9,300.00	0.00%
52260	Special Dept Supplies	2,872.54	2,590.94	1,928.40	5,000.00	5,000.00	100.00%	5,000.00	0.00%
52270	Safety Equip/Supplies	21,884.14	25,840.69	28,000.83	30,000.00	30,000.00	100.00%	30,000.00	0.00%
52280	Maint Supp/Small Tools	47,552.15	57,081.50	58,073.61	64,500.00	64,500.00	100.00%	70,000.00	8.53%
52290	Chemical Supplies	-	-	112.47	-	-	-	-	-
52300	Line Cleaning Supplies	56,262.15	64,291.02	45,515.56	53,000.00	53,000.00	100.00%	53,000.00	0.00%
52350	Prof/Contractual Svcs	32,749.33	75,843.43	66,744.52	113,005.00	113,005.00	100.00%	127,900.00	13.18%
52410	Maint-Buildings & Grounds	-	3,498.54	-	6,000.00	6,000.00	100.00%	56,700.00	845.00%
52420	Maintenance-Equipment	548,283.83	522,594.91	443,989.49	474,220.00	474,220.00	100.00%	504,220.00	6.33%
52430	Landscape Restoration	2,700.56	1,411.21	2,142.78	5,300.00	5,300.00	100.00%	5,300.00	0.00%
52440	Pump Maintenance	63,764.14	80,410.24	105,799.01	102,500.00	102,500.00	100.00%	102,500.00	0.00%
52450	Equipment Rental	4,959.04	-	3,085.95	6,700.00	6,700.00	100.00%	11,000.00	64.18%
52510	Permits/Fees/Software Licenses	20,482.41	21,984.07	21,003.68	26,123.00	26,123.00	100.00%	26,300.00	0.68%
52910	Non-Capital Equipment	7,135.55	3,899.87	6,358.98	10,000.00	10,000.00	100.00%	12,470.00	24.70%
52920	Billing & Collections	-	-	-	-	-	-	-	-
Total Materials, Supplies & Services		983,699.75	1,043,166.47	973,866.48	1,134,784.00	1,134,784.00	100.00%	1,270,215.00	11.93%
Interfund Transfers									
53040	Fleet Replacement Charges	210,602.00	210,602.00	228,102.00	247,935.00	247,935.00	100.00%	247,935.00	0.00%
53050	WWTP Replacement Charges	200,000.00	200,000.00	200,000.00	180,000.00	180,000.00	100.00%	200,000.00	11.11%
53070	Pump Replacement Charges	-	-	-	50,000.00	50,000.00	100.00%	50,000.00	0.00%
Total Interfund Transfers		410,602.00	410,602.00	428,102.00	477,935.00	477,935.00	100.00%	497,935.00	4.18%
Capital Outlay									
54010	Capital Equipment - New	3,204.00	8,910.98	27,528.85	8,517.00	8,517.00	100.00%	16,300.00	91.38%
54030	Capital Equip - Replacement	24,956.30	14,682.59	32,241.22	13,800.00	13,800.00	100.00%	28,650.00	107.61%
Total Capital Outlay		28,160.30	23,593.57	59,770.07	22,317.00	22,317.00	100.00%	44,950.00	101.42%
Sub-Total O&M Fund		\$ 4,522,817.49	\$ 4,963,207.80	\$ 5,036,684.74	\$ 5,627,121.96	\$ 5,627,121.48	100.00%	\$ 5,942,349.00	5.60%
59200 LESS:									
	Chargebacks to General Fund for CIP	-	-	-	-	-	-	-	-
	Chargebacks to General Fund for SSD	-	-	-	-	-	-	-	-
Net Operation & Maintenance Fund		\$ 4,522,817.49	\$ 4,963,207.80	\$ 5,036,684.74	\$ 5,627,121.96	\$ 5,627,121.48	100.00%	\$ 5,942,349.00	5.60%



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 17-18	Approved Positions 18-19	Budgeted Positions 19-20
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	0	1	1
Construction Inspector III	3	2	2
Construction Inspector IV	0	0	0
Lead Construction Inspector	0	1	1
Senior Field Representative	1	1	1
Total Construction Administration	5	6	6

SS Construction (continued)

Staffing History (continued)

Division & Position	Approved Positions FY17-18	Approved Positions FY18-19	Budgeted Positions FY19-20
<i>Construction:</i>			
Construction Worker I	5	1	1
Construction Worker II	2	6	6
Construction Worker III	4	4	4
Construction Operator I	2	1	1
Construction Operator II	0	1	1
Construction Operator III	1	1	1
Construction Crew Leader	4	3	3
Senior Construction Crew Leader	1	1	1
Construction & Repair Supervisor	1	1	1
Heavy Equipment Excavator I	3	2	2
Heavy Equipment Excavator II	3	5	5
Manager of SS Construction	1	1	1
Total Construction	27	27	27
Total – SS Construction Department	33	34	34

Accomplishments for FY 2018-2019

- ★ Rehabilitated 20,800 LF of main sewer line with in-house construction crews.
- ★ Utilized Trenchless Technologies for over 2,000 LF of mainline rehabilitation and 770 LF of service line installation. Through these efforts approximately 2,850 LF of existing asphalt surfaces were maintained.
- ★ Cleared over 43,800 LF of sewer line Right-of-Way.
- ★ Completed over 1,080 work order requests during the year.
- ★ Coordinated (2) joint venture projects with the other agencies to facilitate overall cost savings and/or other benefits for both agencies.
- ★ 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.




SS Construction (continued)

Accomplishments for FY 2018-2019 (continued)

- ★ 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 3 locations during FY 18-19. 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.
- ★ The Construction Administration group provided inspection services for nine (9) Collection System CIP projects; eight (8) Water Reclamation Facility related projects, and seventy-three (73) Planning and Development related sewer extensions.
- ★ Constructed multiple emergency by-pass force main lines in FY 18-19. This includes 1,200 LF for the Lower Swannanoa Interceptor line at 190 Meadow Road (Railroad Yard) Emergency Repair, 681 LF at the MSD Wastewater Reclamation Facility for the Headworks improvement project shutdown/tie-in, and 2,700 LF along Riverside Drive for repair/upgrade on the Weaverville #2 Force Main.
- ★ Provided assistance at the Water Reclamation Facility for the Primary High Rate Treatment project by hauling off 24 loads (322 tons) of debris related to demolition for the Micro-Screen Building. In-house construction crews also replaced a valve on the water line adjacent to the Incinerator Building.
- ★ Repaired multiple sections of 21" VCP interceptor sewer line during the weekend of September 21-23, 2018 adjacent to McDowell Street in Asheville.
- ★ Special trainings for the year included a NC Highway Patrol led class that focused on proper highway operation of dump trucks and loaded trailers, a Stihl Corporation led class on proper operation and safety for pipe saws and chainsaws, one employee attended supervisory development/leadership training at WCI, and three employees advanced with their North Carolina Wastewater Collections Grade I-IV Certifications.

SS Construction (continued)

Budget Highlights/Changes for FY 2019-2020

-  Purchase of (2-6 inch) pipe bursting machine to increase trenchless technology capabilities for MSD in-house crews.
-  Purchase of automated flagger/traffic control system to increase roadside safety of MSD employees and vehicular traffic.
-  Purchase of new straw blower unit to improve safety for MSD employees and efficiency in spreading straw for site restoration on in-house construction projects.

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

SS Construction (continued)

Goals & Objectives (continued)

⦿ **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 insure safety policies and procedures are followed

⦿ **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	FY16-17	FY17-18	FY18-19 (est.)
1. Construction Repairs	557	508	488
2. Taps Installed	363	351	321
3. Manhole Repairs	330	323	282
4. Right-of-Way Clearing (lineal feet)	37,758	42,238	43,800
5. Other Trenchless Line Rehabilitation (lineal feet)	1,859	1,045	770
6. Dig & Replace Rehabilitation (lineal feet)	10,818	10,123	16,170
7. IRS (lineal feet)	144	522	0
8. Construction Rehabilitation (lineal feet)	1,132	1,759	2,630
9. Pipe Bursting Main Line (lineal feet)	3,965	4,348	400
10. Boring Main Line (lineal feet)	4,213	3,399	1,600
11. Total Construction Rehabilitation Footage (lineal feet) (Items 6, 7, 8, 9, 10)	20,272	20,151	20,800
12. Sewer Rehabilitation Inspected on CIP Projects (lineal feet)	28,844	28,165	25,000
13. Sewer Extensions Inspected from Development Projects (lineal feet)	32,945	27,830	24,900

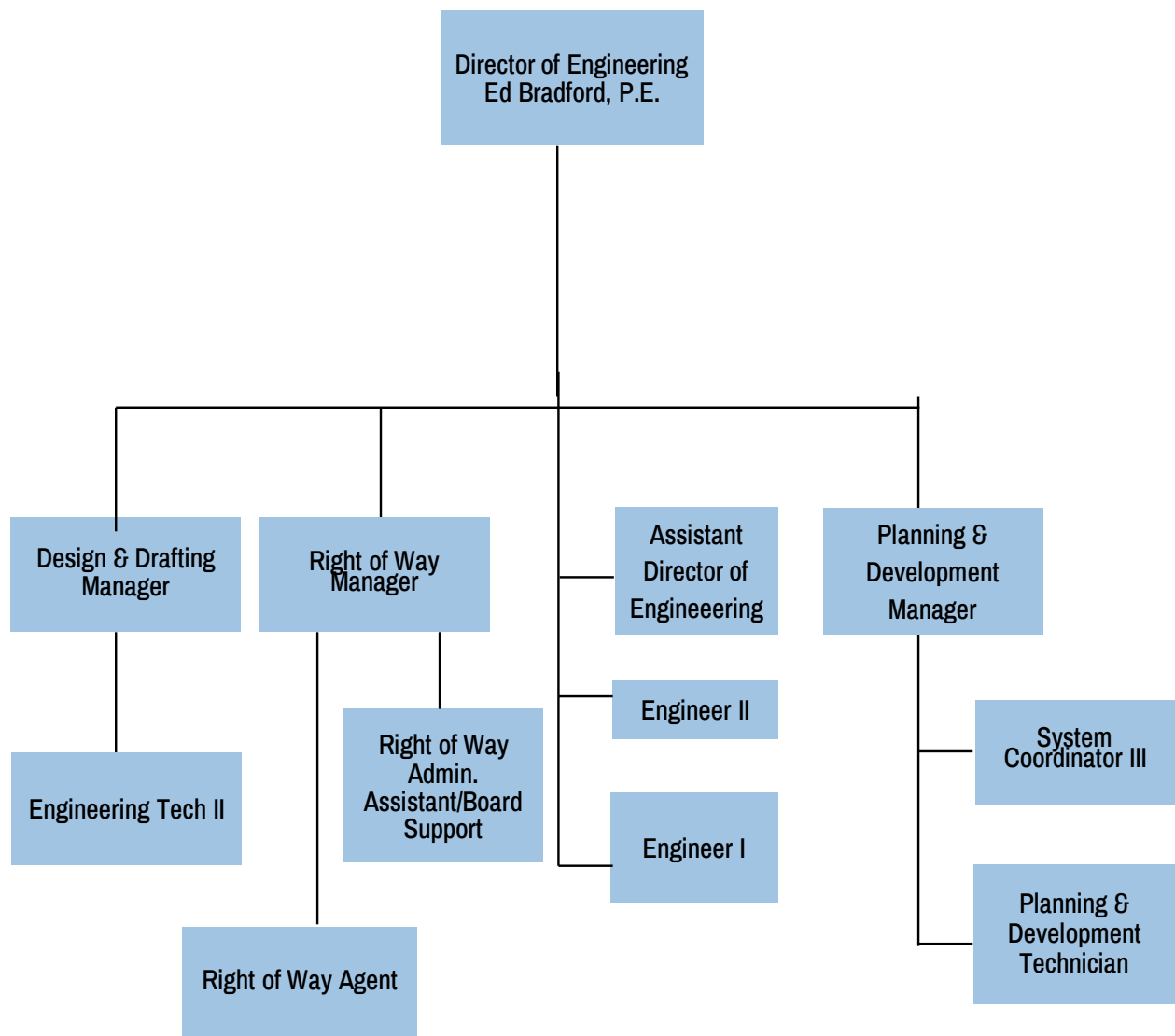
FY20 Budget - SS Construction

No.	Name	Actual 2015-2016	Actual 2016-2017	Actual 2017-2018	Adopted 2018-2019 Budget	Estimated Actual 6/30/2019	Percent Expended To Total Budget	Proposed 2019-2020 Budget	Inc (Dec) Over Prior Year
Salaries & Wages									
51100	Salaries & Wages	\$ 1,662,122.73	\$ 1,617,818.55	\$ 1,705,911.31	\$ 1,790,303.00	\$ 1,790,303.00	100.00%	\$ 1,828,687.00	2.14%
51150	Overtime	50,216.31	37,745.08	34,113.14	69,000.00	69,000.00	100.00%	69,000.00	0.00%
Total Salaries & Wages		1,712,339.04	1,655,563.63	1,740,024.45	1,859,303.00	1,859,303.00	100.00%	1,897,687.00	2.06%
Benefits									
51200	North Carolina Retirement	116,821.30	124,080.16	133,910.98	145,583.00	145,583.00	100.00%	171,172.00	17.58%
51250	Payroll Taxes	126,770.76	122,294.50	128,531.69	142,237.00	142,237.00	100.00%	145,173.00	2.06%
51300	Medical, Dental & Life	429,883.74	451,366.00	485,217.00	527,952.00	527,952.00	100.00%	554,825.00	5.09%
51325	Post Retirement Insurance	45,498.26	63,852.00	59,004.00	74,310.00	74,310.00	100.00%	67,470.00	-9.20%
51350	Worker's Compensation	51,264.00	64,561.00	64,561.00	65,959.00	65,959.00	100.00%	65,087.00	-1.32%
51360	State Unemployment Benefits	1,481.06	252.74	992.81	7,920.00	7,920.00	100.00%	7,740.00	-2.27%
51500	401-K/457 Plan	75,868.13	70,295.82	75,237.79	89,518.00	89,518.00	100.00%	91,437.00	2.14%
Total Benefits		847,587.25	896,702.22	947,455.27	1,053,479.00	1,053,479.00	100.00%	1,102,904.00	4.69%
Total Salaries, Wages & Benefits		2,559,926.29	2,552,265.85	2,687,479.72	2,912,782.00	2,912,782.00	100.00%	3,000,591.00	3.01%
Materials, Supplies & Services									
52010	Advertising	383.33	312.56	306.02	500.00	500.00	100.00%	500.00	0.00%
52050	Dues & Subscriptions	3,459.25	3,218.30	3,960.67	5,150.00	5,150.00	100.00%	5,150.00	0.00%
52150	Travel, Mtgs & Training	35,934.73	21,097.50	21,149.77	26,300.00	26,300.00	100.00%	28,100.00	6.84%
52180	Liability Insurance	97,275.00	88,006.00	88,006.00	88,006.00	88,006.00	100.00%	88,006.00	0.00%
52210	Communications	15,709.97	16,191.68	20,079.10	22,600.00	22,600.00	100.00%	23,600.00	4.42%
52240	Uniforms	22,060.23	25,769.72	22,138.70	24,800.00	24,800.00	100.00%	24,800.00	0.00%
52250	Office Supplies	1,603.73	1,305.17	1,370.42	3,000.00	3,000.00	100.00%	3,000.00	0.00%
52260	Special Dept Supplies	649.38	462.55	715.71	1,000.00	1,000.00	100.00%	1,000.00	0.00%
52270	Safety Equip/Supplies	21,556.80	22,513.94	25,504.36	23,350.00	23,350.00	100.00%	23,350.00	0.00%
52280	Maint Supp/Small Tools	48,264.73	48,557.13	51,268.28	51,550.00	51,550.00	100.00%	53,000.00	2.81%
52300	Line Cleaning Supplies	271.27	93.70	139.33	750.00	750.00	100.00%	750.00	0.00%
52350	Prof/Contractual Svcs	11,434.34	10,841.96	8,020.52	13,000.00	13,000.00	100.00%	13,000.00	0.00%
52420	Maintenance-Equipment	-	1,225.05	35.63	1,400.00	1,400.00	100.00%	1,400.00	0.00%
52430	Landscape Restoration	10,813.06	7,778.66	10,786.08	11,700.00	11,700.00	100.00%	11,700.00	0.00%
52440	Pump Maintenance	-	-	-	-	-	-	-	-
52450	Equipment Rental	1,971.99	9,647.84	6,716.70	19,000.00	19,000.00	100.00%	19,000.00	0.00%
52510	Permits/Fees/Software Licenses	13,541.30	15,695.20	16,778.00	20,000.00	20,000.00	100.00%	21,500.00	7.50%
52910	Non-Capital Equipment	6,722.18	9,679.41	11,755.03	9,500.00	9,500.00	100.00%	7,150.00	-24.74%
52920	Billing & Collections	-	-	-	-	-	-	-	-
Total Materials, Supplies & Services		291,651.29	282,396.37	288,730.32	321,606.00	321,606.00	100.00%	325,006.00	1.06%
Interfund Transfers									
52340	Debt Administration Expenses	188,362.16	178,880.66	170,478.25	170,610.00	170,610.00	100.00%	168,680.00	-1.13%
53040	Fleet Replacement Charges	172,787.00	172,787.00	190,287.00	206,836.00	206,836.00	100.00%	206,836.00	0.00%
53070	Pump Replacement Charges	-	-	-	-	-	-	-	-
Total Interfund Transfers		361,149.16	351,667.66	360,765.25	377,446.00	377,446.00	100.00%	375,516.00	-0.51%
Capital Outlay									
54010	Capital Equipment - New	11,525.00	6,248.00	6,365.15	12,500.00	12,500.00	100.00%	11,720.00	-6.24%
54030	Capital Equip - Replacement	6,912.95	16,730.69	12,988.80	13,100.00	13,100.00	100.00%	24,900.00	90.08%
Total Capital Outlay		18,437.95	22,978.69	19,353.95	25,600.00	25,600.00	100.00%	36,620.00	43.05%
Sub-Total O&M Fund		\$ 3,231,164.69	\$ 3,209,308.57	\$ 3,356,329.24	\$ 3,637,434.00	\$ 3,637,434.00	100.00%	\$ 3,737,733.00	2.76%
59200	LESS:								
	Chargebacks to General Fund for CIP	(769,509.12)	(647,644.19)	(655,734.96)	(844,570.00)	(844,570.00)	100.00%	(860,548.00)	1.89%
	Chargebacks to General Fund for SSD	(1,388,104.00)	(1,565,955.82)	(1,686,399.82)	(1,705,873.00)	(1,705,873.00)	100.00%	(1,740,831.00)	2.05%
Net Operation & Maintenance Fund		\$ 1,073,551.57	\$ 995,708.56	\$ 1,034,194.46	\$ 1,086,991.00	\$ 1,086,991.00	100.00%	\$ 1,136,354.00	4.54%



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 FY17-18	Approved Positions FY18-19	Budgeted Positions FY19-20
Department of Engineering			
<i>Management:</i>			
Director of Engineering	1	1	1
Total Management	1	1	1
<i>Engineers:</i>			
Engineer I	3	2	2
Engineer II	0	1	1
Engineer III	1	0	0
Assistant Director of Engineering	0	1	1
Total Engineers	4	4	4

Engineering (continued)

Staffing History (continued)

Division & Position	Approved Positions FY16-17	Approved Positions FY17-18	Budgeted Positions FY18-19
<i>Design and Drafting:</i>			
Engineering Technician II	2	2	2
Design & Drafting Manager	1	1	1
Total Design and Drafting	3	3	3
<i>Right of Way:</i>			
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
<i>Planning & Development:</i>			
Systems Coordinator III	2	2	2
Private Development Project Manager	0	0	0
Planning & Development Technician	0	1	1
Planning & Development Manager	1	1	1
Total Planning and Development	3	4	4
Total – Department of Engineering	14	15	15

Accomplishments for FY 2018-2019

- ★ 49,918 Linear Feet (LF) of collection system were rehabilitated during FY18. This included 28,165 LF rehabilitated through contract construction, 20,151 LF rehabilitated in-house by System Services, and 1,602 LF rehabilitated through development projects.
- ★ Managed over 93 projects and line items within the CIP. Projects are within the various stages of lifecycles - from preliminary design, to active construction, to complete/closeout.
- ★ Processed over 1,169 applications and reviewed 68 plans for new connections and extensions to the collection system. (Estimated as of May 2019.)

Engineering (continued)

Accomplishments for FY 2018-2019 (continued)

- ★ Acquired Rights-of-Way across 76 properties. Settled two condemnation actions, saving expenses of trial. (Estimated as of May 2019.)
- ★ Designed 26 in-house projects for System Services. These are designed and then constructed by in-house forces. (Estimated as of May 2019.)
- ★ Completed the construction phase of the Plant Headworks Project. This \$9.6 million project was the first recommendation of the Plant Facility Plan.
- ★ Completed the design phase and began the construction phase of the Plant High Rate Primary Treatment Project. This \$17.0 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.
- ★ Completed the French Broad/Carrier Bridge Preliminary Engineering Report. This important planning document prioritizes MSD's largest collection system projects. These include replacement of the Carrier Bridge Pump Station, a new relief interceptor through the Biltmore Estate, and wet-weather storage.
- ★ Completed Phase 3 of the lining project for the interceptor through the Biltmore Estate (5,111 LF).
- ★ Continued to emphasize the use of MSD's new paperless plan review system with consulting engineers for development projects. The use of this system has been slowly growing since its inception in 2016 and saves time for the development community and for District staff.

Budget Highlights/Changes for FY2019-2020

- 🏆 Implement the recommendations of the French Broad/Carrier Bridge PER. The first project will be the replacement of the Carrier Bridge Pump Station (MSD's largest, design to begin in FY19-20).
- 🏆 Begin construction of the Christian Creek Interceptor, which is over 12,000LF and will span two fiscal years.
- 🏆 Rehabilitation of the Weaverville Force Main @ Plant project. This significant project will both rehabilitate an aging force main and will also provide increased line capacity for areas north of the MSD Treatment Plant.

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:** Complete the final (4th) phase of the lining project for the interceptor through the Biltmore Estate.
- ⦿ **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 FY20. (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	FY16-17	FY17-18	FY18-19 (est.)
1. Linear footage rehabilitated	49,782	49,918	41,684
2. CIP expenditures	\$14.6M	\$22.5M	\$21.8M
3. CIP projections vs. actual expenditures	66%	80%	93%
4. Allocations	186	216	194
5. Sewer Tap Applications	1,631	1,443	1,169
6. Plans Reviewed	76	78	68
7. Value of accepted systems	\$3,513,683	\$3,241,420	\$5,600,000

FY20 Budget – Engineering

No.	Name	Actual 2015-2016	Actual 2016-2017	Actual 2017-2018	Adopted 2018-2019 Budget	Estimated Actual 6/30/2019	Percent Expended To Total Budget	Proposed 2019-2020 Budget	Inc (Dec) Over Prior Year
Salaries & Wages									
51100	Salaries & Wages	\$ 919,696.40	\$ 982,572.08	\$ 1,031,100.36	\$ 1,097,470.00	\$ 1,097,470.00	100.00%	\$ 1,132,522.00	3.19%
51150	Overtime	1,202.49	618.89	1,126.01	2,000.00	2,000.00	100.00%	2,000.00	0.00%
Total Salaries & Wages		920,898.89	983,190.97	1,032,226.37	1,099,470.00	1,099,470.00	100.00%	1,134,522.00	3.19%
Benefits									
51200	North Carolina Retirement	62,028.82	72,747.25	78,509.25	86,088.00	86,088.00	100.00%	102,334.00	18.87%
51250	Payroll Taxes	66,765.52	71,261.98	75,116.88	84,109.00	84,109.00	100.00%	86,792.00	3.19%
51300	Medical, Dental & Life	184,238.12	193,441.00	194,087.00	219,981.00	219,981.00	100.00%	231,175.00	5.09%
51325	Post Retirement Insurance	19,499.88	27,365.00	23,600.00	30,962.00	30,962.00	100.00%	28,113.00	-9.20%
51350	Worker's Compensation	21,971.00	27,669.00	27,669.00	27,484.00	27,484.00	100.00%	27,119.00	-1.33%
51360	State Unemployment Benefits	634.74	122.75	425.50	3,300.00	3,300.00	100.00%	3,225.00	-2.27%
51500	401-K/457 Plan	40,833.78	43,474.79	45,648.43	54,875.00	54,875.00	100.00%	56,628.00	3.19%
Total Benefits		395,971.86	436,081.77	445,056.06	506,799.00	506,799.00	100.00%	535,386.00	5.64%
Total Salaries, Wages & Benefits		1,316,870.75	1,419,272.74	1,477,282.43	1,606,269.00	1,606,269.00	100.00%	1,669,908.00	3.96%
Materials, Supplies & Services									
52050	Dues & Subscriptions	3,877.45	4,594.74	4,755.00	5,535.00	5,235.00	94.58%	5,285.00	-4.52%
52150	Travel, Mtgs & Training	14,332.60	13,996.26	14,852.92	20,578.00	19,265.00	93.62%	24,000.00	16.63%
52180	Liability Insurance	38,400.00	34,741.00	34,741.00	34,741.00	34,741.00	100.00%	34,741.00	0.00%
52210	Communications	1,589.67	1,868.63	2,872.20	4,235.00	4,020.00	94.92%	3,900.00	-7.91%
52240	Uniforms	567.84	2,138.81	1,748.85	2,500.00	2,175.00	87.00%	2,500.00	0.00%
52250	Office Supplies	3,124.52	2,655.34	2,138.76	4,700.00	4,525.00	96.28%	4,700.00	0.00%
52260	Special Dept Supplies	1,976.83	2,094.05	1,780.86	3,300.00	3,135.00	95.00%	3,300.00	0.00%
52270	Safety Equip/Supplies	193.84	122.63	118.14	350.00	325.00	92.86%	350.00	0.00%
52330	Legal Fees	-	2,589.50	1,080.00	2,655.00	2,475.00	93.22%	3,000.00	12.99%
52350	Prof/Contractual Svcs	13,341.55	15,378.59	15,560.23	25,600.00	25,300.00	98.83%	25,600.00	0.00%
52420	Maintenance-Equipment	-	-	-	250.00	250.00	100.00%	250.00	0.00%
52500	Rents/Leases	-	-	-	800.00	800.00	100.00%	800.00	0.00%
52910	Non-Capital Equipment	803.20	691.00	-	-	-	-	800.00	-
52920	Billing & Collections	-	-	-	-	-	-	-	-
Total Materials, Supplies & Services		78,207.50	80,870.55	79,647.96	105,244.00	102,246.00	97.15%	109,226.00	3.78%
Interfund Transfers									
53070	Pump Replacement Charges	-	-	-	-	-	-	-	-
Total Interfund Transfers		-	-	-	-	-	-	-	-
Capital Outlay									
54010	Capital Equipment - New	-	-	8,836.43	6,000.00	6,000.00	100.00%	-	-100.00%
54030	Capital Equip - Replacement	-	-	-	-	-	-	-	-
Total Capital Outlay		-	-	8,836.43	6,000.00	6,000.00	100.00%	-	-100.00%
Sub-Total O&M Fund		\$ 1,395,078.25	\$ 1,500,143.29	\$ 1,565,766.82	\$ 1,717,513.00	\$ 1,714,515.00	99.83%	\$ 1,779,134.00	3.59%
59200	LESS:								
	Chargebacks to General Fund for CIP	(1,239,616.25)	(1,343,585.35)	(1,387,528.14)	(1,549,479.00)	(1,548,281.00)	99.92%	(1,607,324.00)	3.73%
	Chargebacks to General Fund for SSD	-	-	-	-	-	-	-	-
Net Operation & Maintenance Fund		\$ 155,462.00	\$ 156,557.94	\$ 178,238.68	\$ 168,034.00	\$ 166,234.00	98.93%	\$ 171,810.00	2.25%

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 FY20 includes an employer contribution increase of 6.5% to cover anticipated expenditures needs.

FY20 SELF-FUNDED EMPLOYEE MEDICAL PROGRAM BUDGET

	Actual 2017-20108	Estimated Actual 2018-2019	Budget 2019-2020
Beginning Balance	\$ 1,168,265	\$ 1,198,068	\$ 1,194,088
Income:			
District Contributions	2,051,775	2,185,141	2,327,175
Employee Contributions	382,579	344,907	344,907
Transfer from Other Insurance Funds	225,000	150,000	150,000
Interest	15,701	30,184	30,500
Total Income	2,675,055	2,710,232	2,852,582
Total Funds Available	3,843,320	3,908,300	4,046,670
Expenses:			
Expected Claim Liability	2,201,519	2,267,053	2,414,412
Fixed Costs (see note below)	443,733	447,159	476,224
Total Expenses	2,645,252	2,714,212	2,890,636
Ending Balance	\$ 1,198,068	\$ 1,194,088	\$ 1,156,034

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 45/75. 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. FY20 funding of \$283,000 represents a 1.6% of total operations. As of May 2019, the District has eighteen (18) eligible participants in the post-employment insurance plan.

FY20 POST-EMPLOYMENT INSURANCE BUDGET

	Actual 2017-2018	Estimated Actual 2018-2019	Budget 2019-2020
Beginning Balance	\$ (1,165,908)	\$ (1,299,524)	\$ (1,309,668)
Income			
District Contributions	249,500	307,560	283,000
Employee Contributions	30,796	29,046	30,000
Interest Income	<u>23,088</u>	<u>33,250</u>	<u>20,000</u>
Total Income	303,384	369,856	333,000
Total Funds Available	(862,524)	(929,668)	(976,668)
Expenses			
OPEB	262,000	230,000	-
Transfer to Other Insurance Funds	<u>175,000</u>	<u>150,000</u>	<u>150,000</u>
Total Expenses	437,000	380,000	150,000
Ending Balance	\$ (1,299,524)	\$ (1,309,668)	\$ (1,126,668)

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 FY20 includes a 0.0% increase to cover anticipated expenditure needs.

FY20 WORKER'S COMPENSATION FINANCIAL PLAN

	Actual 2017-2018	Estimated Actual 2018-2019	Budget 2019-2020
Beginning Balance	\$ 296,832	\$ 332,684	\$ 311,934
Income			
District Contributions	273,000	273,000	273,000
Interest Income	<u>2,800</u>	<u>6,250</u>	<u>2,500</u>
Total Income	275,800	279,250	275,500
Total Funds Available	572,632	611,934	587,434
Expenses			
Interfund Transfer	-	145,920	50,000
Deductibles for Individual Claims	6,505	4,003	10,000
Premiums to commercial carrier	<u>183,443</u>	<u>150,077</u>	<u>190,000</u>
Total Expenses	189,948	300,000	250,000
Ending Balance	<u>\$ 332,684</u>	<u>\$ 311,934</u>	<u>\$ 337,434</u>

Insurance Funds (continued)

General Liability

The District's general liability insurance fund was established to ❶ allocate insurance costs to all departments, divisions and sectional budgets, ❷ provide funds for payment of no-fault sewer back-ups and ❸ establish reserves to offset future unanticipated increases in sewer back-up liabilities in excess of budgeted amounts. The budget for FY20 includes a 0.0% increase based on anticipated expenditure needs.

FY20 GENERAL LIABILITY FINANCIAL PLAN

	Actual 2017-2018	Estimated Actual 2018-2019	Budget 2019-2020
Beginning Balance	\$ 548,000	\$ 379,186	\$ 374,802
Income			
District Contributions	547,746	547,746	547,746
Interfund Transfer From	-	145,920	50,000
Interest Income	3,775	2,200	2,500
Total Income	551,521	695,866	600,246
Total Funds Available	1,099,522	1,075,052	975,048
Expenses			
Interfund Transfer	-	-	-
Premiums to commercial carrier	396,194	363,439	384,235
No Fault Sewer Back-Up Claims	24,006	9,500	35,000
Claim Deductibles	289,637	316,645	175,000
Flood Insurance	10,499	10,666	11,307
Total Expenses	720,336	700,250	605,542
Ending Balance	\$ 379,186	\$ 374,802	\$ 369,506

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Replacement 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 FY20 contribution is \$500,000, with anticipated expenditures of \$557,000, including (3) 1-Ton Pickups, (2) ¾ Ton Pickups, (1) 1½ Ton Pickup, (1) Grit Truck, and (1) Dump Truck.

FY20 FLEET & HEAVY EQUIPMENT FUND BUDGET

	Actual 2017-2018	Projected 2018-2019	Budget 2019-2020
Beginning Balance:	\$ 481,229	\$ 388,619	\$ 602,487
Revenue:			
District Contributions	460,000	500,000	500,000
Sale of Surplus Property	60,060	90,000	66,840
Interest Income	<u>7,616</u>	<u>13,868</u>	<u>12,050</u>
Total Revenue	527,676	603,868	578,890
Expenditures:			
Various	620,286	390,000	-
(2) ¾ Ton Pickups	-	-	76,000
1½ Ton Pickup	-	-	80,000
(3) 1-Ton Pickups	-	-	141,000
Grit Truck	-	-	115,000
Dump Truck	<u>-</u>	<u>-</u>	<u>145,000</u>
Total Expenditure Replacements	620,286	390,000	557,000
Ending Balance:	<u>\$ 388,619</u>	<u>\$ 602,487</u>	<u>\$ 624,377</u>

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 FY20 contribution is \$200,000 with anticipated expenditures of \$298,000 including General Rehab, General Rehab @ Incinerator Building; AquaDisk filters and PLC/CPU upgrade @ Filter Building; replacement of (2) belt filter press control panels @ Solids Handling; complete #3 rebuild, begin #2 rebuild including new bearing and seal, and realignment for #2 & #3 @ Hydro Building.

FY20 WASTEWATER TREATMENT PLANT FUND BUDGET

	Actual 2017-2018	Projected 2018-2019	Budget 2019-2020
Beginning Balance:	\$ 408,735	\$ 287,376	\$ 262,633
Revenue:			
District Contributions	200,000	180,000	200,000
Interest Income	<u>4,730</u>	<u>5,257</u>	<u>5,258</u>
Total Revenue	204,730	185,258	205,258
Expenditures:			
Various	176,089	160,000	-
General Rehab – PLC Upgrades	-	-	25,000
Incinerator General Rehab	-	-	10,000
AquaDisk Filters & PLC/CPU Upgrade	-	-	178,000
Belt Filter Press Control Panels	-	-	35,000
Hydro #2 Motor Rebuild/Bearing/Seal	-	-	50,000
Transfer Out	<u>150,000</u>	<u>50,000</u>	<u>-</u>
Total Expenditure Replacements	326,089	210,000	298,000
Ending Balance:	<u>\$ 287,376</u>	<u>\$ 262,633</u>	<u>\$ 169,891</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 FY20 contribution is \$50,000 with anticipated expenditures of \$60,000, which includes General rehab, in addition to rehab at the Black Mountain Pump Station and the Waightstill Mtn Pump Station.

FY20 PUMP MAINTENANCE REPLACEMENT FUND BUDGET

	Actual 2017-2018	Projected 2018-2019	Budget 2019-2020
Beginning Balance:	\$ 52,471	\$ 145,362	\$ 175,784
Revenue:			
District Contributions	-	50,000	50,000
Transfer In	150,000	50,000	-
Sale of Surplus Property	-	6,999	-
Interest Income	<u>951</u>	<u>3,423</u>	<u>3,516</u>
Total Revenue	150,951	110,422	53,516
Expenditures:			
Various	58,060	80,000	-
General	-	-	20,000
Black Mountain Pump Station	-	-	15,000
Waightstill Mtn Pump Station	-	-	25,000
Transfer Out	<u>-</u>	<u>-</u>	<u>-</u>
Total Expenditure Replacements	58,060	80,000	60,000
Ending Balance:	\$ <u>145,362</u>	\$ <u>175,784</u>	\$ <u>169,300</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 no FY20 contributions to the fund as the balance is in excess of that required.

FY20 CAPITAL RESERVE FUND

	Actual 2017-2018	Projected 2018-2019	Budget 2019-2020
Beginning Balance:	\$ 977,151	\$ 990,338	\$ 1,005,338
Revenue:			
Interfund Transfer	-	-	-
Interest Income	<u>13,187</u>	<u>15,000</u>	<u>15,000</u>
Total Revenue	13,187	15,000	15,000
Ending Balance:	<u>\$ 990,338</u>	<u>\$ 1,005,338</u>	<u>\$ 1,020,338</u>

NOTE: Ending balance must be at least 6% of the annual O&M current expenses. FY2019-2020 O&M Budget (\$17,543,404 - \$750,000 transfer to reserves - \$138,560 capital equipment) x 6% = \$999,291

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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.

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.

Capital Improvement Program (continued)

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, 2019, the District will have \$105.62 million in outstanding revenue bond debt, with total debt service of \$9.45 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.

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 more 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.

Capital Improvement Program (continued)

Background (continued)

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 a number of 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.

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.

Capital Improvement Program (continued)

Background (continued)

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.

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 of 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 as a whole 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.

Capital Improvement Program (continued)

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.

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.

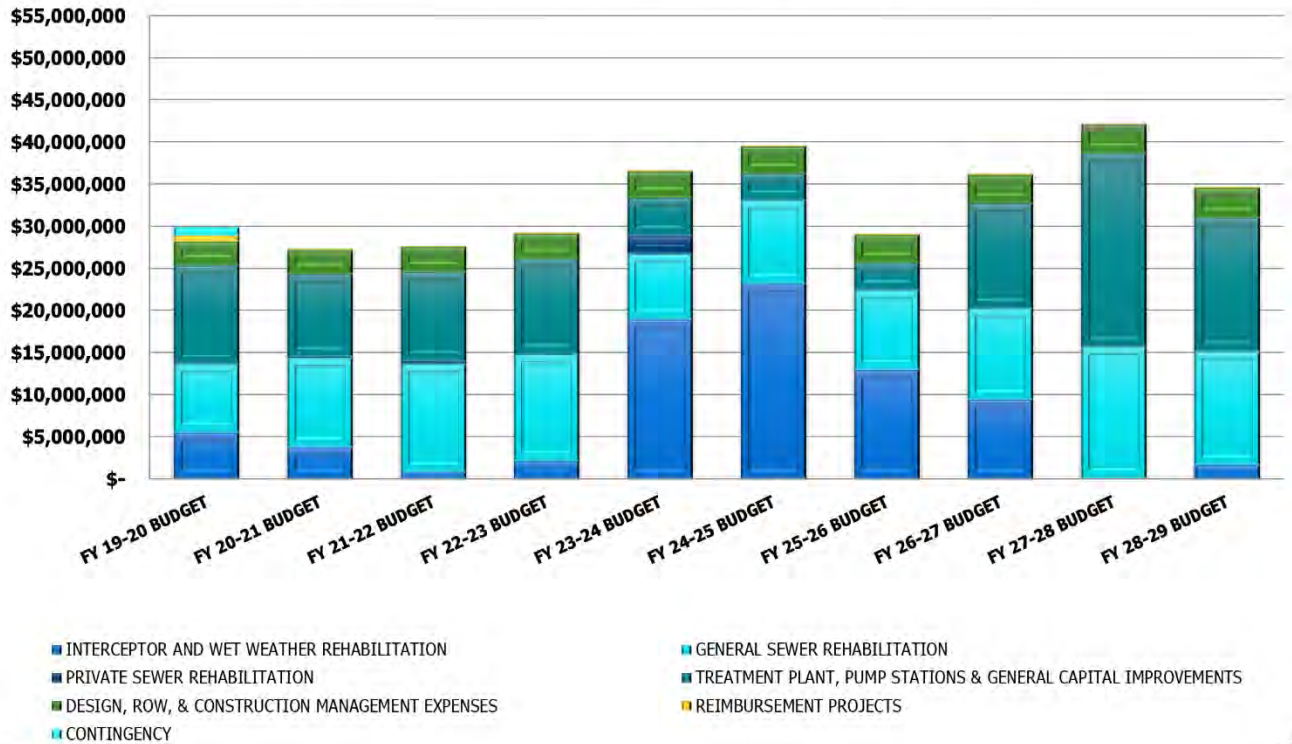
The District's Water Reclamation Facility (WRF) has a permitted capacity to treat up to 40 million gallons of wastewater a day and uses roughly half of this capacity. In accordance with the Master Plan's twenty-year planning period, there are no plans to replace or expand the plant in the near future. 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

FY 2020 thru FY 2029 Projects Based on Type



Capital Improvement Program (continued)

Current Year Highlights

The proposed Capital Budget for FY19-20 is \$29,894,818, 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 \$736,000 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 \$332.4 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 2.9%, which utilizes the previous ten-year ENR Construction Cost Index as a basis. This factor is also updated each year.

Approximately 126 infrastructure projects are included in the CIP for FY20, ranging in length from 92 linear feet to over 36,000 linear feet. Twenty-seven new collection system projects have been added to the CIP for FY2020 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. 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 \$226.4 million out of a total CIP budget of \$332.4 million.

Capital Improvement Program (continued)

Current Year Highlights (continued)

Major projects for FY20 include the \$1,950,000 Christian Creek Interceptor with approximately 3,668 linear feet, \$833,000 South French Broad Lining Project with over 3,976 linear feet, \$2,430,000 Weaverville Force Main at Plant with over 2,370 linear feet, \$1,341,000 Walnut Street at Rankin Avenue, with over 2,495 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. 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 and in the close-out phase of construction.
- **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)

Capital Improvement Program (continued)

Current Year Highlights (continued)

events, this treatment can be ramped-up in order to match the higher flows. Design began in FY17 and construction is planned to begin in FY19 and will be completed in the spring of 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.

Program Summary

PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
Interceptor and Wet Weather Rehabilitation							
Christian Creek Interceptor 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	\$ 5,755,429	\$ 1,950,370	\$ 3,615,000	\$ -	\$ -	\$ -	-
Lower Swannanoa Interceptor This project is to eliminate problems associated with the splitter box and the downstream twin 36-inch lines.	\$ 6,599,879		\$ 32,500		\$ 30,000	\$ 12,500	6,510,000
Middle Beaverdam Creek @ I-26 This project will install 24-inch ductile iron pipe along Beaverdam Creek. It will also replace a 4-inch main at rear of lots on Washington Ave. and along the east side of US 19-23 just north of the railroad. Lines are in poor condition, and the 4-inch lines are undersized.	\$ 1,299,830	\$ -	\$ -	\$ -	\$ -	\$ -	1,292,400
South French Broad Relief Interceptor 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 PS. The new interceptor will provide relief to the existing system during wet weather.	\$ 31,250,250	\$ 50,000	\$ -	\$ 5,250	\$ 510,000	\$ 7,635,000	22,955,000
South French Broad Interceptor - Lining This project is located within the Biltmore Estate along the French Broad River. The southern terminus of the project is located where the Dingle Creek Int. flows into the South French Broad Int. The project consists of CIPP lining approx. 22,000 LF of existing 36-inch Reinforced Concrete Pipe. The line is a major source of inflow and infiltration. Construction has been phased over four years.	\$ 4,892,686	\$ 833,000	\$ -	\$ -	\$ -	\$ -	-
Swannanoa Equalization Tank 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.	\$ 20,525,000	\$ -	\$ -	\$ 700,000	\$ 1,400,000	\$ 9,212,500	9,212,500
Town Branch Interceptor Lining This CIPP lining project is located in the South Slope area of Asheville. The project begins at Choctaw St, runs north along Town Branch, and ends at the intersection of McDowell St and Southside Ave. The existing pipes are in poor condition contributing to I/I that surcharges the line during heavy rains and has	\$ 251,000	\$ 251,000	\$ -	\$ -	\$ -	\$ -	-
Weaverville Force Main @ Plant This interceptor rehabilitation located along Riverside Dr. begins near MSD's Hydro Power Plant and ends at the head manhole at the Water Reclamation Facility. Due to the critical nature of the line, line condition, and the requirement to upsize for future capacity, MSD has placed this project in the FY 19-20 CIP.	\$ 2,430,000	\$ 2,430,000	\$ -	\$ -	\$ -	\$ -	-
SUBTOTAL	\$ 73,004,074	\$ 5,514,370	\$ 3,647,500	\$ 705,250	\$ 1,940,000	\$ 16,860,000	\$ 39,969,900
<i>Inflation per ENR Const. Cost Index</i>	<i>1.0000</i>	<i>1.0000</i>	<i>1.0290</i>	<i>1.0588</i>	<i>1.0895</i>	<i>1.1211</i>	<i>1.18027990</i>
SUBTOTAL with inflation	\$ 73,004,074	\$ 5,514,370	\$ 3,753,278	\$ 746,748	\$ 2,113,722	\$ 18,902,492	47,175,670

Program Summary (continued)

PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation							
Albemarle Commons Pump Station Elimination	\$ 228,000	\$ -	\$ -	\$ 25,500	\$ -	\$ 202,500	\$ -
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" DIP gravity line.							
Atkins Street	\$ 619,330	\$ -	\$ -	\$ -	\$ 2,250	\$ 28,000	\$ 583,600
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.							
Aurora Drive	\$ 967,000	\$ 4,000	\$ 47,000	\$ 906,000	\$ -	\$ -	\$ -
This project runs along Aurora Drive in the Kenilworth area of Asheville. The project begins on Aurora Drive, 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.							
Beale Road at Copney Lane	\$ 1,509,925	\$ 16,200	\$ 155,000	\$ -	\$ 1,323,000	\$ -	\$ -
This project ties into the Lake Julian Ph. 4 project just west of Glen Bridge Road and extends northward to Ducker Road and Lower Glen 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.							
Beaucatcher Road @ Kenilworth Road	\$ 639,708	\$ 460,300	\$ -	\$ -	\$ -	\$ -	\$ -
This project is located in East Asheville and is comprised of 1,590 LF of 8-inch ductile iron pipe. The existing line is aging 6" orangeburg pipe in poor condition with a large amount of root intrusion. A portion of this project was constructed in FY 19 ahead							
Bellevue Road	\$ 378,600	\$ -	\$ 7,000	\$ 57,000	\$ 305,000	\$ -	\$ -
This project is located in South Asheville along properties on Bellevue Road and is adjacent to Roundtop Road. The project will replace 860 LF of 6-inch VCP and PVC. The existing lines are in bad condition and have too many point repairs.							
Bent Tree Road	\$ 782,250	\$ -	\$ 70,000	\$ 704,000	\$ -	\$ -	\$ -
This project runs adjacent to Bent Creek Road in Asheville. The project 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.							
Braddock Way - PRP 20002	\$ 1,437,290	\$ -	\$ -	\$ -	\$ -	\$ 1,000	\$ 1,417,937
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 and 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.							
Buchanan Avenue	\$ 1,121,400	\$ 11,400	\$ 64,000	\$ 1,018,000	\$ -	\$ -	\$ -
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.							

Program Summary (continued)

PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation							
Caledonia Road This project is located at the Caledonia Road entrance to the Kenilworth neighborhood, approx. 0.3 mile south of the Mission Hospital campus. The project includes replacement of approximately 2,491 LF of 8-inch and 10-inch VCP intransitive pipe with new DIP. The existing pipe has structural defects which have resulted in multiple SSO's.	\$ 1,244,850	\$ -	\$ -	\$ -	\$ -	\$ -	879,250
Chatham Road This project is located in North Asheville near W.T. Weaver Blvd. 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.	\$ 530,200	\$ -	\$ 50,000	\$ 13,000	\$ -	\$ 462,400	-
Cherokee Road 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.	\$ 782,680	\$ -	\$ 1,000	\$ 101,000	\$ 656,000	\$ -	-
Chestnut Lodge Road 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.	\$ 1,900,200	\$ 115,000	\$ 1,742,000	\$ -	\$ -	\$ -	-
Cub Road This project is located in Southwest Asheville one lot east of MSD's Villas of Cedar Hill pump station near Patton Hill Road. Currently this public system planned for rehabilitation consists of approximately 1,204 LF of existing 8-inch VCP to be replaced with 8-inch DIP. This 8-inch VCP system is full of sags, bellies, heavy root intrusion, deteriorating manholes and bad service connections.	\$ 425,600	\$ -	\$ -	\$ 14,000	\$ 9,000	\$ 67,000	335,600
East Chestnut Avenue @ Five Points 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.	\$ 1,875,800	\$ 1,000	\$ -	\$ -	\$ 31,800	\$ 130,000	1,575,000
Elk Mountain Place 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 pipe sewer line is in poor condition and has experienced SSO's.	\$ 1,158,250	\$ -	\$ 160,000	\$ 45,000	\$ 935,250	\$ -	-
Fairmont Road This project is located in West Asheville off of Fairfax Avenue and adjacent to the I-240 west bound off ramp to Brevard Road. The project consists of replacing 200 LF of 8-inch VCP and a 10-inch DIP. The lines are in poor condition and have root problems that are creating SSOs.	\$ 1,378,000	\$ -	\$ -	\$ -	\$ -	\$ -	1,378,000
Forestdale Drive 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.	\$ 860,000	\$ -	\$ -	\$ -	\$ -	\$ -	860,000

Program Summary (continued)

PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation							
Four Inch Main - Patton Hill Road	\$ 326,910	\$ 326,500	\$ -	\$ -	\$ -	\$ -	-
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.							
Harmony Lane	\$ 135,000	\$ -	\$ -	\$ -	\$ -	\$ 2,500	132,500
This project is along Harmony Lane in Asheville's Oakley area. The existing system has two parallel lines that collect on both sides of the street. Problems with the system consist of root intrusion, poor access for maintenance, and close proximity to houses.							
Hazel Mill Road @ Richland Street	\$ 1,104,700	\$ -	\$ -	\$ -	\$ -	\$ 17,000	1,087,700
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 and 8-inch clay and PVC. Lines are undersized and in poor condition with multiple pipe sags, cracks, and fractures.							
Highland Farms Road	\$ 301,250	\$ 750	\$ 7,000	\$ 287,800	\$ -	\$ -	-
This project is located adjacent to the WNC Veterans Cemetery, just upstream of the Old US 70 @ 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.							
Hill Street @ Cross Place	\$ 81,050	\$ -	\$ 1,475	\$ -	\$ 14,000	\$ 64,050	-
This project is located in Asheville near Montford Avenue and is comprised of 1,600 LF of 8-inch ductile iron pipe. The existing line is 6-inch vitrified clay pipe in poor condition with multiple severe structural							
Horizon Hill Road (Hy-Vu-Drive)	\$ 228,444	\$ -	\$ -	\$ 218,000	\$ -	\$ -	-
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.							
Howland Road @ Sunset Trail	\$ 440,600	\$ -	\$ -	\$ -	\$ 4,500	\$ 65,000	363,600
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.							
Jarnaul Avenue	\$ 1,829,750	\$ 260,000	\$ 1,492,000	\$ -	\$ -	\$ -	-
This project is located in North Asheville, between Elkwood Ave. (to the west) and Beaver Lake (to the east). The project consists of replacing approx. 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.							
Johnston Boulevard @ Providence Road	\$ 628,150	\$ -	\$ -	\$ -	\$ 11,000	\$ 55,000	554,000
This project is located in West Asheville, approx. 0.6 miles west of New Leicester Highway. The project consists of replacing 2,360 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.							

Program Summary (continued)

PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation							
Kenilworth @ Springdale Road	\$ 747,350	\$ -	\$ -	\$ 8,250	\$ 61,000	\$ 371,600	-
This project is located in Kenilworth at the intersection of Kenilworth Road and Springdale Road. Approximately 2,135 LF of existing 6-inch vitrified clay pipe will be replaced with 8-inch ductile iron pipe. The existing line has voids, cracks, roots, and fractures, and has experienced multiple SSOs.							
Kimberly Avenue @ Sedley Avenue	\$ 1,069,000	\$ -	\$ -	\$ -	\$ 31,000	\$ -	1,038,000
This project is located in North Asheville along Kimberly Avenue. Due to the sensitive nature of construction along this corridor, 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, misaligned joints, and problematic spur lines.							
Lakeshore Drive @ Merrimon Avenue	\$ 221,600	\$ -	\$ -	\$ -	\$ -	\$ -	212,734
This project is located near the intersection of Lakeshore Drive and Merrimon Avenue in North Asheville. It consists of replacing approximately 838 LF of 6-inch VCP with 8-inch DIP. Portions of the line run beneath a collapsed storm drain, and also underneath a house on Lakeshore Drive. The existing pipe is fractured and generally in poor condition, and will be relocated as part of the project.							
Le An Hurst Road	\$ 262,000	\$ 9,000	\$ 41,500	\$ 10,000	\$ 201,500	\$ -	-
This project is located in South Asheville running along the rear of properties fronting Le An Hurst Rd. 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.							
Lincoln Avenue	\$ 504,370	\$ -	\$ -	\$ -	\$ -	\$ -	501,500
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.							
Logan Avenue	\$ 674,500	\$ 500	\$ 16,200	\$ 65,000	\$ 582,300	\$ -	-
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.							
Lynn Cove Road	\$ 1,757,000	\$ -	\$ -	\$ 25,000	\$ -	\$ 22,000	1,710,000
This project is located off of Beaverdam Road. The project runs through multiple properties along Lynn Cove Road from Governor Circle to 225 Lynn Cove Road. These lines and manholes have heavy I/I which have created multiple SSOs.							
Manetta Road @ Johnson Drive	\$ 2,225,700	\$ -	\$ -	\$ -	\$ -	\$ -	2,225,700
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 and has voids, fractures, and root intrusions which have contributed to multiple SSO's.							
Meadow Road @ Train Yard	\$ 1,001,000	\$ -	\$ -	\$ -	\$ 3,000	\$ 46,000	943,000
This project is located in Asheville on Meadow Road between the Biltmore Estate and AB Tech College. It consists of replacing 1,800 LF of existing 6" VCP with new 8" DIP. The existing line is in poor condition, is undersized, and runs underneath various structures.							

Program Summary (continued)

PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation							
Mitchell Avenue This project is located in West Asheville between Patton Avenue and Haywood Road and is comprised of 2,760 LF of 8-inch ductile iron pipe. The existing line is 6-inch vitrified clay pipe in poor condition, with multiple pipe defects that cannot be adequately repaired by point repairs.	\$ 1,164,300	\$ -	\$ -	\$ -	\$ -	\$ -	1,164,300
Montford Avenue @ Montford Park This project is located just south of Montford Park and includes the replacement of approximately 1,258 LF of existing 8" VCP with new 8" DIP. The existing pipe has sags, multiple structural defects, and areas where the pipe is almost non-existent.	\$ 464,150	\$ -	\$ 6,300	\$ 6,750	\$ 100,000	\$ 351,100	-
Mountainbrook Road @ Chunn's Cove This project will relocate lines from the rear yards of lots fronting on Mountainbrook Road (off Chunn's Cove Road) where access and maintenance is extremely difficult. Lines will be moved 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.	\$ 964,515	\$ -	\$ 167,000	\$ 776,500	\$ -	\$ -	-
New Haw Creek Road @ Dogwood Grove 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. Existing manholes are in poor condition.	\$ 652,500	\$ -	\$ -	\$ -	\$ -	\$ -	643,000
New Haw Creek @ Water Booster Station This project is located at the southwest end of New Haw Creek Road adjacent the COA large diameter valve vault. It consists of replacing 92 LF of existing 8-inch VCP with new 8-inch DIP. The line has multiple sags, structural defects, and accessibility issues due to existing large diameter water and gas lines in the vicinity.	\$ 65,785	\$ 59,500	\$ -	\$ -	\$ -	\$ -	-
New Stock Road This project runs along New Stock Road in Woodfin. The project begins at Nichols Hill Drive & New Stock Road and runs under I-26 and ends at Weaverville Road. The existing 8-inch lines have structural issues that lead to root intrusion and multiple SSOs.	\$ 2,653,500	\$ -	\$ 6,500	\$ 77,000	\$ 2,534,000	\$ -	-
New Walnut Street @ Riverside Drive This project runs along Riverside Drive and New Walnut Street. The project begins on Riverside Drive, continues onto New Walnut Street, and extends under I-26. The existing 6-inch clay pipes have multiple sags and yearly maintenance is needed.	\$ 392,000	\$ 360,000	\$ -	\$ -	\$ -	\$ -	-
North Lexington @ I-240 This project is located in downtown Asheville near the I-240 on ramp from Broadway St. and is comprised of 210 LF of 8-inch ductile iron pipe. The existing line is 4-inch vitrified clay pipe with a history of stoppages and overflows.	\$ 114,970	\$ 112,400	\$ -	\$ -	\$ -	\$ -	-
North Market Street This project is located in downtown Asheville and consists of 1,064 LF of 8-inch ductile iron pipe. The existing 6-inch clay line is undersized, has multiple structural issues, and has caused flooded structures.	\$ 283,400	\$ -	\$ -	\$ -	\$ -	\$ -	278,100

Program Summary (continued)

PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation							
Northwest Ave. @ No. 215 This project is in the Grovemont community or Swannanoa and includes the replacement of approx. 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 and has overflowed on multiple occasions and is a confirmed source of I&I.	\$ 388,350	\$ 1,500	\$ 30,000	\$ 355,600	\$ -	\$ -	\$ -
Oakland Drive @ Church Street 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 bad condition and have too many point repairs.	\$ 196,000	\$ -	\$ -	\$ -	\$ -	\$ -	196,000
Owenby Lane @ US Hwy 70 This project is located in Black Mountain along Old US Highway 70 starting near the intersection of Owenby Lane. It consists of approximately 1,426 LF of existing 6-inch VCP to be replaced with 8-inch DIP. This 6-inch VCP system has heavy I&I issues and routinely floods 106 Owenby Lane causing multiple SSO's over the years.	\$ 510,000	\$ 22,500	\$ 50,500	\$ 422,000	\$ -	\$ -	-
Riverside Drive @ Riverside Baptist This project is located along Riverside Drive at the Riverside Baptist Church. It consists of replacing approximately 510 LF of existing 6" VCP with 8" DIP or lining the entire length (pending further investigation). Although this segment is structurally unsound and experiences heavy inflow and infiltration at the road, it doesn't have many service calls or any SSO's.	\$ 208,100	\$ -	\$ -	\$ 5,500	\$ -	\$ 19,600	183,000
Riverview Drive This project is located in Asheville near the Haywood Road bridge. The project consists of replacing approx. 2,302 LF of existing 6-inch vitrified clay pipe with 8-inch ductile iron pipe. The existing line is in poor condition and has experienced multiple overflows.	\$ 823,680	\$ -	\$ -	\$ -	\$ -	\$ -	815,800
Rosewood Avenue @ Riverside Cemetery 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" VCP pipe with new 8" DIP. The existing line is in poor structural condition and is located next to a broken storm drain, causing heavy I&I.	\$ 73,150	\$ -	\$ -	\$ -	\$ -	\$ 1,800	71,350
Royal Pines Drive - PRP 47009 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.	\$ 958,100	\$ -	\$ -	\$ -	\$ 6,500	\$ -	941,500
Sand Hill Road @ Baker Place This project is located in West Asheville and is comprised of 1100 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.	\$ 371,900	\$ 7,000	\$ 13,200	\$ 351,700	\$ -	\$ -	-
Smokey Park Highway @ Sand Hill Road This project is located in Enka at the intersection of Smokey Park Hwy and Sand Hill Rd. It consists of approximately 590 LF of existing 4-inch and 8-inch VCP to be replaced with 8-inch DIP. This system is currently unmapped and possibly has 4-inch service lines tying to inactive sewer.	\$ 272,200	\$ -	\$ -	\$ -	\$ -	\$ -	272,200

Program Summary (continued)

PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation							
S. Main Street @ Reems Creek Road This project is located on S. Main Street in Weaverville, approximately 0.7 mile south of downtown and adjacent to the intersection with Reems Creek Road. The project consists of replacing approx. 513 LF of existing 6" and 8" VCP with 565 LF of new 8" 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.	\$ 201,450	\$ 3,750	\$ 51,000	\$ 144,400	\$ -	\$ -	-
Springside Road @ Overlook Road This project is located in South Asheville near Overlook Rd. and is comprised of 4,080 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.	\$ 1,469,700	\$ 54,550	\$ -	\$ 1,360,400	\$ -	\$ -	-
Starnes Avenue This project is located near downtown Asheville, just north of I-240. Approximately 2,871 LF of existing 6-inch VCP will be replaced with 8-inch DIP along portions of Short Street, Cumberland Avenue, Starnes Avenue, Harrison Street and Flint Street. Portions of the existing pipe were installed circa 1900, and have numerous structural defects.	\$ 1,082,500	\$ -	\$ -	\$ -	\$ -	\$ -	1,082,500
Sulphur Springs Road @ Covington Street 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.	\$ 499,000	\$ -	\$ -	\$ 10,000	\$ 107,000	\$ 374,500	-
Sweeten Creek Road @ Buck Shoals Road This project is located in Royal Pines on Buck Shoals Road between Hendersonville Road (US 25) and Sweeten Creek Road (US 25A). Approx. 918 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.	\$ 407,190	\$ 2,250	\$ 58,000	\$ 341,300	\$ -	\$ -	-
Sweeten Creek Road @ Mills Gap Road 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.	\$ 1,100,000	\$ 80,000	\$ 992,000	\$ -	\$ -	\$ -	-
Toxaway Street This project is located in West Asheville and is comprised of 722 linear feet of 8-inch DIP. The existing sewer line is 6-inch clay with extensive structural problems and roots.	\$ 206,600	\$ 4,000	\$ 1,000	\$ 201,600	\$ -	\$ -	\$ -
US 70 @ Jordan Road This project is located in Swannanoa along US 70. The project begins at McBrayer Avenue, crosses under US 70 at Martin Road, and ends at Burgins Chapel Road. The existing 8-inch vitrified clay pipe is in poor condition. This is a potential lining project.	\$ 1,555,000	\$ -	\$ -	\$ -	\$ -	\$ -	1,555,000
Walnut Street @ N Lexington Avenue This project runs along Walnut Street in downtown Asheville. The project begins at N. Lexington Avenue, runs along Walnut Street, and downside roads of Langren Alley, Market Street, Lawyers Walk, and ends near the corner of E. Walnut Street. The existing 6" and 8" clay pipes have structural issues and yearly maintenance is needed.	\$ 563,500	\$ -	\$ -	\$ -	\$ 7,000	\$ -	556,500

Program Summary (continued)

PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation							
Walnut Street @ Rankin Avenue	\$ 1,359,100	\$ 1,340,600	\$ -	\$ -	\$ -	\$ -	-
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.							
Waynesville Avenue @ Brownwood Avenue	\$ 1,216,200	\$ -	\$ -	\$ -	\$ 19,500	\$ -	1,196,700
This project is located in West Asheville between Haywood Road and Craven Street and is comprised of 4,100 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 large history of SSO's.							
West Crabapple Lane	\$ 635,800	\$ 183,000	\$ 440,000	\$ -	\$ -	\$ -	-
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.							
Wildwood Park	\$ 209,780	\$ -	\$ -	\$ -	\$ -	\$ -	207,400
This project is located in Weaverville at the corner of N Main Street and Wildwood Park. It consists of replacing 430 LF of 8-inch VCP with 8-inch DIP. The existing pipe has multiple fractures, root problems, and runs underneath multiple structures making maintenance difficult.							
SSD Rehabilitation & Replacement	\$ 46,000,000	\$ 4,600,000	\$ 4,600,000	\$ 4,600,000	\$ 4,600,000	\$ 4,600,000	23,000,000
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. FY19-20 includes \$100,000 for contracted clearing of District owned rights-of-way. The total estimated project cost shown is the total within the ten year window.							
Surveys for Design	\$ 500,000	\$ 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 for 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							
SUBTOTAL	\$ 98,939,877	\$ 8,085,700	\$ 10,319,675	\$ 12,200,300	\$ 11,594,600	\$ 6,931,050	\$ 48,211,471
Inflation per ENR Const. Cost Index	1.0000	1.0000	1.0290	1.0588	1.0895	1.1211	1.22856130
SUBTOTAL with inflation	\$ 98,939,877	\$ 8,085,700	\$ 10,618,946	\$ 12,918,178	\$ 12,632,866	\$ 7,770,707	\$ 59,230,747

Program Summary (continued)

PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
Private Sewer Rehabilitation							
Dogwood Road @ White Pine Circle This project is located in South Asheville east of the intersection of Hendersonville Road (US-25) and Royal Oaks Road; more specifically, running along the rear of properties fronting Dogwood Road. The existing 4-inch Orangeburg line is in very poor condition and has regular customer service requests. It will be replaced with 565 LF of 8-inch DIP.	\$ 229,750	\$ 6,500	\$ 22,500	\$ 195,950	\$ -	\$ -	-
Homeland Park This private sewer rehabilitation project is located in East Asheville just south of the intersection of Swannanoa River Road and Tunnel Road in a subdivision called Homeland Park. Currently, it is a private sewer system planned for rehabilitation consisting of approximately 930 LF of existing 4" VCP to be replaced with 8" DIP. This 4" private sewer is the main line for this subdivision and is full of roots with numerous service calls.	\$ 360,550	\$ -	\$ -	\$ 54,500	\$ 19,000	\$ 279,800	-
Old County Home Road PSR This project is located in West Asheville and is comprised of 1,400 LF of 8-inch ductile iron pipe. The existing line is a problematic 4-inch private sewer line composed of PVC and VCP with many defects.	\$ 1,771,900	\$ -	\$ 59,400	\$ 28,000	\$ -	\$ 1,664,500	-
SUBTOTAL	\$ 2,362,200	\$ 6,500	\$ 81,900	\$ 278,450	\$ 19,000	\$ 1,944,300	-
Inflation per ENR Const. Cost Index	1.0000	1.0000	1.0290	1.0588	1.0895	1.121145	-
SUBTOTAL with inflation	\$ 2,362,200	\$ 6,500	\$ 84,275	\$ 294,834	\$ 20,701	\$ 2,179,841	-
Treatment Plant, Pump Stations, & General Capital Improvements							
Biological Treatment This project is the final and largest 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.	\$ 45,500,000	\$ -	\$ -	\$ -	\$ 500,000	\$ 500,000	45,000,000
Building and Facility Rehabilitation 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.	\$ 756,000	\$ 101,000	\$ 91,000	\$ 68,000	\$ 68,000	\$ 68,000	340,000
Carrier Bridge Pump Station Replacement 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 34MGD 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.	\$ 20,012,250	\$ 1,592,250	\$ 4,995,000	\$ 8,950,000	\$ 4,475,000	\$ -	-
Erwin Hills Pump Station Improvements This project is located adjacent to the corner of Erwin Hills Rd and Lees Creek Rd. The pump station needs to be upgraded to meet current and future flows.	\$ 125,000	\$ 125,000	\$ -	\$ -	\$ -	\$ -	-
Flow Monitoring This project is for expenses related to the continued operation, maintenance, and improvements of the District's flow monitoring program.	\$ 442,535	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	250,000

Program Summary (continued)

PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
Treatment Plant, Pump Stations, & General Capital Improvements							
Incinerator Polymer System Replacement	\$ 200,000	\$ -	\$ 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.							
Mull Building HVAC	\$ 477,600	\$ 235,000	\$ 210,000	\$ -	\$ -	\$ -	-
MSD's Mull building experiences hot/cold zones and frequent service calls. The system is approaching 20 years of service life. 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.							
Mull Building IT Back-up Generator	\$ 175,000	\$ 175,000	\$ -	\$ -	\$ -	\$ -	-
Due to the increased demand for server space and necessary back-up capabilities, MSD's IT department has upgraded the Mull Building server room. The Mull Building back-up generator wasn't originally sized to handle all these additional power needs. This project will provide a stand-alone clean energy back-up generator solely for the District's IT equipment.							
Plant High Rate Primary Treatment	\$ 17,005,665	\$ 9,228,000	\$ 3,875,000	\$ -	\$ -	\$ -	-
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.							
Solids Handling Capacity Improvements	\$ 2,052,000	\$ -	\$ -	\$ 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.							
Thickener Rehabilitation	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	-
This project is for the replacement of the Motor Controls Center (MCC) inside the Thickener Building. The existing MCC was installed in the 1988 Plant upgrades. The components of the existing MCC are obsolete and difficult to replace. Additional minor improvements will be made to the thickeners and building.							
Weaverville Pump Station Replacement	\$ 7,267,000	\$ -	\$ 25,000	\$ 640,000	\$ 3,301,000	\$ 3,301,000	-
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 PS No. 1, replacing the existing 12" force main with 18", and converting PS No. 2 into a smaller residential station. Pump Station No. 1 will be designed to pump directly to the WRF.							

Program Summary (continued)

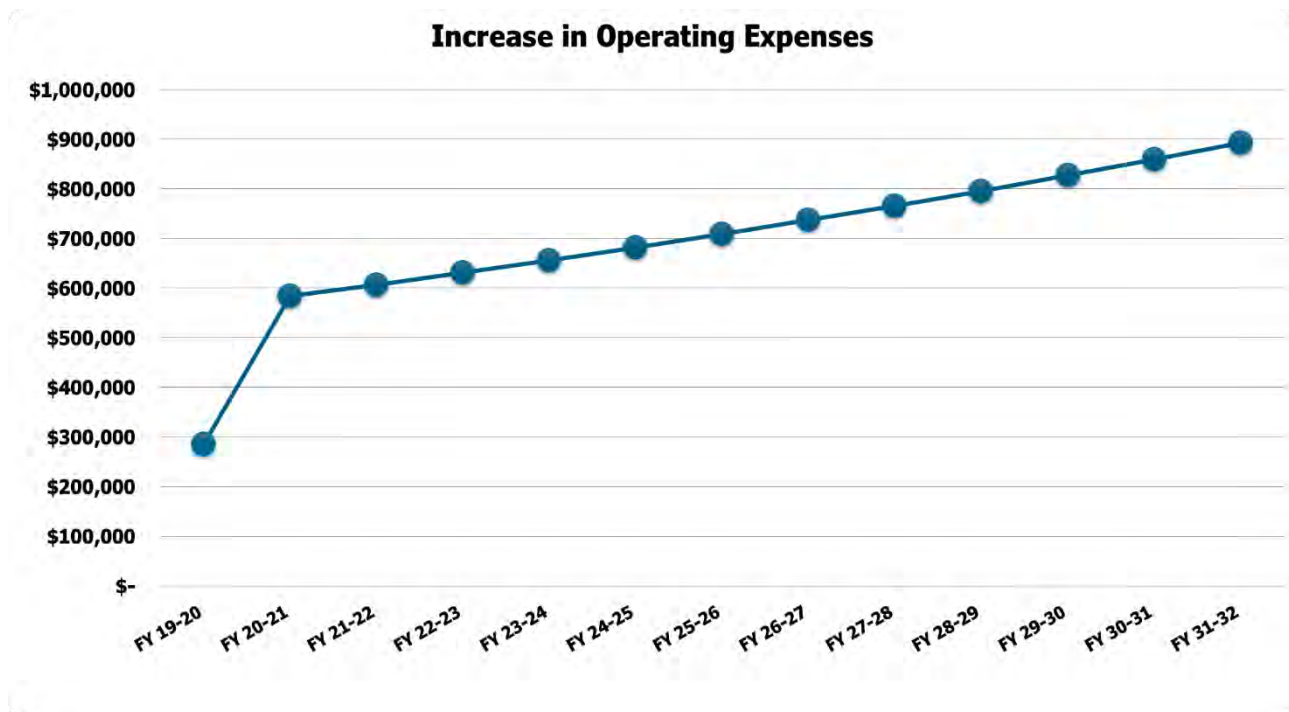
PROJECT NAME	TOTAL ESTIMATED COST	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
Treatment Plant, Pump Stations, & General Capital Improvements							
General Capital Equipment	\$ 1,500,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	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.							
SUBTOTAL	\$ 95,613,050	\$ 11,756,250	\$ 9,596,000	\$ 10,038,000	\$ 10,416,000	\$ 4,069,000	46,340,000
Inflation per ENR Const. Cost Index	1.0000	1.0000	1.0290	1.0588	1.0895	1.1211	1.24842218
SUBTOTAL with inflation	\$ 95,613,050	\$ 11,756,250	\$ 9,874,284	\$ 10,628,646	\$ 11,348,726	\$ 4,561,936	\$ 57,851,884
Design, ROW, & Construction Management Expenses							
Design, ROW, & Const. Mgmt. Exp.	\$ 31,682,735	\$ 2,795,998	\$ 2,864,930	\$ 2,939,320	\$ 3,015,851	\$ 3,094,638	16,971,998
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.							
SUBTOTAL	\$ 31,682,735	\$ 2,795,998	\$ 2,864,930	\$ 2,939,320	\$ 3,015,851	\$ 3,094,638	\$ 16,971,998
Budget Summary							
SUBTOTAL with Inflation	\$ 301,601,936	\$ 28,158,818	\$ 27,195,712	\$ 27,527,725	\$ 29,131,865	\$ 36,509,614	\$ 181,230,299
CONTINGENCY		\$ 1,000,000					
REIMBURSEMENT PROJECTS	\$ 1,636,000	\$ 736,000	\$ 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 FY19-20 there are three(3) reimbursement agreements: ●Olivette Master Plan Pump Station @ \$299,000; ●Olivette Master Plan Interceptor @ \$350,000; ●17 North Market Street @ \$87,000.							
TOTAL	\$ 303,237,936	\$ 29,894,818	\$ 27,295,712	\$ 27,627,726	\$ 29,231,866	\$ 36,609,614	\$ 181,730,300

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.



Operational Impact Summary

PROJECT NAME	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
Interceptor and Wet Weather Rehabilitation						
Christian Creek Interceptor: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lower Swannanoa Interceptor: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Middle Beaverdam Creek @ I-26: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
South French Relief Int: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
South French Broad Int - Lining: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Swannanoa Equalization Tank: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Town Branch Interceptor Lining: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Weaverville Force Main @ Plant: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Interceptor and Wet Weather Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
General Sewer Rehabilitation						
Albemarle Commons PS Elimination: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Atkins Street: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Aurora Drive: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Beale Road @ Copney Lane: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Beaucatcher Rd @ Kenilworth Rd: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Bellevue Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Bent Tree Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Braddock Way-PRP 20002: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-

Operational Impact Summary (continued)

PROJECT NAME	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation						
Buchanan Avenue - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Caledonia Road - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Chatham Road - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Cherokee Road - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Chestnut Lodge Road - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Cub Road - No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
East Chestnut Ave @ Five Points: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Elk Mountain Place: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Fairmont Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Forestdale Drive: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Four Inch Main - Patton Hill Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Harmony Lane: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Hazel Mill Road @ Richland Street: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Highland Farms Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Hill Street @ Cross Place: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Horizon Hill Road (Hy-Vu-Drive): No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Howland Road @ Sunset Trail: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Jarnaul Avenue: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-

Operational Impact Summary (continued)

PROJECT NAME	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation						
Johnston Bouelard @ Providence Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Kenilworth @ Springdale Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Kimberly Avenue @ Sedley Avenue: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Lakeshore Drive @ Merrimon Avenue: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Le An Hurst Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Lincoln Avenue: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Logan Avenue: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Lynn Cove Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Manetta Road @ Johnson Drive: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Meadow Road @ Train Yard: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Mitchell Avenue: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Montford Avenue @ Montford Park: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Mountainbrook Road @ Chunns Cove: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
New Haw Creek Road @ Dogwood Grove: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
New Haw Creek Road @ Water Booster Station: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
New Stock Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
New Walnut Street @ Riverside Drive: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-

Operational Impact Summary (continued)

PROJECT NAME	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation						
North Lexington @ I-240: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
North Market Street: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Northwest Avenue @ No. 215: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Oakland Drive @ Church Street: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Owenby Lane @ US Hwy 70: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Riverside Drive @ Riverside Baptist: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Riverview Drive: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Rosewood Avenue @ Riverside Cemetery: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Royal Pines Drive-PRP 47009: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Sand Hill Road @ Baker Place: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Smokey Park Highway @ Sand Hill Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
S. Main Street @ Reems Creek Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Springside Road @ Overlook Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Starnes Avenue: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Sulphur Springs Road @ Covington Street: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Sweeten Creek Road @ Buck Shoals Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Sweeten Creek Road @ Mills Gap Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-

Operational Impact Summary (continued)

PROJECT NAME	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
General Sewer Rehabilitation						
Toxaway Street: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
US 70 @ Jordan Road: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Walnut Street @ N. Lexington Avenue: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Walnut Street @ Rankin Avenue: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Waynesville Avenue @ Brownwood Avenue: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
West Crabapple Lane: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Wildwood Park: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
SSD Rehabilitation & Replacement: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Surveys for Design: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
General Sewer Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Private Sewer Rehabilitation						
Dogwood Rd. @ White Pine Circle: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Homeland Park: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Old County Home Road PSR: No Impact to Operating Budget - efficiencies gained will be used in the District's collector system preventative maintenance program.	-	-	-	-	-	-
Treatment Plant, Pump Stations, & General Capital Improvements						
Biological Treatment: Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
Building and Facility Rehabilitation: Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
Carrier Bridge P.S. Bypass & Improvements: Impact to Operating Budget will be de minimis.	-	-	-	-	-	-

Operational Impact Summary (continued)

PROJECT NAME	FY 19-20 BUDGET	FY 20-21 BUDGET	FY 21-22 BUDGET	FY 22-23 BUDGET	FY 23-24 BUDGET	FY 24-25 thru FY 28-29 BUDGET
Treatment Plant, Pump Stations, & General Capital Improvements						
Erwin Hills PS Improvements: Impact to Operating will be de minimis.	-	-	-	-	-	-
Flow Monitoring: Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
Incinerator Polymer System Replacement: Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
Mull Building HVAC: Impact ot Operating Budget will be de minimis.	-	-	-	-	-	-
Mull Building IT Back-up Generator: Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
Plant High Rate Primary Treatment: 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	6,269,207
Solids Handling Capacity Improvements- Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
Thickener Rehabilitation- Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
Weaverville PS Replacement- Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
General Capital Equipment: Impact to Operating Budget will be de minimis.	-	-	-	-	-	-
Treatment Plant, Pump Stations, & General Capital Improvements	\$ 286,313	\$ 584,024	\$ 607,246	\$ 631,336	\$ 656,324	\$ 6,269,207
Design, ROW, & Construction Management Expenses						
Design, ROW, & Const. Mgmt. Exp.: No Impact to Operating Budget.	-	-	-	-	-	-
Design, ROW, & Construction Management Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operational Impact Summary						
Interceptor & Wet Weather Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
General Sewer Rehabilitation	-	-	-	-	-	-
Private Sewer Rehabilitation	-	-	-	-	-	-
Treatment Plant, Pump Station and General Capital Improv	286,313	584,024	607,246	631,336	656,324	6,269,207
Design, ROW, & Construction Management Expenses	-	-	-	-	-	-
Total	\$ 286,313	\$ 584,024	\$ 607,246	\$ 631,336	\$ 656,324	\$ 6,269,207

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 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.

Debt Financing (continued)

Debt Management (continued)

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).

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 is anticipated to be expended in the next two years. 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, 2019, the District will have \$105.6 million par value of outstanding revenue bond debt. During FY20, 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, 2019 and anticipated principal repayment during FY20 are on the following two (2) pages.

Debt Financing (continued)

Outstanding Debt as of June 30, 2019

	Original Issue Amount	Balance 6/30/2019	Additions	Retirements	Balance 6/30/2020
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.	\$ 1,500,000	\$ 276,000	\$ -	\$ 64,000	\$ 212,000
Total Bonds, Enka Candler	1,500,000	276,000	-	64,000	212,000
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.	33,635,000	28,065,000	-	920,000	27,145,000
Total Bond, Series 2008A	33,635,000	28,065,000	-	920,000	27,145,000
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.	336,490	185,065	-	16,825	168,240
Total State Revolving Fund	336,490	185,065	\$ -	16,825	168,240

Debt Financing (continued)

Outstanding Debt as of June 30, 2019 (continued)

	Original Issue Amount	Balance 6/30/2019	Additions	Retirements	Balance 6/30/2020
Revenue Bonds, Series 2009A issued to construct certain sewerage projects					
2.0% to 5.00% serial bonds issued October 7, 2009, with maturities on each July 1, 2010 through 2024 varying from \$400,000 to \$700,000; interest payable semi-annually	\$ 7,920,000	\$ 560,000	\$ -	\$ 560,000	\$ -
Total Bond, Series 2009A	7,920,000	560,000	-	560,000	-
Revenue Bonds, Series 2009B issued to refund portions of Series 1999					
2.0% to 5.00% serial bonds issued October 7, 2009, with maturities on each July 1, 2010 through 2019 varying from \$595,000 to \$3,100,000; interest payable semi-annually	13,360,000	635,000	-	635,000	-
Total Bond, Series 2009B	13,360,000	635,000	-	635,000	-
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	30,230,000	15,435,000	-	1,710,000	13,725,000
Total Bond, Series 2013	30,230,000	15,435,000	\$ -	1,710,000	13,725,000

Debt Financing (continued)

Outstanding Debt as of June 30, 2019 (continued)

	Original Issue Amount	Balance 6/30/2019	Additions	Retirements	Balance 6/30/2020
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	\$ 21,510,000	\$ 18,910,000	\$ -	\$ 715,000	\$ 18,195,000
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	-	-	4,685,000
Total Bond, Series 2014	26,195,000	23,595,000	-	715,000	22,880,000
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	32,965,000	32,345,000	-	620,000	31,725,000
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	-	-	4,520,000
Total Bond, Series 2017	37,485,000	37,485,000	-	620,000	36,865,000
Total Bonds, All Series	\$ 150,661,490	\$ 105,616,065	\$ -	\$ 5,240,825	\$ 100,375,240

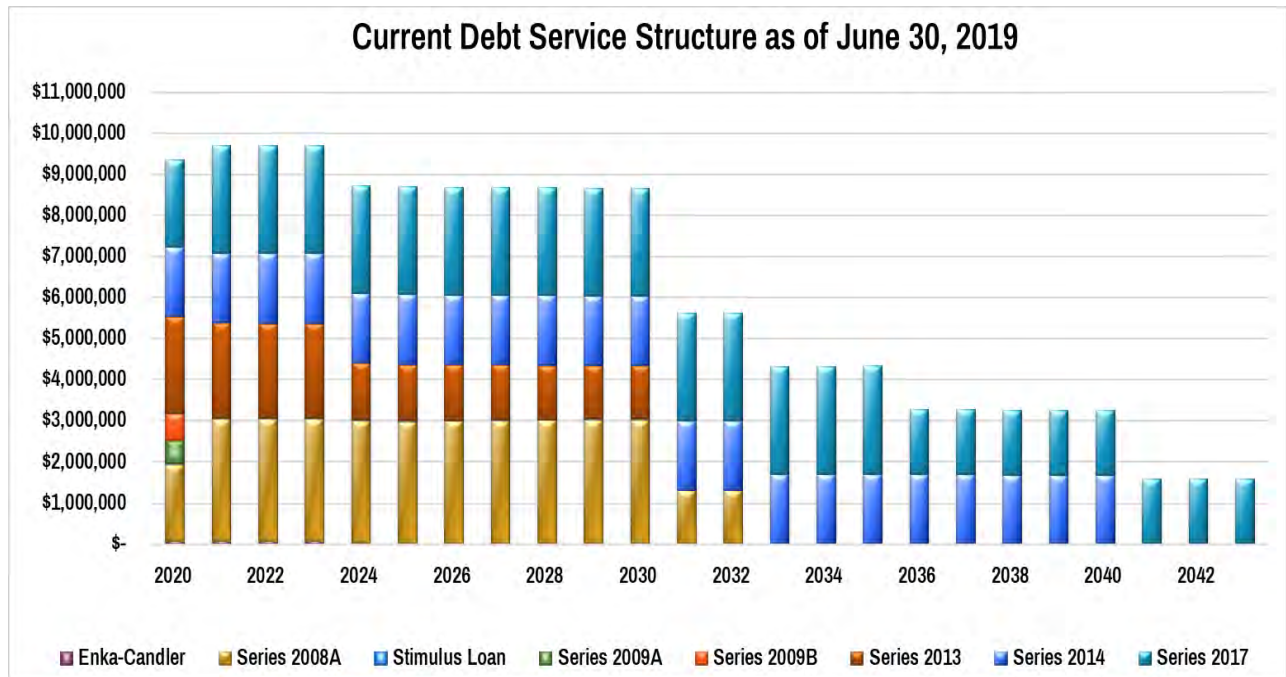
Aggregate Debt Service

Year Ending June 30	Enka-Candler Bonds	Series 2008A Refunding	Series 2009A	Series 2009B Refunding	North Carolina Water Pollution Control Revolving Fund
2020	77,800	1,863,272	571,200	647,700	16,825
2021	74,600	2,967,245	-	-	16,825
2022	71,400	2,979,356	-	-	16,825
2023	68,200	2,979,445	-	-	16,825
2024	21,000	2,986,599	-	-	16,825
2025	-	2,986,194	-	-	16,825
2026	-	2,987,324	-	-	16,825
2027	-	3,000,803	-	-	16,825
2028	-	3,010,738	-	-	16,825
2029	-	3,017,451	-	-	16,825
2030	-	3,025,226	-	-	16,825
2031	-	1,304,929	-	-	-
2032	-	1,306,777	-	-	-
2033	-	-	-	-	-
2034	-	-	-	-	-
2035	-	-	-	-	-
2036	-	-	-	-	-
2037	-	-	-	-	-
2038	-	-	-	-	-
2039	-	-	-	-	-
2040	-	-	-	-	-
2041	-	-	-	-	-
2042	-	-	-	-	-
2043	-	-	-	-	-
	313,000	34,415,359	571,200	647,700	185,070

Aggregate Debt Service (continued)

Series 2013 Refunding	Series 2014	Series 2017	Aggregate Debt Service
2,350,794	1,705,075	2,111,100	9,343,765
2,322,594	1,701,025	2,619,450	9,701,739
2,302,844	1,709,625	2,629,200	9,709,249
2,298,219	1,705,775	2,633,775	9,702,238
1,377,719	1,706,675	2,625,850	8,734,668
1,363,469	1,708,025	2,622,225	8,696,737
1,352,944	1,703,275	2,625,100	8,685,467
1,341,444	1,695,775	2,619,350	8,674,196
1,323,644	1,706,625	2,614,975	8,672,806
1,304,644	1,695,475	2,621,475	8,655,870
1,294,922	1,697,675	2,618,600	8,653,247
-	1,698,175	2,616,350	5,619,454
-	1,696,875	2,614,475	5,618,127
-	1,698,675	2,612,725	4,311,400
-	1,693,575	2,637,675	4,331,250
-	1,698,138	2,635,850	4,333,988
-	1,697,325	1,583,050	3,280,375
-	1,692,850	1,584,650	3,277,500
-	1,682,125	1,580,125	3,262,250
-	1,681,000	1,579,475	3,260,475
-	1,681,000	1,582,550	3,263,550
-	-	1,578,438	1,578,438
-	-	1,577,109	1,577,109
-	-	1,579,297	1,579,297
18,633,234	35,654,763	54,102,869	144,523,194

Current Debt Service Structure as of June 30, 2019



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
- 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

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
- Principal Employers

Net Position by Component

FY2009 to FY2018

Fiscal Year Ended June 30	Net Invested in Capital Assets	Restricted	Unrestricted	Total Net Position
2009	244,875,790	9,493,497	30,570,139	284,939,426
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

General Revenues by Source

FY2009 to FY2018

Fiscal Year Ended June 30	Industrial Sewer Charges	Domestic Sewer Charges	Facility & Tap Fees	Miscellaneous	Total
2009	1,386,132	22,904,587	2,959,115	1,578,976	28,828,810
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

Note: Does not include Capital Contributions

Expenses by Function (Non-GAAP)

FY2009 to FY2018

Fiscal Year Ended June 30	Operating Expenses ⁽¹⁾	Capital Improvement ⁽²⁾	Capital Contributions ⁽³⁾	Debt Service ⁽⁴⁾	Total
2009	12,808,349	12,447,791	5,856,798	6,413,405	37,526,343
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

1. Includes general operations

2. Excludes depreciation expense

3. This includes collection system infrastructure contributed by developers

4. Includes Bond Principal Expense and Bond Interest Less Capitalized Interest Portion and excludes early retirement of long-term debt.

Demographic Statistics – Service Area Population

Year	Asheville	Biltmore Forest	Black Mountain	Montreat	Weaverville	Woodfin	Buncombe County (B)
1960	60,186	1,004	1,313	(A)	1,041	(A)	130,074
1970	57,681	1,298	3,204	581	1,280	(A)	145,056
1980	54,022	1,499	4,083	741	1,495	3,260	160,897
1990	64,625	1,346	6,537	799	2,056	3,002	174,727
2000	68,889	1,440	7,511	630	2,416	3,162	206,330
2010	83,393	1,343	7,848	723	3,120	6,123	238,318
2016	91,190	1,409	8,154	767	3,871	6,433	255,334
2017	91,902	1,421	8,150	760	3,911	6,489	257,607

Demographic & Economic Statistics

FY2009 to FY2018

Fiscal Year Ended June 30	Population Estimates ¹	Per Capita Income ²	Median Age ¹	Civilian Labor Force ³		
				Employed	Unemployed	Unemployment Rate
2009	236,349	34,146	40.8	111,852	10,675	8.7%
2010	238,328	34,144	40.7	113,978	10,716	8.6%
2011	241,224	35,566	41.0	115,209	10,337	8.2%
2012	243,741	37,495	41.2	117,764	9,628	7.6%
2013	246,948	37,278	41.4	120,887	8,218	6.4%
2014	249,302	39,770	41.7	121,889	6,082	4.8%
2015	252,149	42,293	41.8	125,074	6,205	4.7%
2016	255,334	43,232	41.9	129,287	5,318	3.9%
2017	257,607	Unavailable	42.1	132,228	4,736	3.5%
2018	Unavailable	Unavailable	Unavailable	135,665	4,515	3.2%

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

Sources:

1. North Carolina Office of State Budget and Management
2. Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce
3. North Carolina Department of Commerce, Division of Employment Security

Principal Commercial Users

FY2009 to FY2018

Commercial User	Type of Business	2009				2018		
		Total Charges	Rank	Percentage of Total Charges		Total Charges	Rank	Percentage of Total Charges
Milkco, Inc.	Dairy Products & Juices	\$ 529,795	1	2.18%		\$ 701,841	1	1.90%
Jacob Holm Industries America	Textile Manufacturing	60,693	6	0.25%		671,882	2	1.82%
New Belgium Brewing	Micro-Brewery Manufacturer	-----				531,826	3	1.44%
Mission Health System	Health & Emergency Services	241,158	2	0.99%		342,354	4	0.93%
Sierra Nevada	Micro-Brewery Manufacturer	-----				262,696	5	0.71%
Duke Progress Energy	Electric Utility	-----				244,789	6	0.66%
Ridgecrest Baptist Conference Center	Christian Conference Center	163,766	3	0.67%		212,537	7	0.58%
VA Medical Center	Veterans Hospital	93,395	4	0.39%		162,387	8	0.44%
- Asheville Department of Veterans Affairs								
The Biltmore Company	Tourist Attraction/Winery/Resort Services	60,210	7	0.25%		145,615	9	0.40%
Mission Hospital Laundry	Hospital Laundry Services	-----				144,276	10	0.39%
BONAR	Chemical Manufacturer	83,455	5	0.35%				
- (formerly Colbond)								
Day International	Textile Machine Parts	49,340	8	0.20%				
UNC-Asheville		48,849	9	0.20%				

Principal Employers

FY2009 to FY2018

Employer	FY 2009				FY 2018		
	Employees	Rank	% of Total County Employment		Employees*	Rank	% of Total County Employment
Mission Health System & Hospitals	6,990	1	5.93%		3,000+	1	2.21%+
Buncombe County Public Schools	4,010	2	3.39%		3,000+	2	2.21%+
Asheville-Buncombe Technical Community College	-----				1,000-2,999	3	0.74% - 2.21%
The Biltmore Company	1,580	5	1.34%		1,000-2,999	4	0.74% - 2.21%
Buncombe County Government	1,670	4	1.42%		1,000-2,999	5	0.74% - 2.21%
City of Asheville	1,000	9	0.85%		1,000-2,999	6	0.74% - 2.21%
Ingles Markets, Inc.	3,050	3	2.59%		1,000-2,999	7	0.74% - 2.21%
Omni Grove Park Inn	1,100	7	0.93%		1,000-2,999	8	0.74% - 2.21%
VA Medical Center - Asheville	1,140	6	0.97%		1,000-2,999	9	0.74% - 2.21%
Eaton Corporation - Electrical Division	1,010	8	0.85%		750-999	10	0.55% - 0.74%
Borgwarner Turbo & Emissions Systems	830	10	0.70%		-----		
Total for Principal Employers	22,380		<u>20.01%</u>		<u>13,750 - 21,992</u>		<u>10.14% - 16.21%</u>

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

* Employee range is the only public information available

Source:

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

Appendix





Classification of Accounts

51100-Salaries & Wages—This includes salaries & wages for 151 department personnel. Also includes a Cost of Living increase of 3.0%.

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

51200-NC Retirement—The District contributes 7.58% 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. 45/75: 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 for 2014 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.

Classification of Accounts (continued)

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

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.

Classification of Accounts (continued)

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.

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.

Classification of Accounts (continued)

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.

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.

Classification of Accounts (continued)

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.

59200-Chargebacks to Construction Fund—Direct labor and materials costs incurred to acquire right-of-ways, 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.

METROPOLITAN SEWERAGE DISTRICT

OF BUNCOMBE COUNTY, NORTH CAROLINA



Job Classification by Grade Order (effective July 1, 2019)

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
				Technical Services Operator I
13	36,769	45,061	53,353	Electrician I
				Pump Station Technician I
14	37,688	46,188	54,688	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, 2019) (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, 2019) (continued)

Annual Salary Range - July 1, 2019				
Grade	Minimum	Mid-Point	Maximum	Title
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, 2019) (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, 2019) (continued)

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

METROPOLITAN SEWERAGE DISTRICT

OF BUNCOMBE COUNTY, NORTH CAROLINA



Staffing History (FTE's)

Division & Position	Approved Positions						
	10-11	11-12	12-13	13-14	14-15	15-16	16-17
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	1	1	1	1
Total Office Support	1	1	1	1	1	1	1
Department of Human Resources							
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	3	3
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	Approved Positions						
	10-11	11-12	12-13	13-14	14-15	15-16	16-17
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 Management:							
Accounting Technician I	1	1	1	2	2	2	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 Management	3	3	3	4	4	4	3
Purchasing & Warehouse:							
Purchasing Agent I	1	1	1	1	1	1	1
Purchasing Agent II	1	1	1	1	1	1	1
Purchasing Supervisor	1	1	1	1	1	1	1
Total Purchasing & Warehouse	3	3	3	3	3	3	3

Staffing History (FTE's) (continued)

Division & Position	Approved Positions						
	10-11	11-12	12-13	13-14	14-15	15-16	16-17
Department of Engineering							
Office Support:							
Office Manager	1	1	1	1	1	0	0
Total Office Support	1	1	1	1	1	0	0
Engineers:							
Engineer I	2	2	2	2	2	2	2
Engineer II	1	1	1	1	1	1	1
Senior Engineer/Construction Manager	1	1	1	1	1	1	1
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	1	1	1	0	0
Private Development Project Manager	1	1	1	1	1	1	1
Private Development Coordinator/Plan Review	1	1	1	1	1	1	1
Total Planning and Development	5	5	5	5	5	4	4
Construction Administration:							
Administrative Assistant – Construction	1	1	1	1	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	5	5	5

Staffing History (FTE's) (continued)

Division & Position	Approved Positions						
	10-11	11-12	12-13	13-14	14-15	15-16	16-17
Department of Water Reclamation Facility							
Plant Operations:							
Lead Operator	2	2	2	2	2	2	2
Operations Manager	1	1	1	1	1	1	1
WWTP Office/Administrative Manager	0	0	0	0	0	1	1
WWTP Operator	8	8	8	8	8	8	8
Total Plant Operations	11	11	11	11	11	12	12
Industrial Waste:							
Industrial Waste Chemist	1	1	1	1	1	1	1
Industrial Pretreatment Coordinator	1	1	1	1	1	1	1
Pump Station Maintenance Technician	1	1	1	1	1	1	1
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	7	7	7
Mechanical/Electrical Maintenance:							
Electrician II	1	1	1	1	1	1	1
Electrical Maintenance Crew Leader	1	1	1	1	1	1	1
Electrical Specialist	1	1	0	1	1	0	0
Instrumentation Specialist	1	1	1	1	1	1	1
Mechanic II	2	2	2	2	2	2	2
Mechanical Maintenance Crew Leader	1	1	1	1	1	1	1
Mechanical Specialist	1	1	1	1	1	1	1
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	12	13	13	12	12
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	Approved Positions						
	10-11	11-12	12-13	13-14	14-15	15-16	16-17
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 Worker I	1	1	1	1	1	1	1
Construction Worker II	6	6	6	6	6	6	6
Construction Worker III	4	4	4	4	4	4	4
Construction Operator I	1	1	1	1	1	1	1
Construction Operator II	2	2	2	2	2	2	2
Construction Crew Leader	4	4	4	4	4	4	4
Construction & Repair Supervisor	2	2	2	2	2	2	2
Heavy Equipment Excavator I	5	5	5	5	5	5	5
Heavy Equipment Excavator II	1	1	1	1	1	1	1
Total System Services Construction	26	26	26	26	26	26	26
Department of System Services –							
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	2	2	2
Technical Services Worker II	4	4	4	4	4	4	4
Technical Services Worker III	2	2	2	2	2	2	2
Technical Services Operator I	1	1	1	1	1	1	1
Technical Services Operator II	3	3	3	3	3	3	3
Technical Services Operator III	7	7	7	7	7	7	7
Assistant Supervisor - SS Maintenance	2	2	2	2	2	2	2

Staffing History (FTE's) (continued)

Division & Position	Approved Positions						
	10-11	11-12	12-13	13-14	14-15	15-16	16-17
Department of System Services –							
Maintenance:							
Collection System Maintenance Supervisor	2	2	2	2	2	2	2
Total System Services - Maintenance	25	25	25	25	25	25	25
Total:	150	149	149	147	148	148	148

Note: Additional historical data (FY17-18, FY18-19) and current budget year (FY19-20) are included in each departmental summary.



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, 2019 Thru June 30, 2020**

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 2019-2020 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, 2019 and ending June 30, 2020:

Operating and Maintenance Expenses	\$ 13,362,483
Transfer to Insurance Accounts	\$ 3,430,921
Transfer to Fleet & Heavy Equipment Fund	\$ 500,000
Transfer to Wastewater Treatment Plant Fund	\$ 200,000
Transfer to Pump Stations Reserve	\$ 50,000
Subtotal O&M	\$ 17,543,404
Transfer to General Fund	\$ 22,692,000
	\$ 9,834,367
Transfer to Debt Service Fund	\$ 50,069,771

It is estimated that the following revenues will be available in the Revenue Fund for the fiscal year beginning July 1, 2019 and ending June 30, 2020:

Domestic User Fees	\$ 33,623,113
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Budget Resolution

It is estimated that the following revenues will be available in the Revenue Fund for the fiscal year beginning July 1, 2019 and ending June 30, 2020:

Domestic User Fees	\$ 33,623,113
Industrial User Fees	\$ 3,464,402
Billing and Collection Fees	\$ 832,994
Investment Interest	\$ 1,166,960
Reimbursement for Debt Service from COA	\$ 35,000
Rental Income	\$ 71,641
Appropriated from Net Position	<u>\$ 10,875,661</u>
	<u>\$ 50,069,771</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, 2019 and ending June 30, 2020:

Transfer into Construction	<u>\$ 29,366,000</u>
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It is estimated that the following revenues will be available in the General Fund for the fiscal year beginning July 1, 2019 and ending June 30, 2020:

Facility and Tap Fees	\$ 2,175,000
Investment Income	\$ 240,000
Transfer in from Revenue Fund	\$ 22,692,000
Appropriated Net Position	<u>\$ 4,259,000</u>
	<u>\$ 29,366,000</u>

3. The following amounts are hereby appropriated in the Construction Fund for Capital Improvement Plan expenditures for the fiscal year beginning July 1, 2019 and ending June 30, 2020.

Capital Improvements Projects	<u>\$ 29,894,818</u>
-------------------------------	----------------------

It is estimated that the following revenues will be available to the Construction Fund for the fiscal year beginning July 1, 2019 and ending June 30, 2020.

Investment Income	\$ 30,000
Transfer in from General Fund	\$ 29,366,000
Appropriated Net Position	<u>\$ 498,818</u>
	<u>\$ 29,894,818</u>

Budget Resolution

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, 2019 and ending June 30, 2020 are:

Operating Expenditures	<u>\$ 3,696,178</u>
------------------------	---------------------

It is estimated that the following revenues will be available in the Insurance Funds for the fiscal year beginning July 1, 2019 and ending June 30, 2020:

Transfer in from Revenue Fund	\$ 3,430,821
Investment Income	\$ 55,500
Employee/Retirees Medical Contributions	\$ 374,907
Contribution to Net Position	<u>\$ (165,150)</u>
	<u>\$ 3,696,178</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, 2019 and ending June 30, 2020 estimated as follows:

Capital Equipment	<u>\$ 557,000</u>
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It is estimated that the following revenues will be available in the Fleet & Heavy Equipment Fund for the fiscal year beginning July 1, 2019 and ending June 30, 2020:

Transfer from the Revenue Fund	\$ 500,000
Sale of Surplus Property	\$ 66,840
Investment Income	\$ 12,050
Contribution to Net Position	<u>\$ (21,890)</u>
	<u>\$ 557,000</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, 2019 and ending June 30, 2020 estimated as follows:

Capital Equipment	<u>\$ 298,000</u>
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Budget Resolution

It is estimated that the following revenues will be available in the Wastewater Treatment Plant Replacement Fund for the fiscal year beginning July 1, 2019 and ending June 30, 2020:

Transfer from the Revenue Fund	\$ 200,000
Investment Income	\$ 5,258
Appropriated from Net Position	<u>\$ 92,742</u>
	<u>\$ 298,000</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, 2019 and ending June 30, 2020 estimated as follows:

Capital Equipment	<u>\$ 60,000</u>
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It is estimated that the following revenues will be available in the Pump Station Replacement Fund for the fiscal year beginning July 1, 2019 and ending June 30, 2020:

Transfer from the Revenue Fund	\$ 50,000
Investment Income	\$ 3,516
Appropriated from Net Position	<u>\$ 6,484</u>
	<u>\$ 60,000</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, 2019 and ending June 30, 2020:

Debt Service	<u>\$ 9,834,367</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, 2019 and ending June 30, 2020:

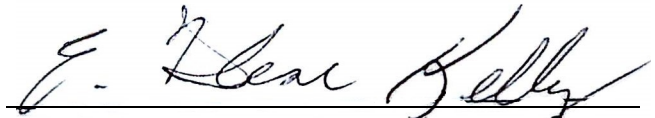
Transfer from the Revenue Fund	\$ 9,834,367
Investment Income	\$ 1,500
Contribution to Net Position	<u>\$ (1,500)</u>
	<u>\$ 9,834,367</u>

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.

Budget Resolution

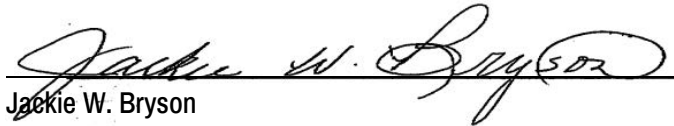
10. The General Manager is hereby authorized to transfer appropriations as contained herein under the following conditions:
 - a. He may transfer amounts without limitation between departments in a fund.
 - b. He may transfer any amounts within Debt Service and Reserve Funds designated as excess by the Trustee into another fund.
 - c. He may transfer up to 10% of Insurance Fund reserves to meet current year expenditures in excess of budget.
11. That the attached Schedule of Fees and Charges be adopted as effective July 1, 2019.
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 12th day of June 2019



E. Glenn Kelly, Vice-Chairman
Metropolitan Sewerage District of
Buncombe County, North Carolina

Attest:



Jackie W. Bryson
Secretary/Treasurer

METROPOLITAN SEWERAGE DISTRICT

OF BUNCOMBE COUNTY, NORTH CAROLINA



Schedule of Rates, Fees, and Charges - FY2020

Effective July 1, 2019

	CURRENT FY19 RATE	ADOPTED FY20 RATE
Collection Treatment Charge		
Residential & Commercial Volume Charges (per CCF) Inside	\$ 4.61	\$ 4.73
Industrial Volume Charges (per CCF) Inside	\$ 4.47	\$ 4.73
Industrial Surcharge for BOD (per lb., BOD >250 mg/l) Inside	\$ 0.307	\$ 0.300
Industrial Surcharge for TSS (per lb., TSS >250 mg/l) Inside	\$ 0.253	\$ 0.250
Residential & Commercial Volume Charges (per CCF) Outside	\$ 4.62	\$ 4.74
Industrial Volume Charges (per CCF) Outside	\$ 4.48	\$ 4.74
Industrial Surcharge for BOD (per lb., BOD >250 mg/l) Outside	\$ 0.307	\$ 0.300
Industrial Surcharge for TSS (per lb., TSS >250 mg/l) Outside	\$ 0.253	\$ 0.250
Base Meter/Maintenance Charge & Billing Fee		
5/8"	\$ 7.11	\$ 7.29
3/4"	\$ 10.35	\$ 10.61
1"	\$ 18.37	\$ 18.83
1 1/2"	\$ 42.04	\$ 43.09
2"	\$ 74.34	\$ 76.20
3"	\$ 164.87	\$ 168.99
4"	\$ 294.21	\$ 301.57
6"	\$ 662.77	\$ 679.34
8"	\$ 1,176.82	\$ 1,206.24
10"	\$ 1,842.84	\$ 1,888.91
Billing Fee (per bill)	\$ 2.40	\$ 2.45
Sewer System Development Fees		
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.		
Residential		
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 - FY2020 (continued)

Effective July 1, 2019

	CURRENT FY19 RATE	ADOPTED FY20 RATE
Sewer System Development Fees <small>(continued)</small>		
<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
Sewer Connection Fees**		
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>		
Manhole Installation/Replacement		
Cost per foot	\$ 250.00	\$ 250.00
Pavement replacement (if required)	\$ 1,800.00	\$ 1,800.00

Schedule of Rates, Fees, and Charges - FY2020 (continued)

Effective July 1, 2019

	CURRENT FY19 RATE	ADOPTED FY20 RATE
Other Fees		
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		
Bulk Charges		
Volume Charge for Septic Haulers (per 1,000 Gal.)	\$ 45.00	\$ 45.00
Biochemical Oxygen Demand >250 mg/l (per lb.)	\$ 0.307	\$ 0.300
Total Suspended Solids >250 mg/l (per lb.)	\$ 0.253	\$ 0.250
Returned Check Charge		
Returned Check (per event)	\$ 25.00	\$ 25.00
Dishonored Draft (per event)	\$ 25.00	\$ 25.00
Copy/Printing Fees/Miscellaneous (each)		
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

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.

Glossary of Terms (continued)

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

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.

Glossary of Terms (continued)

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.

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.

Glossary of Terms (continued)

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.

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.

Glossary of Terms (continued)

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.

Enterprise Funds—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.

Glossary of Terms (continued)

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.

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.

Glossary of Terms (continued)

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.

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

Glossary of Terms (continued)

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.

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

Glossary of Terms (continued)

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.

Glossary of Terms (continued)

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.

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.

Glossary of Terms (continued)

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.